Handbook of **Local Food Reserves** in West Africa

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Foreword
Promoting local grain storage

The liberal and neoliberal policies applied from the 1980s onwards opposed local food reserves on the grounds that they might adversely affect free trade and influence world food prices.

The health crisis sparked by the COVID-19 pandemic, like the 2008 financial crisis or the Ebola crisis before it, has come knocking on our doors like a wake-up call following the recurrent food and nutrition crises confronting West Africa: “But where are the food reserves that will help us counter the effects of these crises on vulnerable populations’ food supply and ensure that markets are regularly supplied?”

To provide lasting solutions to emergencies and ensure regular supplies to markets, ECOWAS drew up a regional storage strategy in 2012 for inclusion in the ECOWAS Regional Agricultural Policy (ECOWAP). This strategy rests on the complementary roles played by the local food reserves held by the farmers’ organisations, the national food security reserves managed by the Member States and a regional reserve for use in a major crisis.

Faced with high risks of production shortfalls through climate hazards, conflicts, locust invasions or armyworms, or, on the contrary, of price reversals in surplus years, farmers’ organisations have taken the necessary steps to store food reserves. Since the dawn of time, food reserves have enabled populations to weather lean seasons, regulate food supply and demand, and offset the extreme volatility of prices for agricultural products, which is harmful for both consumers and farmers. Unless they are able to store their produce, farming communities are powerless in the battle of the markets that decides the distribution of value among the economic stakeholders. Local food reserves therefore play essential roles in guaranteeing supply, regulating the markets, replenishing public reserves and supporting food-deficit households. Reserves of stockfeed keep herds alive if a pastoral crisis strikes. Local food reserves give women greater food security, especially for women who the head of their household or victims of discrimination or violence.

Farmers’ organisations have vast experience of difficult circumstances such as volatile market prices, lack of market regulation or quality standards, lack of financial and risk-management instruments, or untimely interventions by States and the humanitarian community: all obstacles that they have managed to overcome.

ECOWAS is strongly committed alongside these organisations to ensure that best practices in local grain storage are turned into readily accessible, widely circulated knowledge. That is the purpose of this handbook, which has been designed and pro-

duced by the leaders of farmers' organisations, livestock farmers and pastoralists, the managers of local food reserves and their regional networks: ROPPA, Réseau Bilital Maroobé, APESS and ROAC

We are aware that management best practices alone will not be sufficient. Local grain storage also needs a far more supportive and reliable environment with regard to regulations, the law, standards, business practices, finance, etc. It is the role of the national and regional public institutions to create these conditions, in close consultation with the farmers' organisations. We are working side by side on this undertaking, which will make it possible to promote a vast network of local food reserves in West Africa.

Sékou SANGARE
Agriculture, Environment and
Water Resources Commissioner, ECOWAS

Ibrahima COULIBALY
Chairman of the Board of Directors, ROPPA

➔ The members of the Editorial Group during their second meeting, Ouagadougou, July 2019

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Introduction

The importance of local grain storage in managing food and pastoral crises

In 2012, West Africa adopted a regional strategy of local grain storage to address the food security issue. This strategy relies on three complementary lines of defence to cope with food shocks: (i) the local food reserves managed by farmers' groups or cooperatives; (ii) the national food security reserves managed by the States (sometimes in conjunction with their technical and financial partners), and (iii) the Regional Food Security Reserve (RFSR) run by ECOWAS through the Regional Agency for Agriculture and Food (RAAF).

The first line of defence generally relies on the capacity of the organisations of farmers, livestock farmers or pastoralists to anticipate and respond swiftly to the crises that strike rural populations, pending the intervention of the other lines of defence in the event of a serious crisis. The farmers' organisations (FOs) involved in managing local food reserves also have a key role to play in generating income in food surplus areas and in supplying markets and the national and regional food reserves through group marketing systems.

There was a substantial increase in local grain storage in the Sahel following the severe droughts of the 1970s and '80s, when they received strong support from the States and various partners. Later they had to cope with a variety of challenges, including highly volatile prices on fully deregulated agricultural markets, recurrent food and pastoral crises and, frequently, internal management and governance issues. Today, although we have only patchy knowledge of the FOs engaged in local grain storage (except in the Sahel countries), it would appear that the structure and achievements of the FOs engaged in local grain storage vary widely from one country and ecological zone to another.

The three main systems of local grain storage

The objectives pursued and the functions carried out by FOs involved in local grain storage are quite varied. Depending on their primary purpose, they fall into three broad categories: group supply, group marketing and feed banks.

Group supply systems

Most group supply systems are run by FOs situated in crop-deficit areas, the majority of which lie in West Africa's Sahel strip. These systems, sometimes also known as "cereal banks", "village granaries", "village or community shops", or "food security granaries", operate along the following lines: just after harvest, when cereals are in abundant supply and less expensive, the FO buys a large quantity of cereals, which it stores for a few months then resells during the so-called lean season, giving priority to its members. In recent years, some FOs have diversified their product range to include other basic foodstuffs; they may also carry out several rotations per year.

The main purpose of local grain storage in these systems is to ensure that food-deficit households can draw on a secure supply of food. During the lean season (which corresponds to the rainy season in the Sahel zone), rural households can buy cereals at below-market prices, reaping the benefits of both physical availability and affordability. These systems accordingly have a major, direct impact on household food security and infant nutrition, particularly in landlocked villages situated a long way from

markets. They also play a role in community extension initiatives on the collection, storage and sale of agricultural products. Lastly, they play a role in regulating local markets by helping to curb price hikes on local markets, in areas where there may be little competition among traders.

Group marketing systems

These systems are located in areas where cereal crops yield a surplus. They generally rely on cooperative-type organisations (such as unions or federations of farmers' groups or cooperatives), which pool their members' output, sort, package and store the foodstuffs, then sell them to institutional buyers or traders. This system of deferred group marketing achieves scale economies, places farmers in a stronger position for negotiating with buyers (because of larger volumes and superior quality) and lets them sell when prices are higher. As a result, group marketing systems have a positive impact on incomes and poverty levels in rural areas, by increasing households' capacity to buy other goods.

Group marketing FOs have forged business ties with national grain storage companies, other institutional stakeholders such as the WFP and NGOs, and more recently with the RFSR and ECOWAS. They bid for contracts with these organisations and sometimes negotiate direct purchasing contracts. Supplying public-sector markets is a major outlet for these FOs; it is also an opportunity to learn how to market products that must meet strict standards, insofar as these markets are generally far more demanding than regular markets selling "run-of-the-mill" products; lastly, the income it brings FOs is more reliable (because guaranteed by signed contracts) and generally higher than that obtained on regular markets.

Stockfeed supply systems

These systems, also known as "feed banks", are similar to group supply systems for cereals. They were set up by livestock farmers' organisations to counter livestock farmers' (and in particular pastoralists') growing vulnerability to pastoral crises in recent decades. In short, the systems make group stockfeed purchases when prices are reasonable (at the beginning of the dry season, in November or December), then resell them when forage resources become scarcer (from February to June). The livestock farmers set up a working capital fund in the first year, with or without the help of outside subsidies. The stored stockfeed is intended mainly for cattle and small ruminants. It consists primarily in agro-industrial by-products (brans, feeding cakes, etc.) and processed feeds (feed concentrates, etc.).

These systems make it possible to maintain the herd, which is the main means of subsistence of households engaged in livestock farming or mixed farming. Often coupled with cereal banks, they help prevent these households from falling into food insecurity. By helping to ensure supplies for transhumant herds, stockfeed supply systems also lower the risks of conflict in the host areas. These systems are all the more important as stockfeed is scarce during the fodder lean season in the ECOWAS area and it is harder for food security stakeholders to take swift, targeted action if a pastoral crisis strikes.

Why produce a handbook of local grain storage?

The local grain storage initiatives conducted by many grassroots FOs and their umbrella organisations in recent decades have yielded a set of best practices for the technical, economic and commercial management, and governance, of local food reserves. At the same time, the FOs and their partners have also developed various instruments or systems for financing, risk management (in particular price risk), information systems, etc.

The preparation of this handbook is underpinned by the belief that building a knowledge base of best practices (and practices to avoid) can help organisations engaged in local grain storage to overcome difficulties, avert failures and generally gain in effectiveness. It also enables FOs already involved in local grain storage, or about to take this step, to reap the benefit of other organisations' experience, thereby strengthening cooperation among FOs. Lastly, it helps more tightly knit local grain storage systems into the regional grain storage strategy advocated by ECOWAS in partnership with the States and the professional organisations representing farmers, pastoralists and livestock farmers.

Over the coming months, this handbook will serve as a solid basis for training sessions for the members and employees of FOs engaged in local grain storage. To this end, training modules will be produced, based on different chapters of the handbook.

An innovative development process

Under the tenth European Development Fund, ECOWAS receives European Union funding to implement the Regional Food Security Storage strategy. This project is conducted through delegated operators, in particular the AECID, the AFD and the AGRHYMET/CILSS Regional Centre. The activities are carried out by the RAAF, which hosts a division of the Regional Food Security Reserve.

The project's "support for local grain storage" component includes a number of activities, one of which is "the production of regional reference guidelines on local grain storage". These guidelines will consist of three very complementary documents: i) this Handbook of Local Food Reserves; ii) the "Multi-Stakeholder Support Framework for Local Grain Storage in West Africa", which overviews the main focus areas and methods of support used by the national and regional authorities and the international partners to consolidate local grain storage, and iii) "the Charter on the Operation of Local Food Reserves", a sort of voluntary code of conduct setting out the commitments made by the FOs engaged in local grain storage. The visibility and transparency achieved through the FOs' compliance with this charter pave the way for contractual agreements with the national and regional public institutions and the international organisations in charge of managing the food security reserves. They also facilitate coordination with the stakeholders involved in preventing and managing food and pastoral crises.

These three documents were drafted by an Editorial Group comprised of 15 representatives of the FOs operating local food reserves, drawing on their experience of local grain storage. The group met four times between July 2019 and February 2020 to work on successive versions of the documents. The Editorial Group was supported in this role by a group of consultancies and NGOs selected for the purpose by ECOWAS. The entire process was guided by the Steering and Organisation Committee, which draws together the regional institutions and the regional networks of farmers' organisations. The committee is responsible for proposing the main lines and approving the finished products.

How is the Handbook's content structured?

The Editorial Group chose to structure the Handbook around the different aspects of local grain storage. Accordingly, the document deals in turn with the institutional, financial, economic and social aspects, then the technical considerations involved in managing local food reserves. This is followed by three cross-cutting chapters dealing, respectively, with information management, risk management, and coordination between the FOs operating local food reserves and the stakeholders involved in preventing and managing food and pastoral crises.

The different chapters include a summary of best practices, illustrated by examples taken from the FOs' experiences, a presentation of the key points to remember, and bibliographic references for further reading. Each chapter is accompanied by practical appendices (plans, sample contracts, regulatory texts, etc.), which are available on the RAAF website. The webpages containing these appendices can be accessed through the Internet link or the QR code provided at the end of each chapter.

CHAPTER 2

The **institutional aspects** of local food reserves

Introduction

In West Africa, local food reserves are mostly managed by farmers' organisations (FOs). The term «farmers' organisation» spans a very diverse array of situations on the ground, particularly in terms of the functions performed (the group marketing or group supply of cereals and the supply of livestock feed), the volume of activity, the number of members and the degree of formal structure.

The results obtained by a FO through its local grain storages depend largely on the choices it makes at an institutional level:

- Does it choose to operate informally or adopt one of the legal statuses defined by the current legislation?
- If it opts for a formal status, which is strongly recommended, what status does it choose: association, group, cooperative or economic interest group (EIG)?
- What are its internal operating procedures? In other words, «who is responsible for what» in the FO's decision-making, operational and control processes?

This chapter examines these and other questions that lay the foundations for the smooth operation of a FO engaged in local food reserves. It is divided into two subchapters.

The first, on the «Legal framework of farmers' organisations», examines the benefits and drawbacks of each legal form (association, group, economic interest group or cooperative), based on the legal and regulatory requirements and FOs' experiences. The analysis of the legal texts factors in the respective specificities of French-, English- and Portuguese-speaking countries.

The second subchapter deals with farmers' organisations' governance, i.e. the mechanisms and procedures for decision-making, performance and oversight that enable a FO to correctly perform its mission. A FO typically conducts its business activities to fulfil a social mission for the benefit of its members. To achieve a sound balance between its social and business-oriented goals, it is essential for the FO to draw up and apply good governance rules.

CHAPTER 2A

Legal framework for farmers' organisations operating local food reserves

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A – Introduction

In West Africa as elsewhere, men and women tend to join forces to carry out activities that they cannot carry out on their own, or only with greater difficulty. At the local level, many organisations such as tontines and mutual-assistance groups operate on an informal basis, relying on proximity and mutual trust among members.

Farmers' organisations (FOs), particularly those operating local food reserves, follow the same logic. However, given their membership and the extent of the resources they manage, FOs cannot operate informally and need to be registered with the authorities in their country. There are a number of benefits to registering an organisation: it allows the organisation to seek legal recourse to assert its rights (and those of its members); it also entitles it to various services such as obtaining credit, being granted subsidies, receiving technical support... and gaining access to institutional markets

The registration process requires organisations to choose a legal form, taking into consideration the constraints and advantages of each of the forms available in the country or region in which it is based. The legal forms existing in ECOWAS countries and likely to be suitable for organisations operating local food reserves fall into four main categories:

- non-profit organisations;
- groups;
- economic interest groups;
- cooperatives.

This chapter examines the advantages and limitations of each legal form, based on the legal texts and FOs' experiences, and taking into account the specificities of English-speaking and Portuguese-speaking countries.

B – Associations

B.1 How to set up an association

In all ECOWAS countries, associations are defined as organisations constituted by legal or natural persons for non-profit purposes, in particular in the cultural, sporting, social, spiritual, religious, scientific and professional fields. Depending on each individual case, associations may or may not be allowed to carry out economic activities. However, the profits from these activities may under no circumstances be distributed to members and are therefore entirely allocated to the association's corporate purpose. Similarly, in the event of liquidation, the remaining assets may under no circumstances be taken back by their members but must be transferred to one or more other associations pursuing similar objectives.

Setting up an association is a relatively easy process in terms of administrative procedures. The documents required are the article of association[1], the by-laws, the minutes of the constituent assembly, the attendance list for the constituent assembly and the list of committee members. Associations are generally registered with the administrative authority in charge of the territory and its local divisions, such as departments and provinces.

Anyone can set up an association, since its members are not required to contribute any initial capital.

B.2 What are associations' obligations?

Association laws allow members great latitude in their organisation and their operating rules: conditions of membership and exclusion, conditions and procedure for withdrawal, establishment of the membership dues, electoral conditions, sanctions, etc. However, associations are required to elect officers for their administration, the three essential functions being president, secretary and treasurer. These volunteer functions are unpaid.

In French-speaking countries, associations are required to keep a record of their activities (minutes of meetings, achievements, etc.) and a book of account recording the movement of funds and the movement of movable and immovable property.

Depending on the situation, associations may benefit from tax breaks, public subsidies and outside aid. Those receiving public subsidies or outside aid are generally subject to tighter control. In French-speaking countries, for example, any association receiving grants must provide the corresponding Ministry of the Economy with its budgets, annual accounts and financial reporting. This control is in addition to that of the donor.

In practice, though, the supervisory bodies' controls are not very strict. Also, national legislations in French or Portuguese-speaking countries make no provision for the individual or collective liability of the association's managers or controlling bodies. Nor do they recognise a right to be notified for the association's members. There is therefore a risk of non-transparent practices in the management of associate ons' assets.

1 An association's articles of association are a document that contains, on one hand, its identity (title, purpose and head office address) and, on the other hand, all of the rules of procedure it adopts. The by-laws add information that might change periodically, such as the amount of the membership dues, the rules for using the premises and the equipment, and the full names of the members of the board of directors, etc.

B.3 What are the advantages and drawbacks of associations?

The association is a legal form that has the advantages of being easy for anyone to set up and very flexible in its operation. However, it has several drawbacks:

- An overly slack legislative framework and controls, resulting in a risk of non-transparent asset management;
- Ambiguity as to whether or not the association may carry out economic activities. This entails a risk of the association being reclassified as a commercial company.

In practice, few group marketing FOs are associations.

C – Groups in French-speaking and Portuguese-speaking countries[2]

A group is a voluntary organisation of persons, of a social and economic nature, with legal personality, and whose members have common interests. By nature, a group is a simplified form of cooperative, operating on the same principles as a cooperative. It must have a general assembly and a committee. At least three of the committee members must have been elected by the general assembly and the committee must be composed of at least a president, a secretary and a treasurer. In addition to these two bodies, there is also a controlling body.

The procedure for setting up a group is similar to the procedure for setting up an association. Groups must keep records of their members and their members' contributions, as well as the minutes of the general assembly's meetings. They must also undergo an external audit of their accounts and management, carried out by a natural or legal person qualified to deal with groups and certified under the current legislation.

The main limitation of groups is financial management. Although the law provides rules for the collection of members' contributions, it says nothing about the legal status of these contributions. In fact, there are no precise rules on the reimbursement of these contributions, on the fate of these resources in the event of dissolution, or on the possibility of making contributions in kind.

Until the OHADA Uniform Act on Cooperatives came into force, public policies had worked to groups' advantage. As a result, they generated a great deal of interest in the farming community. However, the OHADA law made no provision for groups, so today the States are encouraging them to convert into cooperatives.

There is no equivalent to the group form in English-speaking countries.

2 Of the two Portuguese-speaking countries in West Africa (Cape Verde and Guinea Bissau), only Guinea Bissau is a member of the OHADA.

D – Economic interest groups (EIGs) in French-speaking and Portuguese-speaking countries

D.1 What is an EIG?

The EIG is governed by the provisions of Articles 869 et seq. of the OHADA Uniform Act on the Commercial Companies and Economic Interest Groups. Its sole purpose is to take steps to facilitate or develop its members' economic activities. The EIG's activity is therefore necessarily complementary to that of its members.

Two or more natural or legal persons may constitute an EIG. The EIG contract or the members' assembly freely organises the administration and appoints one or more directors whose powers, duties and conditions of dismissal it also determines.

The EIG does not itself carry out activities aimed at generating a profit for distribution to its members. Instead, its activities are designed to promote direct profit-making by its members.

An EIG may be set up without capital. Unless otherwise agreed with the creditor, the EIG's members shall be liable for the group's debts from their own assets.

The formalities entailed in setting up an EIG are generally completed in business administration centres or by the commercial court of the EIG's registered office. The documents required for full registration of EIGs are the group contract and the minutes of the constituent assembly.

D.2 What are EIGs' obligations and limits?

The periodic obligations of EIGs are specified in the contract between the members. EIGs also have tax and social obligations related to their operations and the number of employees. In the context of local storage, EIGs are required to draw up annual financial statements, keep an up-to-date inventory of stocks, keep a register of meetings and pay payroll tax, income tax, withholding tax on business leases and corporation tax, unless expressly exempted by the competent tax authorities.

In practice, the fact that management control rules are freely set by members often leads to problems of governance and transparent management.

Moreover, FOs are reluctant to adopt this legal form because of the members' indefinite and joint liability for any debts incurred by the EIG. The obligation to hire an auditor to audit the financial statements also deters FOs from adopting the EIG as their legal form.

Nevertheless, the EIG may be an appropriate legal form at the "union" level of local food reserve systems, in particular for group marketing FOs, provided that the rules stipulated in the EIG contract have been defined in such a way as to allow sound and transparent management. To this end, stakeholders are advised to make members aware of the issue and seek outside technical support.

There is no equivalent to the EIG in English-speaking countries.

E – Cooperatives

WWW.ICA.COOP

According to the International Cooperative Alliance, cooperatives are people-centred undertakings that are jointly owned and democratically controlled by their members to meet their common socio-economic aspirations and needs. As companies underpinned by values and principles, they give priority to fairness and equality by creating sustainable initiatives that create jobs and generate prosperity in the long term. Managed by producers, users or workers, cooperatives operate on the principle of "one person, one vote".

E.1 Types of cooperatives in French-speaking and Portuguese-speaking countries

In French-speaking and Portuguese-speaking countries that are signatories to the OHADA Uniform Act on Cooperatives, there are two forms of cooperatives:

- The simplified cooperative society (abbreviated as "SCOOPS") is made up of at least five natural or legal persons. It is managed by a management committee composed of a maximum of three members (natural persons), including a president and two members elected by the general assembly [3]. The oversight committee is a controlling body composed of three to five members (natural persons), with no business or family connection with the members of the management committee. The functions of member of the management committee and member of the oversight committee are not remunerated.
- The cooperative company with a board of directors (in short: "COOP-CA"), which is made up of at least fifteen natural or legal persons. The Board of Directors is the main management body. The directors (a maximum of 12) are elected by the general assembly. The board of directors appoints a general manager, under contract to the cooperative. Like simplified cooperative societies, COOP-CAs have a controlling body, called a supervisory board. This body is composed of 3 to 5 members (natural persons), elected by the General Assembly and unrelated to the members of the Board of Directors. The functions of member of the Board of Directors and member of the Supervisory Board are not remunerated.

In French-speaking countries, cooperative may group themselves into unions, federations, confederations and networks of cooperatives.

E.2 Types of cooperatives in English-speaking countries

In English-speaking countries, the situation is more varied.

Nigerian law provides for two types of cooperatives: primary cooperatives and industrial cooperatives. A *primary cooperative* must comprise at least 10 people, while an *industrial cooperative* needs only six. In addition to these two forms, the law provides for umbrella organisations, which must include at least five registered companies.

In Ghana, Sierra Leone, Gambia and Liberia, cooperatives are governed by more or less long-standing national laws. In Ghana and Sierra Leone, legislation gives considerable powers to the public administration, which hinders the autonomous development of cooperatives.

3 This number may be increased to five when the cooperative has 100 or more members.

E.3 Cooperatives' operating rules

In all cooperatives, membership implies the subscription of one or more shares in accordance with the cooperative's articles of association. In practice, this means that any natural or legal person who wishes to join a cooperative must undertake to contribute to its capital. The amount of this contribution is known and accepted by all members. The contributions - or shares - entitle each cooperator to voting rights; each has one vote regardless of the number of shares subscribed.

Like other legal forms, cooperatives are subject to various periodic obligations, designed to enable the supervisory authorities to check that the statutory meetings are held and monitor their activities. In French-speaking countries, accounting records must be kept according to the common SYSCOHADA standard.

E.4 Advantages and disadvantages of the cooperative form

Because of the advantages it offers, the cooperative form is strongly encouraged by national authorities, particularly in the French-speaking world. However, the cooperative form has certain obstacles and drawbacks. The diagram below summarizes the advantages and disadvantages of this legal form.

ADVANTAGES

Free registration (in French-speaking countries).

Existence of reserve mechanisms to promote the cooperative's long-term viability.

Tax exemption on donations, legacies or subsidies obtained by the cooperative (in French-speaking countries).

Legal form adapted to the exercise of economic activities and promoting professional management.

Democratic functioning, according to values similar to those of FOs ("one member, one vote" principle, members have a say in the cooperative's business).

Presence of controlling bodies.

DISADVANTAGES AND OBSTACLES

Many members have difficulty building up their initial contribution (shares).

Tight restrictions on the holding of multiple mandates: prohibition extended to the holding of multiple mandates in cooperative companies that do not have the same corporate purpose (in French-speaking countries).

Imprecise taxation (French-speaking countries).

In Nigeria, cooperatives' scope of activity is confined to the federal states. To operate at national level, they must obtain another registration with the federal authorities

In Ghana, legislation allows public authorities to intervene in the decision-making process.

In Sierra Leone and Gambia, the legislation is too old and not suitable for the current context.

F – Some examples of cooperative-type FOs' experiences

The USCCPA/BM (Union of cooperatives for marketing agricultural products from the Boucle du Mouhoun region) in Burkina Faso

Under the OHADA law, the UGCPA/BM (Union of groups for marketing agricultural products from the Boucle du Mouhoun region) in Burkina Faso changed its name to the USCCPA/BM: the Union of Cooperatives for Marketing Agricultural Products from the Boucle du Mouhoun Region.

Fifteen simplified cooperatives were created to form the USCCPA/BM. This restructuring operation reorganized the former bodies (as shown in the table below), without changing their established rights.

Table 1 – USCCPA/BM bodies

	Grassroots cooperative	Union (USCCPA/BM)
Bodies	> general assembly > management committee > oversight committee	> general assembly > board of directors > supervisory board > marketing action committee (CAC) > conciliation and arbitration board

As part of this reorganisation, the presence of young people and women in the bodies of the grassroots cooperatives and the union has been taken into account, although the articles of association do not expressly provide for a quota. As a result, young people have been appointed to head the board of directors of the union and simplified cooperatives. The more senior predecessors were appointed to lead the so-called "conciliation and arbitration board" with the aim of retaining experience and wisdom within the union and its member cooperatives.

In the union and the grassroots cooperatives, meetings are held regularly and cooperative principles are upheld. There is a manual of administrative, financial and accounting procedures as well as by-laws, which describe the process of collecting, storing and marketing agricultural products. Rules of good governance have been included in the internal rules of the grassroots cooperatives and the union. For example, it has been decided that the chairman of the management committee may not be re-elected more than twice in the same basic cooperative and his term of office may not exceed six years, including renewal, in the same simplified cooperative. The internal regulations also contain ethical rules such as: every member of a body must be concerned about the interests of all members and must take care not to favour certain members or their own selfish interests.

In order to ensure transparency in the management of all its operations and actions in the field and for the benefit of the cooperators' community, USCCPA/BM, using its own funds and contributions from TPF, has its accounts audited each year by an auditor. This allows obtaining the certification of its accounts.

Viim Baore cooperative, cooperative with board of directors (Burkina Faso)

Food Security Granary Network Support Unit (UA-RGSA) was initially a technical department of the National Federation of Naam Groups (FNGN). It then aimed to acquire its legal autonomy. With the support of the UA-RGSA's long-standing external partner, FNGN commissioned a study to identify the most appropriate legal form for the future institution. This process led to the creation of the first cooperative under the OHADA law in Burkina Faso in January 2015. The choice was made to create a cooperative with a board of directors in view of the size of its unions, the size of the assets managed by the UA-RGSA (more than CFAF 1 billion - 1.64 million US$) and its organisational and operational mode.

All Viim Baore cooperative members are legal entities: the FNGN federation, the external historical partner and the Naam unions (members of the FNGN and promoters of food-security granary), operating mainly in the form of associations or groups.

Since its creation, new unions have joined the Viim Baore cooperative and have increased its partnership capital (see table below).

Table 2 – Viim Baore cooperative's evolution

	Situation at the cooperative's creation (January of 2015)	Situation at the end of 2018
Partnership capital	12 F CFAF millions (19,730 US$)	22 F CFAF millions (36,172 US$)
Number of Naam unions	18	37

The board of directors is composed of twelve members. The five-member supervisory board intervenes at each board of directors to alert it of any situation that could compromise the continuity or peaceful management of the cooperative.

The alternation was carried out in accordance with the cooperative's articles of association, which provide for a three-year term of office renewable only once for directors. Thus, in 2018, six of the twelve members of the board of directors were replaced. The objective is to ensure succession. Although there is no statutory quota for women, this new council is composed of 6 women and 6 men on the basis of recommendations from member unions. In order to ensure transparency in the management of all its operations and actions in the field and for the benefit of the cooperative community, the cooperative is audited each year and has its accounts certified by an auditor. It is assisted in legal, social and tax matters by a law and tax firm.

It keeps within its ranks the register of cooperative shareholders as indicated by the OHADA law.

On the social level, the Viim Baore cooperative has adopted, with the approval of the Labour Inspectorate of the Yatenga region, a salary scale that takes much more into account the professional experience of employees than the diplomas acquired.

JUSSAF (Nigeria)

JUSSAF is a Nigerian umbrella organisation that operates at the national, regional and international levels. It was registered as a company limited by shares (a form of company governed by the Nigerian federal authority) in 2014. This allows it to engage in activities at the national and regional levels. JUSSAF is also registered as a cooperative in 4 states in northwest Nigeria. JUSSAF aims to support farmers' organisations operating local food reserves. To this end, it carries out various activities in the conservation, transport, marketing, etc. of foodstuffs. It has 2,500 members, most of whom are grassroots cooperative organisations. JUSSAF has two internal bodies, namely a General Assembly and a Management Committee comprising 7 members elected by the General Assembly. There is no control committee. The funds are administered by a treasurer, a member of the Management Committee, assisted by an employee accountant.

Meetings are held regularly, respecting the right of communication and the political rights of each co-operator. JUSSAF makes of its members capacity building a tool for the sustainability of the cooperative.

Table 3 - Summary of the different legal forms for FOs operating local food reserves

	Country	For-profit	OHADA	Constituent documents	Place of registration		Obligations	⊕ Advantages	⊖ Disadvantages
Association	French, Portuguese or English-speaking	No	No	Articles of association, by-laws, constituent meeting minutes and attendance list, list of board members	Administrative authority in charge of the territory		> Elect a GA and a committee (with a President, Treasurer and Secretary) > Keep an activity register and accounting records > If public subsidies received: provide annual accounts and financial report	> Easy creation > Flexible to run	> Flexible legislative framework and weak controls: risk of non-transparent management > Ambiguity about the possibility of carrying out economic activities: risk of reclassification as a commercial company
Group	French or Portuguese-speaking,	Yes	No	Similar to the procedure for setting up an association	Administrative authority in charge of the territory		> Elect a GA and a committee (with a President, Treasurer and Secretary) + a controlling body > Maintain the register of members and their contributions, the registers of the minutes of the General Assembly > External audit of accounts and management	> Simplified form of cooperative	> No legal rule concerning members' contributions: risk for financial management > Not provided for by the OHADA law
EIG	French or Portuguese-speaking,	Yes	Yes	> group contract > minutes of the constituent assembly	Business administration centres or commercial court registry of the place where the EIG's registered office is located		> EIG's activity must be complementary to that of its members > Prepare annual financial statements > Maintain a stock inventory book and the register of general meetings > Pay taxes (on wages, income, companies, business lease rents)	> Appropriate form for unions, in particular for group marketing FOs	> Governance and transparency issues (latitude to lay down management control rules) > Indefinite and joint and several liability of the members for debts contracted by the EIG. > Obligation to have an auditor.
Cooperatives	French, Portuguese or English-speaking	Yes	Yes				> Subscribe a share for any membership > For SCOOPS, a management committee elected by the GA, and an oversight committee (OHADA law) > For COOP-CA: a board of directors elected by the GA and a supervisory board (OHADA) > Periodic obligations to enable the regulatory authorities to carry out controls > Bookkeeping to the SYSCOHADA standard (French-speaking countries)	> Free registration > Reserve mechanisms > Tax exemption > Adapted to economic activities > Democratic functioning, values similar to those of FOs > Controlling bodies	> Difficulty for members to build up their initial contribution > Tight restrictions on the plurality of offices > Imprecise taxation (French-speaking countries) > Restrictive or inappropriate legislation (Nigeria, Sierra Leone and Gambia) > Involvement of public authorities in the decision-making process (Ghana)

G –Key points

➔ However, the associative form may be appropriate for umbrella organisations that do not act as commercial companies (distribute dividends, pay rebates, etc.), but confine themselves to defending their members' moral and material interests and promoting their members' food reserve activities.

➔ Despite some difficulties, the cooperative form is generally the most appropriate, from a legal viewpoint, for local grain storage. It upholds the values of the smallholder movement and is widely used in English-speaking countries; it is currently being promoted in French-speaking and Portuguese-speaking countries within the framework of the OHADA uniform act.

➔ To work well, a FO must have statutory texts suited to its actual circumstances. The choice of a legal form and the drafting of statutory texts are both far-reaching and infrequent steps in the life of a FO. The members should be closely involved in the process of drawing up these texts, with support from an expert with a knowledge of the law, a sound understanding of the realities of life for FOs and the ability to explain the issues at stake.

H – Further reading

LEGAL FRAMEWORK OF ASSOCIATIONS

Bu**rkina Faso**: Law No. 064-2015/CNT on freedom of association.

Côte d'Ivoire: Law No. 60-315 of 21 September 1960 on associations.

Guinea Bissau: Law No. 14/91 of 11 May 1991.

Guinea Conakry: Law L/005/013/AN establishing association arrangements.

Mali: Law No. 04-038/AN-RM of 5 August 2004.

Mauritania: Law No. 64.098 of 9 June 1964 on associations.

Niger: Order No. 84-06 of 1 March 1984 on association arrangements. Amended by Order No. 84-50 of 5 December 1984 and Law No. 91-006 of 20 May 1991.

Togo: Law of 1 July 1901 and Decree of 16 August 1901.

LEGAL FRAMEWORK OF GROUPS

Burkina Faso: Law No. 014/99/AN (OJ No. 24 1999) regulating cooperative societies and groups. Decree No. 2004-039/PRES/PM/MAHRH/MATD/MRA of 11 February 2004.

Guinea Conakry: Law L/2005/014/AN regulating cooperative economic groups, non-financial mutual societies and cooperatives.

LEGAL FRAMEWORK FOR ECONOMIC INTEREST GROUPS (EIGS):

OHADA Uniform Act on the Commercial Companies and Economic Interest Groups.

LEGAL FRAMEWORK OF COOPERATIVES

OHADA: OHADA Uniform Act on Cooperatives.

Willy Tadjudje. *Le droit des coopératives et des mutuelles dans l'espace OHADA*. Larcier, 2013, 565 p.

Nigeria:
- Edoabasi Udo, *Nigeria: Steps To Follow To Register A Non-Governmental Organization ("Ngo")* , see in the appendix.
- *Nigeria Company Act, 1963 (Act 179).*
- *Nigerian Co-operative Societies act*, see in the appendix.

Ghana:
- Owusu-Awuah, *Irene, Legal and policy framework of non Governmental Organizations – NGOs in Ghana,* see in the appendix.
- *Companies Act 1963*, see in the appendix.

Appendix
Chapter **2A**

https://bit.ly/3g3b1vK

CHAPTER 2B

Governance of farmers' organisations operating local food reserves

Table of Contents

A – Introduction

Governance refers to an organisation's ability to maintain itself and grow while working towards fulfilling its mission. Governance is based on a system of mechanisms and procedures for decision-making, performance and oversight, and on the ability of the different stakeholders to understand, comply with and enforce its mechanisms and procedures.

Farmers' organisations (FOs) operating local food reserves all have this in common: they conduct business to fulfil a social mission for the benefit of their own members and other communities. FOs' governance helps maintain the right balance between social aspects (directly linked to the mission) and economic aspects (to ensure the longevity of the mission).

The governance system depends on the organisation's legal form and structure. In West Africa, many local food-reserve organisations are either set up as cooperatives or intended to evolve into cooperatives. Accordingly, this chapter deals with the governance of cooperative FOs. This type of FOs comprises members of the community who voluntarily choose to band together to address a shared problem or to take advantage of an opportunity by setting up a collectively owned and democratically managed entity.

To carry out its work, a cooperative must have share capital consisting of all the shares of its members. The rules of operation are codified in texts (articles of association and rules of procedure) adopted during the general meeting. A cooperative is an association of persons (as opposed to an association of capital), and its smooth operation depends mainly on its members' involvement in the bodies that it has freely decided to include in its own structure. The democratic nature of their management style puts elected leaders at the very heart of governance. Some FOs, however, also employ staff to handle day-to-day management and carry out specific tasks, in which case governance also includes managing the FOs' human resources.

After providing a detailed description of the responsibilities of the different bodies during each phase of the local food-reserve storage cycle, this chapter proposes a few rules of best practice for managing organisations and their staff, and for gender mainstreaming.

This chapter is based on the provisions of the Acte Uniforme sur le Droit des Sociétés Coopératives (Uniform Act on Cooperatives), hereinafter the "UAC"), drawn up by the Organisation for the Harmonisation of Business Law in Africa (OHADA). This legislative framework is common to the nine French-speaking member countries of the Economic Community of West African States (ECOWAS). However, it also addresses the situation of non-OHADA member countries, since the principles underpinning cooperatives' operation are the same in all of the countries. Although it is recommended practice in most of the countries to form a cooperative, the "Charter on the operation of local food reserves" (see specific publication) contains a commitment to set up a formal body, which may take the form of an association.

B – Governance bodies of a cooperative FO

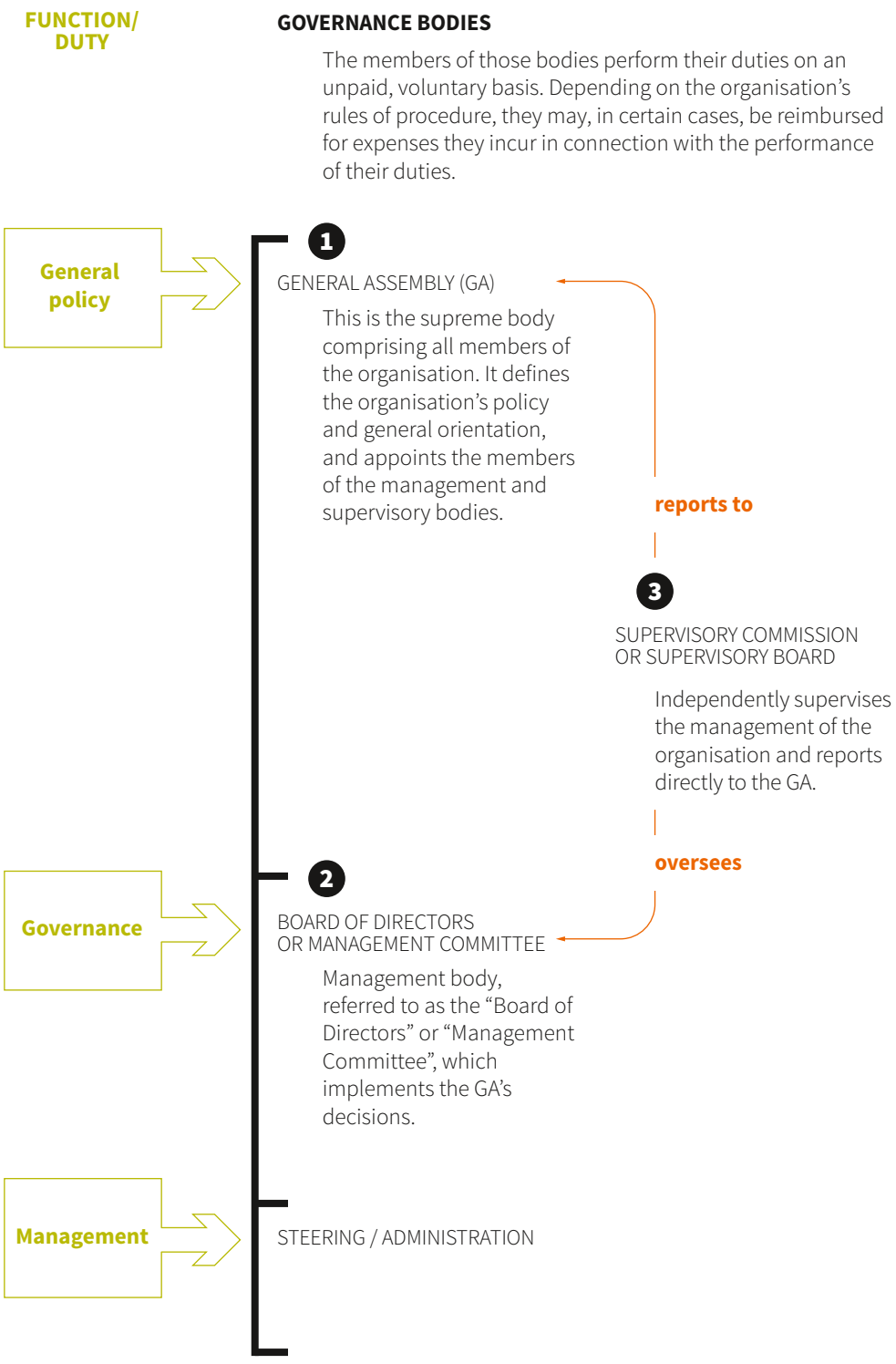
Whatever their legal form, local food-reserve organisations generally have three main bodies:

- the General Assembly*(GA): This is the supreme body comprising all members of the organisation. It defines the organisation's policy and general orientation, and appoints the members of the management and supervisory bodies;
- a management body, referred to as the "Board of Directors" or "Management Committee", which implements the GA's decisions;
- a supervisory body, referred to as the "Supervisory Commission" or "Supervisory Board", which independently supervises the management of the organisation and reports directly to the GA.

* SEE GLOSSARY

The members of those bodies perform their duties on an unpaid, voluntary basis. Depending on the organisation's rules of procedure, they may, in certain cases, be reimbursed for expenses they incur in connection with the performance of their duties.

DIAGRAM 1
The UNPCB's statutory bodies and specialised committees



To facilitate the implementation of its activities, the FO may also decide to set up specialised committees and assign them specific missions.

BOX 1
The UNPCB's statutory bodies and specialised committees

The National Union of Cotton Producers in Burkina Faso (UNPCB) has three statutory governance bodies:

> General Assembly (GA): the union's supreme decision-making body, comprising three representatives from each of the 28 provincial unions;

> Board of Directors (BoD): the union's executive body, comprising 12 members elected by the GA. Each BoD member has the status of director;

> Supervisory Board (SB): the union's body in charge of permanent internal oversight, comprising five members elected by the GA.

The GA has two specialised commissions: the "Inputs Commission" and the "External Relations Commission". The BoD has eight technical commissions: *Commission for Monitoring the Sale of Surplus Cereals, Commission for the Examination of Tenders, Recovery Commission, Staff Monitoring Commission, Organic Cotton Commission, BoD Commission for Cotton Companies, Commission for the Interprofessional Cotton Association of Burkina Faso (AICB) and Commission for the Buffer Fund Association (AFDL).* Each technical commission has more than four members.

The General Assembly of a cooperative FO

The GA is the supreme body and has the most extensive powers. It is composed of all shareholding members. Its decisions apply to everyone. All members are entitled to participate in the GA's deliberations and each member has one vote, regardless of how many shares he or she has. The GA is in charge of approving the financial statements and deciding how to allocate net income; electing the members of the various internal boards and committees; and approving (or not) agreements entered into between company leaders and the FO.

The Management Committee (or Board of Directors)

The composition of the management body depends on the organisation's legal form and size. For FOs set up as simplified cooperative societies*(SCOOPS), the body in charge of administration and management is a management committee (MC) of three to five members, depending on the size of the organisation (Art. 223 UAC). For FOs set up as cooperative societies with a board of directors*(COOP-BoD), the board of directors has between three and twelve members (Art. 292 UAC).

* SEE GLOSSARY

* SEE GLOSSARY

The MC/BoD is in charge of:

- defining the FO's objectives and orientation;
- approving each member's accounts;
- ensuring the application of cooperative principles for the management and allocation of net income;
- designing and coordinating the training programme for members;
- ensuring sound management of the FO;
- producing the FO's financial and chairman's report.

It is important to note that management responsibility lies with the MC/BoD. In practice, the MC/BoD may (if the volume of activity warrants it and if there are sufficient resources to do so) delegate the performance of day-to-day tasks to salaried staff, while

remaining in charge of management. If so, the role of the MC/BoD is to lay down the main lines, guide the salaried staff and closely monitor the results. In small FOs, the MC/BoD is directly in charge of management.

The Supervisory Commission, or Supervisory Board

The controlling body of an FO set up as a SCOOPS is a supervisory commission (SC) comprising three to five natural persons elected by the GA (Art. 258 UAC). The controlling body of an FO set up as a COOP-BoD is a supervisory board (SB) comprising three to five natural persons elected by the GA from among the FO's members. (Art. 335 UAC).

Those controlling bodies can, at any time, check or have a third party check the management of the cooperative's leaders. The controlling bodies inform the umbrella cooperative (if one exists) of any irregularities observed, and convene, if necessary, a general meeting to decide what measures to take.

NB: COOP-BoDs with over 1,000 members, revenue greater than CFAF 100 million (164,419 US$) and a balance-sheet total greater than CFAF 5 million (8,220 US$) are required to appoint a statutory auditor selected from the list of approved statutory auditors in the country. The statutory auditor is appointed by the GA for a three-year period. The statutory auditor is optional for SCOOPS (Art. 121 UAC).

BODIES	COOPERATIVE FOs' CATEGORIES	
	SCOOPS	COOP-CA
GA	All shareholding members	
Management body	CMC: 3 to 5 members depending on the size of the organisation (Art. 223 UAC)	BoD: 3 to 12 members (Art. 292 UAC)
Controlling body	Supervisory Commission: 3 to 5 natural persons elected by the GA (Art. 258 UAC)	Supervisory Board: 3 to 5 natural persons elected by the GA (Art. 335 UAC)

C – Roles of the governance bodies during the different phases of the cycle for managing local food reserves

This section examines the roles of the different bodies during the four main phases of the local food reserves management cycle: (1) stocking/replenishment of reserves; (2) conservation of reserves; (3) sale and (4) storehouse maintenance after destocking.

In all FOs, at least part of the cycle is handled by the grassroots entities that manage the decentralised storehouses, with the umbrella entity playing a supporting role. Depending on the FO, certain phases of the cycle can be centralised, either partially or entirely, within the umbrella entity. That is the case, for instance, with group marketing FOs, in which the replenishment of reserves (collection) is decentralised and sales are usually centralised. Some FOs even have one or more intermediate levels. As a result, most FOs manage both decentralised storehouses and central storehouses. The following remarks apply to the different levels in charge of the phase in question.

C.1 Phase 1: stocking/replenishment of reserves

ROLES OF THE GA

The GA is mainly involved before the operation (preparing the operation) and after the operation (reviewing and approving the purchasing committee's report).

Before the operation, the GA approves the action plan proposed by the MC/BoD and:

- analyses previous management outcomes and lessons learned;
- defines the quantitative and qualitative objectives for the current year;
- determines the financial and material resources to mobilise;
- chooses the purchasing procedures (competitive bidding for an order, collection in full or in part from members, price for purchases from members, price for purchases from non-members and duration of the operations);
- sets the terms of remuneration for the purchasing committee.

At the end of the reserve replenishment operations, the GA reviews and rules on the report on the replenishment of reserves presented by the MC/BoD. The report should provide an overview of the situation at the end of the replenishment operations: reserves purchased (quantity and quality by type of product), purchasing prices, purchasing expenses and cost of purchase. The GA must also analyse and rule on the controlling body's report on the reserve replenishing operations.

Compliance with those rules varies depending on the type of FO. On the whole, marketing FOs comply with them. In group supply FOs, however, the MC/BoD sometimes takes the place of the GA to make certain decisions, particularly to determine purchasing procedures and establish the purchasing committee's remuneration. In order to ensure compliance with those rules, they must be formalised in the FO's rules of procedure.

ROLES OF THE MC/BOD

The MC/BoD is responsible for carrying out purchasing operations in compliance with the GA's decisions. The MC/BoD determines which tasks to delegate to its members and to salaried staff. It must ensure that all replenishment operations are properly carried out:

1. check the availability of materials and the physical state and cleanliness of the storehouse;
2. set up a purchasing committee comprising elected members and salaried staff working under its authority;
3. check that all cash-flow operations and flows of goods are correctly recorded;
4. check compliance with warehousing rules (use of pallets, space between reserves and the wall) to ensure proper conservation of the commodities and to facilitate counting;
5. at the end of the replenishment operations: internal assessment and preparation of a report on the operations, highlighting strengths and weaknesses;
6. submit the report to the GA for analysis and validation;
7. submit to the controlling body any information needed to fulfil its mission.

In some cases, the MC/BoD does not report to the GA in due time. Often the results are not available at the end of the operations, the operations last too long and the price set by the GA is exceeded.

Roles of the controlling body

The role of the controlling body is to verify that the replenishment operations were performed in compliance with the decisions of the GA. More specifically, it checks: storage conditions and warehousing rules; performance of the purchasing operations by the authorised persons; that the quantity of reserves is consistent with cash outflows (consistency between cash flows and the flow of goods); the quality of the reserves; that purchasing prices match market prices; compliance with deadlines. On completion of its task, it prepares a report, which it presents to the GA. If the FO is affiliated with an umbrella entity, the controlling body informs the latter (Art. 262 and 340 UAC) of any irregularities observed.

The controlling body plays an important role in the process of replenishing reserves, allowing members to know whether the operations were performed in the interests of the FO. However, it is clear that this body does not always fulfil its role, particularly in grassroots organisations. The members' technical capacities are commonly cited as a problem.

For this body to be effective, its members must be chosen in compliance with the criteria defined by law (Art. 258, 259, 335 and 336 UAC) and they must receive appropriate training for carrying out their mission.

C.2 Phase 2: conservation of stocks

Between the replenishment and sale of stock, the stocks need to be managed and stored in good conditions to avoid losses that could jeopardise the FO's financial stability and operational efficiency.

Roles of the GA

Under normal circumstances, the GA has no specific role in the day-to-day management or conservation of the reserves, which are purely operational activities. If a problem arises, however, the GA may be called on to intervene by the controlling body or by a group of at least one-quarter of the members (for SCOOPS, Art. 232). The GA then makes a decision regarding the problem and takes the necessary measures.

Roles of the MC/BoD

The MC/BoD has primary responsibility for the conservation of the stored commodities, the security of the storehouse and the integrity of the reserves. It appoints a manager who works under its authority. The manager's duties include inspecting the storehouse and its surroundings, maintaining the cleanliness of the interior and exterior of the storehouse and constantly monitoring the products throughout the storage period.

In general, this role is carried out satisfactorily, particularly in marketing FOs. Supply FOs, however, sometimes lack certain pieces of equipment needed for proper storage, such as pallets.

Roles of the controlling body

The controlling body checks compliance with proper storage conditions and the integrity of the reserves. To do so, it needs to visit the storehouse at least once a month to check the stock cards and verify that the reserves recorded on paper correspond to the amount of reserves actually in the storehouse. If a discrepancy is observed, the controlling body alerts the entity in question (BoD, GA, umbrella entity).

Within group supply FOs, monitoring of the physical inventory and storage conditions is not performed on a regular basis. This is due mainly to the high number of storehouses to monitor over a relatively large area. Group supply FOs do not always have the necessary resources to perform monitoring as rigorously as desired.

C.3 Phase 3: sale

This is one of the most important phases in the local food reserves management cycle and the FO's financial viability hinges on its success. This operation should be performed in three steps: preparation, the actual sale, and review.

Roles of the GA

The main role of the GA (particularly in supply FOs) is to create the right conditions for successful sales. To this end, the GA should:

- decide on the starting date and the days on which stock will be sold;
- decide on the terms of sale to apply (cash, credit, etc.), depending on the context, the FO's particular circumstances and the social policy to adopt for the most disadvantaged buyers;
- decide, if necessary, on quotas to apply (quantity to sell per member, quantity to sell to non-members, etc.);
- set a sale price per unit of measurement (kg, bag, local unit of measurement) that is beneficial for the members, while ensuring the organisation's financial stability and working towards its growth objective;
- decide on the terms of remuneration for sales committee members;
- examine and approve the sales report submitted by the MC/BoD.

The sales operation is generally prepared by the GA, particularly in group supply FOs, where it is an internal operation. For marketing FOs, certain roles are directly assumed by the MC/BoD in order to efficiently meet market requirements.

Roles of the MC/BoD

The MC/BoD is in charge of the actual sales operations. It appoints a sales committee comprising elected members (the elected members may not belong to the controlling body) and salaried staff. Under the authority of the MC/BoD, the sales committee checks the quality and quantity of the reserves beforehand; performs the sales operations in accordance with the terms defined by the GA; keeps the funds safe by establishing a

management system that minimises the risk of theft, fire, misappropriation, etc.; and draws up periodic reports on reserves, cash inflows and credit for the MC/BoD.

After the end of the sales operations, the MC/BoD draws up a profit and loss statement which it submits to the GA for approval. The GA then decides how to allocate the net income. The MC/BoD provides the controlling body with all the necessary information about the sales operations.

The MC/BoD is the body with the most active role in sales operations, whether internal or external, and it coordinates all of the associated operations.

Roles of the controlling body

The members of the controlling body (in possession of the minutes of the preparatory general assembly) should make frequent, unannounced visits to the storehouse where the sales take place to check whether the operations comply with the GA's decisions. They are to ask the MC/BoD for any information they need to carry out their mission. The members of the MC/BoD are required to provide them with the information they request. The controlling body then prepares a report on its investigations and presents it to the GA after the sale.

For the same reasons as mentioned in the previous steps, sales are not systematically monitored, only when members have reported a problem.

C.4 Phase 4: storehouse maintenance

Experience has shown that once the sale has been completed and the storehouse emptied, the storehouse often remains closed for months without being looked after by anyone. But, just like funds, the storehouse needs to be kept safe and secure. This avoids costly repairs when reserves are replenished, and helps maintain an acceptable level of cleanliness both inside and outside the storehouse. Storehouse maintenance techniques are described in detail in Chapter 5b.

SEE CHAPTER 5B

Roles of the MC/BoD

During this phase, the MC/BoD monitors the state of the storehouse and performs routine maintenance. It keeps the equipment in good working order (it must be kept inside the storehouse) and keeps the interior and immediate vicinity of the storehouse clean.

Roles of the controlling body

inspect the state of the storehouse and equipment. They report any abnormalities to the MC/BoD and, if necessary, to the GA.

C.5 Securing funds

Group supply FOs in farming areas generally engage in two types of sale: cash sales and sales paid on credit. Within FOs that mainly engage in cash sales, cash flows are relatively high. Depending on the area and the market situation, the time between sale and replenishment can sometimes be long (3 to 6 months). The different bodies are therefore responsible for taking measures to secure the FO's funds during those inactive periods.

Roles of the GA

The GA takes preventive measures by setting out, in its articles of association and rules of procedure, the procedures for securing funds and the suits for civil liability that may be brought against the cooperative's officers (Art. 122 to 132 UAC).

Roles of the MC/BoD

The MC/BoD secures all funds in an account at a reliable financial institution. Since current account fees can be expensive, it is more practical for grassroots FOs to open a dual-signature savings account (for which the fees are lower).

Roles of the controlling body

When it comes to securing funds, the controlling body verifies that all of the funds are actually secured in a dual-signature account (requiring two authorised signatories) at a reliable financial institution. It periodically checks the account balance and verifies that no fraudulent withdrawals have been made. If any abnormality is detected, the controlling body informs the GA immediately.

PHASES OF THE LOCAL FOOD RESERVE MANAGEMENT CYCLE	FO's BODIES		
	GA	MC/BoD	Controlling body
Stocking/ replenishment	> Prepares the operation > Reviews and approves the purchasing committee's report	> Carries out the purchasing operations	> Verifies the replenishment operations
Conservation of reserves	> Intervenes in the event of a problem if called upon by the controlling body or by a group of members	> In charge of the conservation, security and integrity of the reserves	> Verifies compliance with proper storage conditions and the integrity of the reserves
Sale	> Creates the right conditions for the sale to be completed	> Carries out the sale operations > Appoints a sales committee > Draws up and presents a profit and loss statement	> Verifies the sale operations
Storehouse maintenance	N/A	> Monitors the state of the storehouse > Performs routine maintenance of the storehouse and equipment	> Inspects the state of the storehouse and equipment > Presents an investigation report after the sale
Securing funds	> Adopts preventive measures to secure funds	> Secures funds at a reliable financial institution	> Verifies that the funds are secure at a reliable financial institution > Checks the balance periodically

D – Best practices

D.1 Best practices in organisation and administration

ACTIVE PARTICIPATION OF MEMBERS IN FUNDING AND DECISION-MAKING

What makes a cooperative FO unique is that its members actively participate in funding the organisation and making decisions. As a company, the cooperative must have a partnership capital comprising all of its members' shares. There are several different types of shares (shares issued in exchange for a cash contribution, shares issued in exchange for a contribution in kind and shares issued in exchange for a contribution of labour; Art. 33 UAC). In the spirit of one of the seven universal cooperative principles ("*members' economic participation*"), each member must have at least one share. That participation gives each person the status of "member" and the right to participate in the democratic decision-making process (one member, one vote).

ASSIMILATION OF TEXTS AND RULES OF OPERATION BY ALL MEMBERS

FOs draft articles of association and rules of procedure to gain recognition from public authorities and to organise how they operate internally. Those texts serve as the basis for the creation of the FO and its day-to-day operations. Unfortunately, members (including leaders) are sometimes unfamiliar with the articles of association and rules of procedure. Some organisations may not even have these documents. Consequently, internal disputes are settled without referring to the texts designed for that purpose. Before the OHADA law came into force, those texts were drafted in accordance with national laws◆. Now, the texts must be drafted in compliance with the 18 mandatory provisions outlined in Article 18 of the UAC◆.

◆ SEE TEMPLATES IN APPENDIX

Cooperative educational sessions for members on key topics—such as members' rights and responsibilities, and cooperative identity—are necessary (on average once a month for 1 year) for the assimilation and application of the texts.

BOX 2
Cooperative education: the TELWA and SA'A federations in Niger

With the help of their internal leaders trained by Afrique Verte, the TELWA federation in Agadez and the SA'A federation in Zinder (both in Niger) organised cooperative educational sessions that helped their members better understand the country's laws on cooperatives and encourage greater participation in the life of their organisation. This is why the leaders of the SA'A federation in Zinder are regularly appointed to represent the region's FOs at meetings with the government and with partners.

Today, cooperative educational initiatives need to be conducted on a widespread basis to achieve a proper understanding and application of the OHADA UAC.

NON-DISCRIMINATORY APPLICATION OF THE TEXTS

If the articles of association and rules of procedure no longer serve as benchmarks for the FO's routine operation, then the settlement of internal disputes and decision-making by leaders are not immune from discrimination, whether intentional or unintentional.

In order to avoid arbitrary decisions, leaders must have a solid understanding of the content of the texts and apply the texts without discrimination. Leaders must therefore receive training to that end.

METHOD FOR CHOOSING LEADERS AND STAFF ON THE BASIS OF APTITUDE AND QUALITY RATHER THAN SOCIAL STATUS

FO's leaders should not be chosen on the basis of their social status, but rather for their skills and their desire to work for the benefit of the members. Many FOs have failed because of an inappropriate choice of leaders. A person co-opted to lead an FO does not feel accountable to the members. The same applies for staff and for certain functions requiring proven technical aptitude.

Compliance with the criteria and method for choosing leaders and staff is a prerequisite for good governance and sound management of an FO.

UPHOLDING THE SEGREGATION OF DUTIES WITHIN THE FO

The law provides for different bodies within a FO because certain functions are mutually incompatible. Diagram 1 shows that a FO set up as a COOP-BoD has at least four functions. Under the principle of subsidiarity, the GA may not perform the functions attributed to the MC/BoD. Likewise, the MC/BoD must also let the staff handle its own work. Lastly, leaders and their close connections may not exercise an oversight function (they may not be both "judge and party").

Maintaining the segregation of duties is the bedrock of democracy and, therefore, of good governance.

EFFICIENT AND APPROPRIATE OVERSIGHT SYSTEM

The controlling body plays an important role in each of the four steps involved in managing local food reserves. And yet, it is often the least efficient body and seems to be the least rigorous in the selection of its members.

In order for the controlling body to function efficiently, its members must be chosen very selectively, based on the qualities required for the job. They should be respectable and respected within the organisation and the community at large; hard-working and disciplined; able to read and write; and not have a first-degree relative sitting on the MC/BoD. Moreover, given the technical nature of the oversight function, anyone doing this job must also be trained in FO's oversight techniques.

The umbrella entity (if there is one) must also play a role in overseeing its member organisations. It must support the members of the FO's controlling body and take the initiative to conduct its own monitoring. It may be advisable for each FO umbrella entity to set up a specialised internal control unit to train and support the controlling bodies of the grass-roots FOs in their missions.

The mandatory periodic monitoring by the public supervisory authority is the third level of control designed to avoid, or at least curb, slip-ups in FO's governance and management. Currently, there is still insufficient such monitoring.

SYSTEM OF REIMBURSEMENT OF DIRECTORS' EXPENSES

FO's directorships are voluntary duties: directors are not paid for the time they dedicate to the organisation. The expenses incurred (money actually spent and the working time lost through travel) should therefore be reimbursed in accordance with the rules of ethics and subject to rigorous management. The rates applied must be reasonable and on a par with prices in the market or sector. Care must also be taken to ensure that expenses reimbursed by a partner are not also reimbursed by the FO.

All reimbursed expenses must be justified by documentary evidence. The type of expenses generally incurred in connection with the organisations' activities are transport expenses (actual cost); meal expenses, within a reasonable limit, and loss of working time owing to travel (during very busy periods), at the local rate.

D.2 Best practices in staff management

HUMAN RESOURCES MANAGEMENT POLICY, TAILORED TO THE DIFFERENT TYPES OF FOs

The type of human resources used by a FO will depend on its size and level of structure. In grassroots FOs supplying cereals or stockfeed, the salaried staff is often composed of a manager and a storekeeper. In principle, the secretary elected to the MC/BoD is in charge of keeping administrative records and meeting minutes. However, if the FO has scant financial resources, the secretary can replace the manager. If so, the storekeeper is the FO's only salaried staff. The work is part-time (the busy periods are the stock replenishment and sale phases). Grassroots FOs need to be attentive to the status of the people involved in managing and maintaining the reserves. There are two scenarios. Either they are volunteers who are reimbursed for their expenses (see above regarding the reimbursement of expenses for directors), or they are paid to perform tasks under the supervision of one of the FO's leaders. In the latter case, they are deemed to be employed by the FO, regardless of whether or not there is a written employment contract. In general, the recommended practice is that, once the GA has decided on the terms and conditions of their employment, the persons in question and the MC/BoD sign a document summarising their tasks.

SEE TEMPLATES IN THE APPENDIX

Marketing FOs (set up as COOP-BoD) whose operations are relatively large-scale and complex need a professional manager. The manager may be assisted by several agents, including at least one storekeeper. Depending on the size of the FO and the business opportunities, relations between staff and the FO may be governed by a seasonal contract or a part-time contract.

SEE TEMPLATES IN THE APPENDIX

Umbrella entities (unions and federations) are managed on a day-to-day basis by a director, who must be skilled in managing organisations. Relations between staff and the umbrella entity are governed by labour law.

SYSTEM FOR REMUNERATING SALARIED STAFF

Remuneration for temporary or permanent salaried staff is based mainly on the nature of the relations between the salaried employee and the FO. For storekeepers, remuneration must be permanent, but weighted according to the periods of activity. For managers, remuneration may be partly fixed and partly proportional (depending on the level of activity or net sales).

BOX 3
Terms of remuneration for the sales committee: examples in Niger

In the Maradi and Zinder regions, the common practice for supply FOs is to remunerate the sales committee (manager and storekeeper) in proportion to the volume of sales at a rate of CFAF 200 per 100kg bag.

The sales committee of the Goundey FOs (Tillabéry region) is remunerated based on net sales. The manager's portion is larger.

For all of those FOs, the rules are set by the GA.

Directors of unions and federations receive fixed monthly remuneration. As with managers, it is reasonable to minimise the fixed portion and link a portion to net sales. In all cases, the BoD must perform an annual assessment of the employment contract before it is renewed.

STAFF TRAINING AND EDUCATION

To better understand the environment in which they work, salaried employees must have a thorough grasp of the principles of professional conduct and ethical values of the organisation that employs them. This applies to FO's staff too. They must receive training in the cooperative's identity (definition, values and principles), just like members. Each employee must also receive specific technical training for their job. It has been observed that only technical training (in accountancy/management or storage) is funded by the partners. Almost none of the statutory funds provided for by law (Art. 114) to train members are provided by the FO, as they lack the resources to do so. Against this background, one solution would be for public authorities to set up a programme to train and educate FO's members so that they can develop a better understanding of cooperative identity, the organisation and how cooperatives operate, and gain skills in technical functions.

E – Gender considerations in FOs' governance

E.1 Choosing members for governance bodies based on criteria that are fair for men, women and young people

The lack of gender balance in the choice of governance bodies' membership is rooted in the organisation's membership principles. When a FO is set up, it is generally the head of the family who joins. Even female heads of household have difficulty joining. However, women and youth have technical and moral qualities that can better serve the FO. To remedy the situation, certain partners (e.g. UNICEF and the PPILDA project in Aguié, Niger) have tried to promote female-only FOs. Sometimes, that promotional work has been done on the initiative of the women themselves.

E.2 Gender equality in the composition of governance bodies and in the division of roles among members

When membership becomes open to everyone without distinction, the composition of governance bodies must take into account the different types of members, their skills and their specific values. People with sound judgement and the ability to draw people together are a good choice for the position of chairperson. FOs must make gender equality a fundamental principle of governance by adding special provisions to their texts.

E.3 Gender equality in the choice of wage-earning staff

FOs need stable, available staff. Staff turnover sometimes leads to decline or even failure. In grassroots FOs, however, the most stable staff have proved to be women, and men who are not involved in the seasonal exodus. As far as possible, FOs should recruit part of their salaried staff from these groups. Unions and federations should give priority to recruiting young people to manage and train members, and to teach them about cooperative principles.

F – Key points

➔ Good governance is essential to ensuring the efficiency and longevity of local food-reserve organisations.

Within each FO, it is very important for the prerogatives of each governance body to be respected:

- the General Assembly, which establishes the FO's orientations, approves the accounts and appoints managers;
- the Management Committee (or board of directors), which is responsible for the smooth operation of the FO's activities, particularly with regard to local food reserves;
- the controlling bodies (supervisory commission or supervisory board), which verify the quality of managers' performance of their management duties, and report their observations to the general assembly.

➔ At every stage in the management of local food reserves (stocking/replenishment, conservation, sale, storehouse maintenance), each of those bodies has specific tasks to accomplish and responsibilities to fulfil.

➔ To improve their governance practices, local food-reserve organisations must give special consideration to the following points:

- active participation of members in funding and decision-making;
- assimilation of the organisation's rules of operation by all of its members;
- application of rules within the organisation without any discrimination;
- segregation of duties between the different bodies (GA, MC/BoD and controlling bodies);
- creation of an efficient oversight system tailored to each FO;
- transparency and rigour regarding the reimbursement of expenses to members of the management committee (or board of directors);
- definition and implementation of a human resources management policy that is tailored to the FO's volume of activity;
- equality between women and men in the composition of governance bodies, in the division of roles among the members of those bodies and in the recruitment of salaried staff.

G – Further reading

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Appendix
Chapter **2B**

https://bit.ly/31nwNq9

CHAPTER 3

The financial aspects of local food reserves

Introduction

To carry out their local food reserve operations, farmers' organisations (FOs) need infrastructure (mainly buildings), equipment (in particular for cleaning grains) and working capital (since the stored commodities are immobilised for several months), which together represent substantial sums of money. It is essential, therefore, for a FO operating local food reserves to define a strategy for obtaining financing that is commensurate with its needs and capacities. Once the financial resources have been secured, it is very important to manage them rigorously and transparently to guarantee the organisation's economic viability, strengthen its good governance and build lasting trust on the part of the financial institutions and the technical and financial partners.

This chapter is divided into three subchapters, each of which examines a different aspect of financing local food reserves.

The first deals with the four instruments FOs can use to finance their local food reserve operations, namely: the FOs' own funds (members' contributions and cumulative profits from previous years), subsidies, loans from financial institutions, and blended finance. The benefits and drawbacks of each of these instruments are analysed. This subchapter also provides guidance about the most appropriate instruments to use for different purposes, specifically infrastructure and facilities, working capital, and running expenses (salaries, electricity, etc.).

The second subchapter is devoted to the system known in French as warrantage and in English as the inventory credit system. This financial mechanism enables an individual farmer or a FO to secure a loan against collateral in the form of a stock of semi-perishable agricultural products. If the loan is not paid off by the end of the agreed term, the lender will be entitled to sell the stock pledged as security to recover the amount owed. Warrantage takes a wide variety of forms, from simple community warrantage through to the warehouse receipt system or community double-lock warrantage. This subchapter examines the benefits and drawbacks of each of these mechanisms.

The third and final subchapter presents the basic principles and main tools used for a FO's accounting and financial management. It covers the statistical tools used to track production, inventory and marketing, along with the accounting and financial tools (inventory, journal, cash book, bank book, financial statements, etc.), pointing out the importance of these tools for the organisations' economic viability and good governance. It then deals with the functions of financial control and accountability to members.

CHAPTER 3A

Financing instruments for local food reserves

Table of Contents

A – Introduction

Local grain storage is an activity with an economic and social function. Local grain storage relies on the ability of farmers' organisations (FOs) to mobilise financial resources for harvesting in order to build or replenish reserves and to provide growers with income at harvest time to avoid selling their produce at cut price.

Access to finance is a key parameter for the viability of FOs operating local food reserve operations. Indeed, whether it concerns group marketing systems, feed banks, or group supply systems, the local food reserve activity involves mobilising considerable resources in the form of buildings and equipment, working capital* to replenish reserves and to cover various operating costs (salaries, travel, etc.). Where and how to find the money to finance these different operations? These are the questions this chapter will attempt to answer.

SEE GLOSSARY

As a first step, this chapter will review the various financing instruments available, i.e.: (1) own funds (contributions from members and income from activities); (2) subsidies (from public authorities, cooperation partners and private individuals); (3) loans from financial institutions and (4) blended financing. Next, the chapter will present best practices for financing (1) infrastructure and equipment; (2) working capital to carry out operations and (3) operating expenses. In addition, as local grain storage is an activity that carries with it various risks (unfavourable price movements, defaulting customers, etc.), this chapter will also address some of the measures/provisions that FOs can take to deal with these problems.

SEE CHAPTER 7

B – What are the different financing instruments used by FOs operating local food reserves?

FOs operating local food reserves have recourse to various financing instruments to cover their different financing requirements.

B.1 Own funds*

* SEE GLOSSARY

These include members' contributions (almost all FOs draw on members' contributions, shares or membership fees, which constitute their own funds); deductions from the group sales made by group marketing FOs; income from the sale of field crops and other community outputs; income from renting storehouses, equipment (e.g. cleaning lines, oven, etc.) or plots of land; income from the provision of services by a group of members providing labour; and financial income generated by deposits with financial institutions

B.2 Subsidies and donations

– **State or local community subsidies**

These subsidies correspond in particular to the consideration of the needs of FOs in community development plans and donations of community land to enable storehouses to be built

– **Subsidies from technical and financial partners (TFP)**

Subsidies awarded by TFPs, which are most often non-governmental organisations (NGOs), concern several areas, in particular institutional support and access to finance from financial institutions (guarantee funds, support for capacity building, etc.). Increasingly, these subsidies are awarded through calls for projects that bring together a number of farmers' organisations.

– **Local subsidies or *love money***

Sometimes members of the diaspora or people living locally provide finance to help FOs operating local food reserves finance their investments (infrastructure and equipment) or their running expenses. This type of subsidy is called 'proximity capital' or '*love money*', due to the family connections of the people who provide it and the spirit of solidarity that drives them to do so.

B.3 Loans from financial institutions

Some FOs approach banks and microfinance institutions (MFIs), also called Decentralised Financial Systems (DFS), to take out loans to meet their various financing requirements. Most are cooperatives' federations, borrowing on behalf of the grassroots unions. But grassroots unions sometimes take direct action to access local financing opportunities and then ask federations for a guarantee.

The high interest rates charged by financial institutions quite often limits FOs' access to this kind of financing. In some countries, State subsidies can lower the cost of loans (see box below).

BOX 1

How subsidies can lower the cost of loans: the case of Kaduna State (Nigeria)

In 2015, an agreement signed between the Kaduna State Government and the ***Bank of Agriculture*** (BOA) helped lower the cost of interest on agricultural loans.

The state government contributed 500 million naira, while the BOA contributed another 500 million naira, making a total of 1 billion naira in loans to farmers (€2.5m).

To qualify for a loan, a farmer must open an account with the BOA for a minimum amount of N5,000. The maximum amount of loans granted without a guarantee is N250,000 for individuals and N2.5 million for cooperatives. A guarantee is required for amounts above these.

Recovery of loans is carried out by cooperatives and the bank. The interest rate is 10%, but the state subsidy means that the rate actually borne by farmers is only 5%.

B.4 Blended finance

Most FOs combine two or three funding sources to cover their financing requirements. This is called blended financing: a combination of own funds and subsidies from TFPs and/or loans for the construction of storehouses or for the purchase of certain items of equipment, particularly for grassroots unions. There are also cases in which FOs participate in calls for projects to mobilise resources to supplement their own funds.

C – What are the advantages and disadvantages of the different financing instruments?

The table below summarises the advantages and disadvantages of the various instruments available to FOs to finance their food reserve activities.

Table 1 – Comparison of financing instruments for FOs operating local food reserves

Financial in-strument	Advantages	Disadvantages	Potential
Own funds	> Ensure the long-term viability of the activity > Do not incur expenses for the FO > Processing operation is short and simplified	Generally insufficient, leading to slow development of activity	Economic development model (boost practices based on the logic of long-term viability)
Subsidies and donations	> Support the social mission of local food reserves > No cost	> Subsidies are scarce > Cannot be obtained at any specific time	Long-term support to build capacity
Bank loans	> High amounts available > Activities can be rolled out rapidly	> Difficult conditions attached, including interest rates > Timeliness of pay out	Development of suitable financial products
Blended finance	Combines at least two complementary instruments	Complementarity of funding sources	Used increasingly frequently, very useful to support the development of local FOs

It is important to emphasise that the main source of finance and the major guarantee for access to external funding (subsidies or loans) for all grassroots FOs implementing local food reserves are essentially based on the federation to which they are attached. This system of sponsorship by a parent (or umbrella) company ensures better governance of physical reserves as well as better accountability for the use of financial resources •.

SEE CHAPTER 2B

D – How do FOs finance their infrastructure and storage facilities?

For the financing of infrastructure and equipment, recourse to loans is almost non-existent, given the low profitability of the activity (particularly in the case of group supply systems) and especially the duration of the depreciation of these fixed assets.

These assets must therefore be financed by the organisations' own funds and internal resources, or by obtaining subsidies and donations, particularly with regard to infrastructure (the cost of which is sometimes very high).

D.1 Financing infrastructure

There are four ways of financing storehouses:

- Large-capacity storehouses for federations are almost exclusively financed by subsidies from technical and financial partners (the case with several federations: Viim Baore, Mooriben, USCCPA/BM, Faso Jigi, Tassaght…), from the State, from local communes (the case with the *Réseau Billital Maroobé* (RBM)), or from regional institutions (the case with the West African Economic and Monetary Union (WAEMU)) or the Economic Community of West African States (ECOWAS), as was the case for the *Centrale des Producteurs de Céréales du Togo* (CPC-Togo);
- Community storehouses of grassroots groups are usually built using their own funds and labour supplied by their members. This is the case, for, example, at Viim Baore and Mooriben;
- Some storehouses are built by large farmers with significant financial capacity, who then make them available free of charge to other members of the FO (in the case of CPC in Togo);
- Some infrastructure is built by private companies that then rent them to FOs (in the case of the Ghana Grain Council).

BOX 2
WAEMU financing of food reserve storehouses

The West African Economic and Monetary Union (WAEMU) has financed the most ambitious programme in recent years for the construction of storehouses in West Africa. The programme started in 2010 and involves the construction of 422 stores in the eight countries of the Union, with a total capacity of 290,000 tonnes.

The storehouses built range from small 10-tonnes stores to large units with a capacity of 2,000 to 4,000 tonnes.

The planned investment amounts to CFAF 25 billion (US$ 41M), of which 90% is complete. It includes not only the construction of buildings and drying areas, but also the purchase of cleaning equipment and capacity building for the farmers' organisations.

	Storage capacity in tonnes											country total
Country	10	100	150	250	350	400	500	1,000	2,000	3,000	4,000	
BENIN								6	15	1	2	47,000
BURKINA FASO				24			39					25,500
CÔTE D'IVOIRE			10		17							7,450
GUINEA BISSAU	15				15					3		14,400
MALI		36		1		2	11	14				24,150
NIGER							4	30				32,000
SENEGAL								111				111,000
TOGO	30				30					6		28,800
TOTAL	45	36	10	25	62	2	54	161	15	10	2	290,300
Storage capacity	450	3,600	1,500	6,250	21,700	800	27,000	161,000	30,000	30,000	8,000	290,300

Source : WAEMU Commission

D.2 Financing equipment

Financing of equipment is usually blended, due to the nature (large or small) of the equipment. For large equipment (cleaning and grading line, drying area, etc.), FOs benefit from subsidies but also provide their own contributions. As this type of equipment is very high, FOs do not have sufficient resources of their own to buy them. As a result, in most cases the majority of resources come from donors, not from their own funds. The need to use large equipment to meet quality standards is more relevant to group marketing FOs, especially if they target public sector markets. With regard to small equipment (post-harvest equipment, office equipment, etc.), FOs generally combine loans and own funds. Group marketing systems have easier access to bank financing because of their higher level of profitability and shorter payback time. On the contrary, group supply systems and livestock feed banks, which are less profitable because more involved in a social mission, are more dependent on subsidies to finance their equipment.

BOX 3
Financing arrangements for equipment: examples

USCCPA/BM (Burkina Faso)

For the acquisition of a cereal cleaning and grading unit with a capacity of 3 tonnes per hour, *Union des sociétés cooperatives pour la commercialisation des produits agricoles de la Boucle du Mouhoun* (USCCPA/BM) asked UPA *Développement International t*o draw up the business plan and terms of reference. The equipment, valued at CFAF 55,500,000 (US$ 91,252), was purchased with subsidies from three partners: AFDI/European Union (CFAF 40,000,000, US$ 65,767), WFP (CFAF 10,000,000, US$ 16,441) and *Œuvre Léger* (CFAF 5,500,000, US$ 9,043 US$). USCCPA, for its part, financed the costs of starting up the equipment (electrical connection and construction of a hangar), for a total amount of CFAF 12,500,000 (US$ 20,552). The equipment has made USCCPA more competitive, especially in terms of the quality of the products supplied.

Faso Jigi (Mali)

Post-harvest equipment (blowers and threshing machine) were acquired through a loan from the microfinance institution Kafo Jiginew, with which Faso Jigi signed a protocol. The operation proceeded as follows:

DEFINE ELIGIBILITY CONDITIONS WITH THE GRASSROOTS COOPERATIVES

(e.g. membership of the union for the last three years and no late loan repayments over the same period)

GRASSROOTS COOPERATIVES AND THEIR MEMBERS IDENTIFY THEIR EQUIPMENT NEEDS

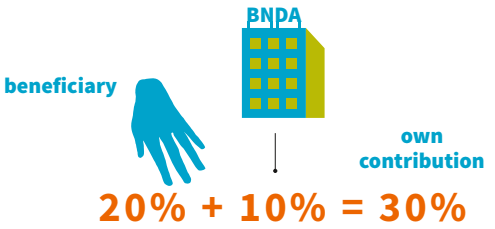
THE COOPERATIVES' FEDERATION SELECTS THE PROJECTS

FASO JIGI CONSOLIDATES THE SITUATION AND APPLIES FOR A LOAN FROM THE MFI KAFO JIGINEW

FOR THE REQUIRED 30% OWN CONTRIBUTION:

> each beneficiary contributes 20% of the value of the equipment to be financed;

> the remaining 10% of the own contribution is made up of the guarantee fund (CFAF 417 million, US$ 685,618) that Faso Jigi invested with the BNDA (Malian National Bank for the Development of Agriculture).



CPC (Togo)

For the replacement of small equipment items, CPC Togo introduced a levy on each bag sold (CFAF 3 per kilo sold, US$ 4 centimes).

E – How do FOs finance their working capital?

SEE GLOSSARY

To carry out their local grain storages, FOs must mobilise sufficient financial resources for harvesting in order to build/replenish their stocks. Working capital* can be financed from the FO's own funds, by taking out a loan from a financial institution, or by obtaining subsidies and donations from a TFP.

– Financing current operations

Current operations consist of collection, processing, transport, handling, storage, control and marketing. Collecting cereals from members and storing them for sale at a time when prices are more favourable requires FOs to have appropriate financing instruments. These are mainly:

- → Self-financing from own funds constituted by the organisation (income from marketing operations, membership fees, income from financial transactions…)
- → Working capital managed directly by the FO and usually initially provided by an external donor (foundation, NGO, etc.)
- → A line of funding negotiated with a financial institution with a financial guarantee (a guarantee fund deposited by financial partners, buffer/safety fund or term deposit). This refinancing can be used to inject credit at the beginning of the season, which is paid back (usually in kind) by the members of the FO at the time of the cereal harvest •

SEE CHAPTER 4C

- → Pre-financing by large private stakeholders (processors or wholesalers). This mechanism means that, at the beginning of the season, some processors advance funds to farmers to source inputs, with a repayment in kind at harvest time. This is the case with CPC Togo, in which some of the members of the inter-professional committee of the cereals sector pre-finance fertilisers at the beginning of the season, on the basis of 1 bag of fertiliser in exchange for 1 bag of maize at harvest time. This practice preserves the FO's cash flow, which otherwise would have been used as working capital to pre-finance the purchase of inputs
- → Sometimes, members of the FOs deliver their production on credit to the cooperatives' federation and are reimbursed after the group sale. This procedure augments the federation working capital for conducting its activities. This method is only used by group marketing FOs.
- → It should be noted that a personal contribution is required in these individual financing practices. Since the same conditions apply for everyone, men and women alike, this mandatory contribution may rule out women who do not have sufficient financial resources or assets to meet the requirements.

BOX 4
Financing arrangements for working capital: examples

Faso Jigi (Mali)

The process starts with the expression of the farmers' financing requirements. On this occasion, each farmer draws up an individual plan for the season in his cooperative and signs a contract of commitment to deliver a certain amount of their production at a pre-determined price and delivery date. The purchase price is defined by Faso Jigi at the beginning of each season and announced to the farmers. The capacity of each member to generate surpluses is assessed on the basis of the farm's size, the farmer's equipment, the labour available and the family's self-consumption requirements. Based on these surpluses, Faso Jigi sets a ceiling on the advance granted to each farmer. This amounts to between 40%-60% of the value of the quantity of grain the farmer has pledged to deliver. Each grassroots cooperative calculates the total advances requested and advises Faso Jigi of the amount. It is these individual applications that are submitted to the Banque *Nationale de développement Agricole* (BNDA), which analyses them and disburses the total amount to the Faso Jigi account, from where it is redistributed to the grassroots cooperatives. At harvest time, and once the quantities promised have been delivered, the cooperatives centralise all the stocks in Ségou pending their sale. The farmer receives a share of any profit made by Faso Jigi after the sale of the stocks in the form of a bonus.

Coopérative Viim Baore (Burkina Faso)

One of the Coopérative Viim Baore's activities is to buy cereals for resale at social prices, after storage. Through its partnership with SOS Faim and the Belgian Fund for Food Security (BFFS), the cooperative was able to gradually build up a working capital of over CFAF 2 billion (US$ 3,2 million) between 2002 and 2016. This centrally-managed fund provides loans to member unions. In concrete terms, the cooperative grants loans to its member unions, based on their needs and solvency. The unions use these loans for their supplies. The loan is repaid to the cooperative once the stocks have been sold, with a relatively low interest rate by comparison with the market rate. The interest earned is used to cover part of the cooperative's running expenses.

– **Financing major marketing operations**

These are operations that require the mobilisation of large quantities of deliverables and large financial capacity. This is why the bank loan is the main financing instrument used to respond to calls for tenders from public-sector stakeholders (national food security reserves, Regional Food Security Reserve, World Food Programme, etc.) and other major buyers. These operations mainly concern marketing FOs.

The challenge for FOs in fulfilling these contracts is twofold•:

SEE CHAPTER 4C

– On the one hand, securing financing and repayment: this is played out between the FO and the financial institution (bank or IMF);
– And on the other, securing the availability of products: this is played out between the FO and the member, who must respect its delivery commitments. This is why USCCPA/BM, for example, uses a method to classify and select members that are reliable and can be counted on. Securing product availability also depends on the FO's ability to meet payment deadlines to its members. When certain institutional buyers are late paying the FO, the FO cannot meet its commitments to its own members. There is then a high risk in the following season that the farmers will be looking to sell their crops through channels other than the FO.

F – How do FOs finance their running costs?

How do farmers' organisations finance running costs (salaries, water, electricity, rent, and telecommunications) that cannot be covered by income from the activity itself. The question is particularly relevant to group supply systems and feed banks, given their strong social dimension.

The financing instruments generally used by FOs operating local food reserves to cover their running costs are their own funds or subsidies (and donations), or a combination of the two.

– Membership fees and sales of marketing services (levy)

Some group marketing FOs apply a levy on income from the sale of products. A profit distribution key has been created to enable the smooth running of the entire structure from the grassroots FOs to the federation, with each organisation benefiting from the profits of the activity. This is the case of the FEPA-B (the Burkina Faso Federation of Agricultural Professionals), which redistributes 30% to the grassroots farmers, 30% to the intermediate union and 40% to the federation.

Other FOs, such as the CPC in Togo, allow members to pay their membership fees in kind (bag of agricultural produce) at the end of the season. The stock gathered in this way is resold to provide the necessary funds to cover running costs.

– Revenue from financial operations and other services to members

When their cash position permits, FOs (such as Faso Jigi in Mali) invest in term deposits (TDs) with financial institutions and negotiate interest on their deposits. The revenue from these TDs is added to their own funds.

Another mechanism, used by USCCPA/BM in Burkina Faso and JUSSAF in Nigeria, for example, is to rent equipment or even infrastructure to other organisations to supplement their own funds.

– Subsidies

Most of the time, FOs operating local food reserves are not able to cover all of their operating costs without receiving subsidies from various TFPs or government support. In some cases, partner NGOs include institutional support in their programme and cover some or all of the salaries and/or certain fixed running costs (as is the case of Viim Baore). In other cases, government employees are seconded to FOs as technical support at the government's expense. This is the case, for example, of government volunteers assigned to work for CPC Togo and whose salaries are paid for a year on a renewable basis.

In addition, there are still some cases of volunteer work, although this is becoming increasingly uncommon. In Mooriben, a committee of volunteers has been set up to run day-to-day operations (financial transactions, purchases, storage, sales, etc.). However, a flat sum is deducted from the FO's profits and given to the members of the committee as an incentive bonus. This premium is calculated in two ways: either a percentage of the estimated end-of-season profit is fixed for the volunteers at the beginning of the season, or the FO pays the volunteers a flat sum at the end of the season.

The diagram below summarises the financing methods to be used by FOs operating local food reserves, according to the different types of financing requirements.

FINANCING REQUIREMENTS

CFAF

FINANCING METHODS

Infrastructure and equipment

> Storehouse
> Large equipment items (cleaning and grading line, drying area…)
> Small equipment items (post-harvest equipment, office equipment…)

Working capital

> Day-to-day operations (collection, processing, transport, handling, storage, control and marketing)
> Major marketing operations

Running costs

Salaries, water, electricity, rent, telecommunications costs…

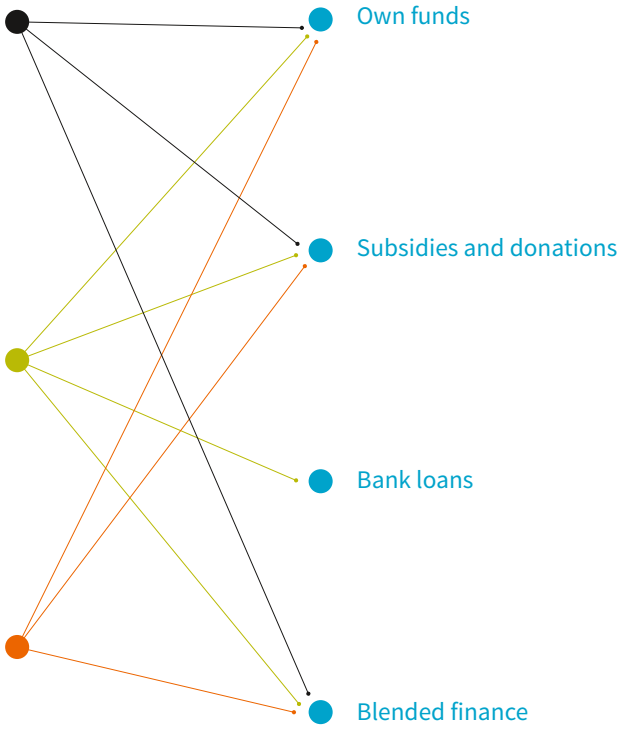


DIAGRAM 1
What types of financing are used for different financing requirements?

G – What risk management tools and mechanisms relate to obtaining financing?

SEE CHAPTER 7

Risk management is a function that FOs operating local food reserves are increasingly incorporating into their practices•: it is one thing to have financing instruments, but another to ensure the long-term viability of activities and organisations.

Most FOs began their activities with the support and backing of technical and financial partners. However, FOs operating local food reserves recognise that these kinds of support are often ad-hoc. Accordingly, they use tools to limit the risk of default on loans they granted to their members, and guarantee the repayment of loans granted to them by financial institutions. These two kinds of tool are shown respectively in the two sections below.

G.1 What tools do FOs use to limit the risk of non-repayment of loans by their members?

FOs establish internal mechanisms to manage the risks associated with using and managing financial resources, in order to develop a spirit of cooperation, make members accountable (from grassroots level to federation) and protect profits.

In practice, the vast majority of FOs have internal policies and procedures to manage their financial resources. They recruit competent qualified people to implement and monitor their policies and procedures.

BOX 5
Credit default risk management tools: example of Faso Jigi's safety fund

To ensure effective risk management when borrowing from financial institutions, Faso Jigi has set up a safety fund. This fund represents 3% of annual turnover and is used to repay registered claims and unpaid loan transactions. In addition, the FO has set an individual repayment threshold for members at 97%. Any farmer who cannot repay 97% of their loan is automatically suspended from the system and liable to prosecution by a court bailiff. Finally, the accounts are audited on an annual basis and published, thereby limiting the risks of accounting fraud.

G.2 What tools and mechanisms do financial institutions use to protect themselves from credit defaults by FOs?

These mechanisms ease FOs' access to financing and provide the guarantees required by financial institutions.

– Financial guarantees

FOs use two types of fund to satisfy financial institutions' requirements. The first is the guarantee fund, which is used to repay the sums owed by the borrower, in full or in part, should the borrower be unable to honour their commitments. The second type of guarantee is the term deposit (Faso Jigi, CPC Togo, USCCPA). This is a type of savings account with specific conditions governing the interest earned and the duration of an investment. These deposits are sometimes used by beneficiaries to guarantee loans.

BOX 6
Guarantee funds: some examples

USCCPA/BM (Burkina Faso)

Over time, USCCPA/BM has been able to obtain subsidies from various technical and financial partners to set up guarantee funds with the "Caisses Populaires du Burkina" Federation to cover its financing requirements. These guarantee funds, which are remunerated by the financial institution, enabled it to raise over CFAF 2 billion (US$ 3,2M) for three agricultural seasons (2015-2016, 2016-2017, 2017-2018).

Mooriben (Niger)

To finance the operations conducted by its unions and groups, Mooriben has invested in guarantee funds with financial institutions. In particular, there is a CFAF 50,000,000 (US$ 82,209) guarantee fund with the Banque Agricole du Niger (BAGRI), which entitles the holder to a loan of CFAF 200,000,000 (US$ 328,839), and another CFAF 111,000,000 (US$ 182,505) fund with Ecobank, which entitles the holder to a loan of twice that amount.

– Security or the fiscal domicile of orders

Under this arrangement, banks agree to grant loans on the basis of a contract with reliable buyers, through a process of security and by establishing fiscal domicile of payments (the case of USCCPA and FEPA-B).

– Warrantage and the warehouse receipt system

Double lock warrantage and a warehouse receipt system are in-kind guarantee mechanisms, protecting financial institutions from the risk of default by the FOs to whom they have granted loans. These two mechanisms are detailed in Chapter 3b•.

SEE CHAPTER 3B

H – Key points

➔ The development of funding mechanisms and tools must take into consideration the distinctive features of the economic and social functions of local food reserves, as these do not have the same importance from one FO to another.

➔ The implementation of local grain storage by FOs requires significant infrastructure and equipment. In general, these cannot be financed from own funds or from bank financing, due to the low profitability levels of storage operations.

➔ It is important to strengthen the capacities of elected representatives regarding the possibilities of mobilising funding and the mechanisms for securing this funding.

➔ Blended financing (own funds and loans and/or subsidies) is the recommended solution for small equipment items, while developing a mechanism that caters for the equipment's replacement.

➔ The long-term sustainability of local food reserves hinges on defining a clear, well-defined business model by type of storage.

➔ Guarantee funds, warrantage and warehouse receipt systems should be promoted to ease access to financing for FOs operating local food reserves.

I – Further reading

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BOETABA

Appendix
Chapter **3A**

https://bit.ly/2BaRACL

CHAPTER 3B

Warrantage

Table of Contents

A – Introduction

SEE GLOSSARY

Warrantage*, also known as inventory credit, is a financial mechanism whereby an individual farmer or a farmers' organisation (FO) can secure a loan against collateral in the form of a stock of semi-perishable agricultural products (millet, sorghum, rice, maize, sesame, gumbo, groundnuts, etc.) that will retain their value. If the loan is not paid off by the end of the agreed term, the lender will be entitled to sell the stock pledged as security to recover the amount owed.

Warrantage is generally used by farmers or FOs that want to put off selling their products until they can get a better price for them, but still have some ready cash just after the harvest to meet their household's needs or undertake some off-season income-generating activities. Warrantage accordingly spans a period of a few months between harvest time and the so-called "lean season", when stronger demand has usually pushed prices up.

Warrantage saves farmers from having to sell off their crops cheaply just after harvest because they need cash straight away.

Pledged agricultural produce is a very safe form of security, which, in principle, allows the lender to extend credit at little cost. On the other hand, the expenses incurred in storage (caretaker, insurance, etc.) can push up the cost of the credit.

B – Types of warrantage

There are a number of possible classifications of warrantage. The one used here is based on the number of parties involved. It results in three types of warrantage.

B.1 Simple communal warrantage

SEE GLOSSARY

Simple communal warrantage* involves a farmers' organisation that has its own working capital (without needing to use bank financing) and holds the members' output as collateral until the next lean season.

The main function of this type of warrantage is to contribute to the population's food security by ensuring that households can recuperate a few sacks for their own consumption during the lean season. It is a function with a largely social aspect. In areas with a precarious balance, this type of warrantage also plays a marketing role when the FO has surpluses to sell after good harvests.

The main reason farmers use this type of warrantage lies in the profitable income-generating activities (IGAs) they can carry out with the sums they have borrowed. The profits earned on sales of the crops pledged as collateral are often very meagre compared with the cost of storage.

One way to make IGAs more profitable is through seasonal migration in search of higher-paying temporary jobs in the city. In Guéra, Chad, this seasonal migration takes place during the dry season rather than the lean season. Both men and women migrate after the harvest, leaving one or two sacks in the lean season bank. They return in the lean season to prepare the soil, at which time the money they earned during their migration pays for the agricultural inputs. This strategy works very well with simple warrantage, which provides the opportunity to finance the season migration in better conditions.

B.2 The double-lock system of warrantage

Compared with communal warrantage, this double-lock warrantage involves an extra party: the financial institution. Stock is kept in a community storehouse closed with two locks. The keys to the first lock are held by the FO, the keys to the second by the financial institution[1]. This is an advantageous option for mid-sized FOs not yet ready to shift up to a warehouse receipt system (a third type of warrantage presented below).

There are two main models of double-lock warrantage[2]*: a decentralised model in which the financial institution (FI) finances each group separately; and a centralised model where the umbrella organisation (a union or federation) negotiates a loan with the FI on behalf of all of its members. Each model has advantages and drawbacks.

* SEE GLOSSARY

In Mooriben's decentralised model (in Niger), only unions with the capacity to manage warrantage are allowed to use Mooriben's bank guarantee fund to negotiate credit with the bank. By selecting the unions best equipped for the task, this formula has the advantage of minimising the risk of poor management. It does, however, limit the possibility of scale economies.

The centralised model gives FOs the advantage of being able to negotiate a credit with the best possible terms and conditions. For example, the Coopérative de prestation de services agricoles (COPSA-C) in Burkina Faso was able to leverage its good reputation and centralised credit management in its negotiations with the bank and bring down the interest rate from 15% to 8% for all of the groups.

Double-lock warrantage is more frequent in mid-sized storehouses (50-100 tonnes) than in larger ones. In mid-sized storehouses, there is sometimes a storage capacity problem that can result in group members with smaller financial means being marginalised. To overcome this difficulty, COPSA-C set a 10-sack limit per member, which prevents large farmers from taking up all of the available storage space in the FO's storehouses. In federations with high-volume central storehouses, the larger members' surpluses can be transferred from village-based storehouses to central storehouses.

The price most often charged for this type of warrantage is CFAF 100 (US$ 0.16) per 100 kg sack (i.e. €1.5 per tonne). This relatively affordable cost does not include insurance (very few members take out insurance in this type of warrantage).

B.3 Warehouse receipt system

The warehouse receipt system of financing is backed by cereals stored in a storehouse under the control and responsibility of a professional manager (the collateral manager).

As the cereal sector becomes increasingly professional, the quantities stored are growing (thousands of tonnes) and it is increasingly important for the stock to be kept safe and secure. Accordingly, some FOs are opting for the warehouse receipt system. In this case, three parties are involved: a FO, the bank and the collateral manager.

Collateral managers have a dual role: on the one hand, they stand guarantee for financing operations (by verifying the collateral); on the other, they act as an intermediary between the FOs and the banks (often, at a client's request, they plead the client's case to the financial institutions).

The storehouse where the warehouse receipt system operates may belong to the FO or to another party. A storehouse is "public" if it is open to individual depositors. It is considered "private" if it is reserved exclusively for collective contracts with FOs.

1 Double-lock warrantage also relies on community or collective operation, but to avoid confusion with the first type of warrantage, we have not included the adjective «community» in this type's name.
2 Coulter, Key Findings, p.7

The price charged under a warehouse receipt system is CFAF 200-250 per 100 kg sack (i.e. € 3-3.80 per tonne). This is more expensive than double-lock warrantage, but it includes the cost of insurance, which is a legal obligation under OHADA (Organisation pour l'Harmonisation en Afrique du Droit des Affaires) legislation and other West African laws. This obligation is totally justified, given that the quantities stored under a warehouse receipt system are generally much larger than under double-lock warrantage. Who is responsible for covering losses if, for instance, 5,000 tonnes of stock burns?

The warehouse receipt system is not widespread in West Africa. The countries where it is most frequently used include Ghana, Côte d'Ivoire and, to a lesser extent, Burkina Faso.

BOX 1
Use of the warehouse receipt system at the Ghanaian Grain Council (case study)

Before the Ghana Grain Council (GGC) was founded, banks required an additional guarantee to finance warrantage, known as the warehouse receipt system. With the system brought in by the GGC, no security is required other than the stored produce.

The GGC runs 20 warehouses that implement a warehouse receipt system. Collateral managers are registered with the GGC, along with farmers' organisations, traders and banks. Merchants can also purchase and store produce in the storehouses.

These warehouses are public, meaning that they are open to private individuals, who are the main users of their services. They offer their members a range of services, including cleaning and quality control. The overheads of these operations are subsidised for members.

The procedure operates as follows:

> The depositor brings the cereals to a GGC-certified warehouse.

> The stock of cereals is tested for humidity, weight and the presence of any foreign bodies. If necessary, it is cleaned and put back into sacks.

> The Ghana Standards Authority then ranks the stock.

> The warehouse manager issues a Goods Received Note (GRN).

> The GRN is then sent to the central depositor.

> The guarantee manager appointed by the GGC examines the GRN, then issues and signs the warehouse receipt.

> The receipt is then sent electronically to the warehouse manager, who signs it.

> The depositor is given a copy of the receipt. The warehouse manager also keeps a copy and a third copy is manually transferred to the GGC.

The GGC issues warehouse receipts that can be transferred between members. Receipts exist in both paper and electronic format. These receipts are negotiable with banks, since the latter are confident that the warehouses respect grain conservation standards (maintenance is performed correctly and insurance cover has been taken out).

In addition to the insurance cover against fire, theft, burglary and any other damage to the warehouses, there is also «price risk» insurance through a transactional guarantee deposit, which covers the revenue shortfall should the trader be forced to sell at a lower market value.

Signing a contract with buyers also helps cover price risk. NAFCO , the WFP, school feeding programs, breweries and other private merchants are among the buyers.

The advantages of the GGC system are transparency, accountability, the recording of receipts in a central depository system, and the fact that the transactions mainly take place between GGC members. However, the system faces two main challenges: the financing granted represents between 50% and 70% of the value of the commodities placed in storage, i.e. a lower percentage than in the French-speaking countries (80%); also, interest rates are high in Ghana.

In practice, it is not always easy to operate a warehouse receipt system in certain West African countries. The services provided by the collateral managers have proved to have shortcomings.

The *Fédération des professionnels agricoles du Burkina Faso* (FEPA-B) reports a case of a delay in opening the collateral manager's storehouses, even though the credit had been reimbursed and a buyer was available. This wasted a lot of time and created tensions with the buyer. In other instance, the collateral manager had set the stock's selling price without consulting the FEPA-B beforehand. The FEPA-B has also criticised the limited professional stock maintenance services.

Faso Jigi has also had difficulties with the warehouse receipt system in Mali, where only two companies provide this sort of service. The problems experienced include: a) The high cost of the service, which comes to CFAF 700,000 (US$ 1,151) per month for five or six months (irrespective of the quantity stored). On top of this fixed cost, Faso Jigi has to add caretaking costs, since the collateral manager does not have its own storehouses, and the cost of insurance; b) the protracted release procedure, which deters certain buyers; c) the lack of instructions from the collateral manager to ensure proper stock management; d) the non-involvement of the collateral manager in the negotiations between the FO and the financial institutions.

In both cases, though, the warehouse receipt system helped lower the interest rates: from 14% to 8% for the FEPA-B and from 14% to 9% for Faso Jigi. At the end of the day, the benefits of the warehouse receipt system hinge on the relationship between the quantities stored and the fixed costs, on one hand, and the quality of the services provided by the collateral manager, on the other.

B.4 What type of warrantage to choose?

The table below presents a summary comparison of the three types of warrantage, based on factors such as management, cost, the risks involved, flexibility in terms of being able to make the decisions about the product's sale, and compliance with OHADA rules and the laws on cooperatives in English-speaking countries.

Table 1 – Comparison of the three types of warrantage

Factors for comparison	Different types of warrantage		
	Simple communal warrantage	Double-lock principle	Warehouse receipt system
Management	Easy to manage: requires only an agreement between members of the group.	Need to control the credit contracts with the FIs.	Need to control the complex contracts with the FIs and the collateral managers, along with the insurance contracts.
Cost	Low fixed cost: less than CFAF 100 (US$ 0.16) per 100 kg sack.	Average fixed costs (approximately CFAF 100, US$ 0.16 per 100 kg sack): storage costs plus bank oversight fees. Major savings are possible if credit negotiation involves several thousand tonnes.	High fixed prices (CFAF 200-250 per 100 kg, US$ 0,3-0.4): storage costs, bank oversight fees and warehouse receipt fees. However, achieves scale economies.
Risks	High risk (theft, fire, flooding, pests and rodents, etc.) Stock is not insured.	Generally not insured. Same risks as with simple warrantage, but more dangerous, because there can be substantial quantities in storage.	Insurance is mandatory against theft, fire and stock spoilage. Possibility of taking out "price risk" insurance also.
Flexibility in terms of being able to make the decisions about the product's sale	Very flexible.	Flexible in small storehouses, not very flexible for large storehouses.	Low flexibility.
Compliance with OHADA rules and laws on cooperatives in English-speaking countries.	Non-compliant	Non-compliant	Compliant if it meets all of the conditions (incl. insurance).

B.5 What conditions should be met before switching from one type of warrantage to another?

Before switching from simple communal warrantage to double-lock warrantage, make sure the storage building presents the minimum conditions required by the financial institution and that FI supervisory visits are possible (building must not be outside the FI's radius of action).

To switch from double-lock warrantage to a warehouse receipt system, it is important to first conduct a small feasibility study to ensure that the warehouse receipt system will be profitable for the FO. Also check whether warehouse receipt systems are available and deliver an adequate quality of service in the country in question. Not all collateral managers have the same experience.

C – Risks of warrantage

Is warrantage always profitable?

Price risk• is the reason why warrantage often results in losses for members of a cooperative. In other words, when paying off the credit (which represents 80% of the value of the stored commodities), the final sales price does not always offset the cost of the credit. When interest rates are in the double figures, it is very difficult to make warrantage cost-effective.

SEE CHAPTER 7 "RISK MANAGEMENT"

Why are interest rates high when the credit is covered by the value of the pledged commodities?

There are at least two answers to this question:

- The FO's ability to negotiate with the financial institution. The COPSA-C example described above (Burkina Faso) shows that a sufficiently large and well-organised FO can get the financial institution to significantly lower its interest rates.
- Risks associated with the storage of cereals (or other commodities). If stocks aren't insured against fire or theft, the financial institution will seek to protect itself against such risks by raising its interest rates. Similarly, if the financial institution thinks that the FO is not going to maintain the stock as carefully as it should (ventilation, protection against predators), which may lower the stock's value, it will prefer to charge high interest rates on its loans•.

SEE CHAPTER 7 "GRISK MANAGEMENT"

Why is warrantage still so popular despite so many risks and poor profitability?

The profitability of warrantage does not stem solely from price variations between harvest and the lean season. It also - sometimes mainly - stems from the proceeds of IGAs. This is why assisting and advising households on undertaking IGAs (after consulting partners) is considered best practice for FOs.

D – Prerequisites and process for setting up warrantage

D.1 Prerequisites

The following are prerequisites for any warrantage operation:

- A strong and well-organised farmers' organisation;
- Members aware of the shared risks;
- A storehouse in which produce can be stored in good conditions;
- A stock of semi-perishable goods likely to gain in value;
- An accessible market for selling the goods;
- An available source of funding (either internal: working capital; or external: bank or MFI);
- By-laws that all members of the FO are familiar with and have accepted◆.

SEE AN EXAMPLE IN THE APPENDIX TO THE CHAPTER

More specifically for the warehouse receipt system, there is an additional prerequisite: the existence of professional suppliers and the availability of insurance services.

D.2 Main steps in setting up a warrantage system: double-lock warrantage

Double-lock warrantage is quite widespread among FOs in all of the countries in the region. The table below presents the main steps involved in setting it up. The periods mentioned for each step are indicative only and may vary from one country to another[3].

3 Sources: (in French) - FEPAB warrantage report 2016-17, Warrantage training guide (Niger), COPSA-C manual, PAPSA manual, IARBIC manual.

Table 2 – The steps to double-lock warrantage

Main steps	Operations/tasks to be carried out	Period
Warrantage information and awareness-raising	> Hold awareness-raising meetings.	August-September
Situational analysis: survey of the storage intentions within each group	> Specify the partners that will be involved; > Identify the types of products (pay particular attention to women's products); > Estimate expected quantities and the number of participants.	August
Decision-making and planning of the warrantage operation	> Hold a general meeting and be sure to discuss the conditions for ensuring that women can use the warrantage system (see point 5 below).	August
Establishment of the rules and the management committee	> Set the periods (closing and opening dates). See Box 2 below on the important of closing and opening (double-lock warrantage); > Raise members' awareness of the necessity of following the rules laid down; > Explain the expenses involved in storage.	September
Storehouse preparation	> For more information, see Chapter 5b «Warehousing techniques».	October
Initial contact and negotiation with the financial institutions	Plan meetings with the FIs and negotiate the following: > The requested amount; > The interest rate; > The date on which the funds become available; > The terms of credit settlement; > Stock control and monitoring arrangements; > The geographical scope of the operation (some MFIs refuse to go beyond a certain distance); > Joint, progressive evaluation of the contract terms.	October
Product collection and storage	> Identify the sacks: labelled sacks prevent fraud; > Check product quality (see Chapter 5b "Warehousing techniques"), including the sacks.	October-November
Stock monitoring and control	> Draw up a stock monitoring calendar; > Write a summary report on each visit. The management committee must also write a summary report if the bank fails to honour the appointment.	On an ongoing basis
Market research	> Propose a deal (by the bank, the FO or the collateral manager); > Monitor price trends in order to anticipate a possible market downturn (see Chapter 7).	February-April
Conclusion of the agreement with the bank	> Recuperate and reimburse credits.	
Evaluation of the operation	> Calculate the financial outcomes; > Hold final review meetings; > Write the end-of-crop year report.	End of the cycle

BOX 2
The importance of closing and opening dates (double-lock warrantage)

The storehouse is closed at the warrantage committee's initiative. If possible, it should be closed on the set date. However, if some farmers have not yet finished drying their grain, and if the warrantage committee agrees to wait, the closing date can be pushed back.

On the agreed date, a representative of the MFI comes to the village and records the quantity and quality of the stored produce. The storehouse is then locked with two different padlocks, one belonging to the MFI and the other to the warrantage committee. This means that both parties will have to be present to open the storehouse.

The MFI then brings the sum of money corresponding to the credit requested by the FO. The lead time between when the storehouse is closed and when the loan funds are released is decisive for the warrantage operation's success. When all goes to plan for both parties (good harvest forecasts, correct date estimates, etc.), the credit is brought to the FO on the day the storehouse is closed, which is a boon for the farmers. Sometimes, though, the credit is made available a month later, which is discouraging for the farmers. When there is a delay before the credit is granted, traders can step in and buy the stock between harvest time and storehouse closing.

Similarly, when storehouses open late, farmers involved in warrantage operations are exposed to price drops before destocking, due to the intervention of public-sector stakeholders (sales at reduced prices, free distributions, etc.). This is discussed in Chapter 7 «Risk management».

SEE CHAPTER 7 "RISK MANAGEMENT"

Source: Le Cotty T., Coste J., & Jenn-Treyer O. (2019). Feasibility study for ARM investment in Niger: futures contract and warrantage network in support of national strategies, 1–129, PARM.

It is possible that the bank may not want to release the stock, even if there is a buyer market; this suggests that the bank wants to prolong the period in which it is being paid interest. To avoid this type of difficulty, the contract should stipulate that interest will be paid for the agreed duration and that the stock may be released before the term if there is a buyer. In some coastal countries, the FO pays a penalty if the effective duration of the contract is shorter than the contract term initially defined. In a win-win relationship, the bank and the FO must be able to give their opinion on the most appropriate time to release the stock.

BOX 3
COPSA-C's best practices (Burkina Faso)

COPSA-C has extensive experience of warrantage. It even has a warrantage training centre. The following COPSA-C best practices are particularly noteworthy:

> Reserve storage space for novices and certain sections of the population, such as women and young people.

> Set a cautious amount of credit (no more than 80% of the price of the cereals•: the amount of credit may not exceed 80% of the value of the sacks in storage at the time the credit is negotiated. If, in the end (during the lean season), prices are still lower than this amount, the farmer who stored the produce is responsible for assuming the losses and reimbursing the credit in full. Usually, the IGAs carried out can offset this loss.

> Phased storage: storage can be carried out in several stages. This enables poorer participants to stock produce and obtain credit without having to wait for those farmers who arrive later (often the wealthiest).

> Phased destocking: farmers who pay off their credit quickly can recuperate their sacks without having to wait for farmers who arrive later.

SEE CHAPTER 7

E – Warrantage and gender

Warrantage is an inclusive financial instrument that can help women and youth become more involved. How can communities ensure that women's needs are addressed?

It is important for women to be represented on warrantage management committees•. It is also important to ensure that women's products are included in the storehouse's speculations. In some areas, for example, women grow cowpea (bissap, hibiscus or soybean) and men grow cereals. Make sure that all of the products that meet the criteria for warrantage (potential for price increases, non-perishable commodities) can be stored.

SEE CHAPTER 2B

Sometimes women do not have access to warrantage because men take up all of the available space in the storehouses. One of COPSA-C's best practices is to set a quota per person of 10 sacks for the first two times they take part in the programme, so that there is always some storage space available for women.

Some banks ask participants to contribute 5% of their credit (for example, the FCPB, one of the banks that provides credit to the FEPA-B). Women producers are obliged to sell their cereals at below-market prices to fund their personal contribution. One possible solution would be to deduct this percentage from the credit instead of requiring upfront payment.

Warrantage is the preferred means of financing women's IGAs in the most vulnerable areas. As mentioned earlier, in small-scale warrantage, the cost-effectiveness of the operation stems more from the IGA than the price difference. Giving women and young people incentives and technical support for developing IGAs is a best practice.

F – Warrantage legislation

SEE CHAPTER 2A

In French-speaking countries, the legislation on warrantage is based essentially on the OHADA's rules, with some minor variations from one country to another. English-speaking countries rely more on the British legislative tradition. A review of the legislation for Burkina Faso, Niger, Senegal, Ghana and Côte d'Ivoire can be found online (in Coulter, 2015, Review of applicable laws; see the "Further reading" section).

In OHADA member states, warrantage is based on the *Acte Uniforme Révisé portant Organisation des Sûretés* of December 2010, which makes two stipulations: insure the stock and the storehouse, and register pledges in the Registre du Commerce et du Crédit Mobilier (RCCM).

SEE CHAPTER 7

The OHADA requires that stocks be insured at least against the risks of theft, fire and damage to the stored goods. However, many banks do not require this type of insurance for double-lock warrantage operations. Where a warehouse receipt system is in place, an insurance contract is indispensable.

Registration in the Registre du Commerce et du Crédit Mobilier (RCCM) (https://rccm.ohada.org) protects creditor's interests but, in practice, few of them take this precaution. Banks, on the other hand, rely on other forms of guarantee. *"Many financiers are happy not to take 'legal' security; instead they rely on practical security such as using the double lock system"* (Coulter, p. 104).

One question remains for discussion: if the OHADA makes it compulsory to insure all stocks, what will FOs managing small stocks do in areas where there is no insurance market, or only at a very high price? Currently, small producers who store their goods in small storehouses have to assume any losses that may occur. To date, there does not appear to be any solution to this problem.

G – Key points

➔ There are different types of warrantage: simple community, double lock and the warehouse receipt system. Each can be adapted to the different types of FOs operating local food reserves.

➔ Warrantage offers members of the FO the possibility of obtaining credit at a below-market price. However, it involves a price risk and additional costs, so its cost-effectiveness needs to be weighed up on a case-by-case basis.

➔ The warehouse receipt system is more or less developed, depending on the country. In the Sahel, there is a persistent lack of professionalism among the service providers.

➔ Warrantage provides women with an efficient financing tool, but FOs must take steps to ensure that women have access to the warrantage system.

H – Further reading

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Appendix
Chapter **3B**

https://bit.ly/2NGsVIC

CHAPTER 3C

Financial and accounting management

Note: the outlines referred to in the text are available online on the RAAF website via the link shown on the last page of this chapter

Table of Contents

A – Introduction

An organisation's accounting and financial management can be defined as all of the procedures it uses to provide its partners and stakeholders with a clear vision of its economic flows and the development of its asset base.

For a variety of reasons, it is very important to have sound financial management:

- for the organisation: sound administrative, accounting and financial management enables the organisation to create transparency, improve trust between members and raise the profile of its operations. It also indicates whether operations are making a profit or not. This is vital knowledge for making the right decisions and making the organisation's operations more efficient;
- for legal reasons: producing annual financial statements* is a legal requirement for formal companies or organisations in each State. The chart of accounts and the legislative texts in force define the form and content of these financial statements;
- for development partners: when they issue calls for tenders or grant subsidies, development partners (NGOs, international institutions, etc.) and the State expect candidates to have a very sound technical, financial and management capacity to fulfil the mission entrusted to them. Sound management allows an organisation to seize existing opportunities (calls for tenders, grants, etc.), especially in a context of strong competition, to win contracts and secure resources;
- for financial institutions: before granting a loan, financial institutions (banks, microfinance institutions, etc.) evaluate the applicant's technical, financial and organisational capacities: they want to be sure that the organisation will be able to carry out the project effectively. For this, they need information on its governance and the quality of its financial statements. Business partners ask for the same thing (for instance, when suppliers want to grant the organisation suppliers' credit).

* SEE GLOSSARY

Accordingly, any organisation must set up an efficient administrative, accounting and financial management system. This chapter presents the basic principles and main tools that form the basis of such a system for farmers' organisations (FOs) operating local food reserves.

It does not claim to cover every aspect of accounting and financial management. A thorough command of the subject is only acquired through ongoing research and training.

B – Overview of current accounting and financial management practices among FOs operating local food reserves

The table below presents an overview of how FOs keep statistics and use management tools. It is the result of documentary research into organisations' management practices, and feedback from the training courses on accounting and financial management conducted with several FOs.

Table 1 – Overview of current accounting and financial management practices among FOs operating local food reserves

Procedures/Tools	FOs practices	Recommendations
Statistical record keeping	Few unions or federations of FOs keep statistics on input supply, production, storage or marketing.	Develop a plan for a reliable and consistent database. It will be used to identify the FO's production and marketing capacities and make accurate projections.
Accounting tools	FOs generally have the following documents: stock books, credit books, repayment books, books of Income Generating Activities (IGAs), stock monitoring sheets/books. These workbooks have often been set up following training on warrantage and the management of cereal storehouses, etc., and are not always available to all organisations.	Set up an accounting and financial system. Develop the accounting and IT skills of the key stakeholders involved in managing the organisations.
Management tools	Most FOs have management sheets that were given to them during training in inventory management (delivered by storekeepers). However, very few FOs are familiar with financial statements (balance sheets, operating accounts/income statements, cash account). Yet these tools are essential for assessing organisations' management capacity, assets, the profitability of operations, and the organisations' solvency. Various difficulties account for the fact that most organisations do not have standards-compliant accounting: > the lack of qualified management and accounting staff; > the lack of software tools in the unions and grassroots cooperatives; > technical staff's lack of IT training.	Recruit qualified interns

C – Organisational system for sound accounting and financial management

According to the accounting standards used in West Africa (the West African accounting system (SYSCOA) for French-speaking countries and the International Financial Reporting Standards (IFRS) for English-speaking countries), every organisation must set up an accounting system in order to provide internal and external information.

Entering current operations in the accounts is not sufficient to satisfy this obligation: the accounting systems must also provide for the annual presentation of summary financial statements.

The presentation of these different statements (income statement, balance sheet, etc.) is carried out through the implementation of specific accounting or extra-accounting operations, during the so-called "year-end" or "inventory" tasks.

DIAGRAM 1
The benefits of sound accounting and financial management

FOs' organisational structures are often unable to ensure sound administrative, accounting and financial management. These shortcomings stem from insufficient staff education and training, and a lack of IT tools and accounting departments in unions and grassroots cooperatives.

The following steps are often suggested to overcome this:

- set up an accounting department with qualified staff in the unions and grassroots cooperatives (if possible). Union accounting departments would be responsible for managing grassroots cooperatives' accounts;
- provide the unions with suitable software and computer equipment;
- train storekeepers and finance managers in computing in the unions and cooperatives.

These are good ideas, but it can be difficult for FOs to finance the necessary equipment and staff. It will be necessary to form a team of qualified support staff for all of the unions (from the grassroots cooperatives up to the federations) in order to organise the system of administrative, financial and accounting management. Organisations that can't afford to recruit qualified accountants can employ trainees, either directly or through partnerships with training schools. This can be an interim solution to the lack of accounting staff and help them upgrade their accounting and financial management.

Given how difficult it is for the cooperatives and grassroots groups to manage a full set of accounts, the following system may be adopted:

Table 2 – Distribution of roles among the various levels of FOs' structure

Grassroots cooperatives and groups	> Keep statistics on input supplies and production (if applicable). > Keep the following accounting and financial records: stock cards, purchase and sale cards, journal, cashbook and passbook. > Produce regular reports (monthly, for instance).
Unions at regional or commune level[1] (through their finance departments)	> Produce general ledgers, balances and financial statements (balance sheets, income statements, etc.). > Keep the books for grassroots cooperatives and groups.
Federation	> Ensures that each entity maintains accounting and financial records > Centralises (for consolidation) unions' sales, purchases and stock transactions and financial statements (balance sheets, income statements, etc.).

This organisational system is essential, in particular to enable farmers' organisations to participate in national and international tender calls for public-sector contracts. Unions' top managers (i.e. all Board of Directors' members) must be effectively involved in order to implement the actions. Operational implementation must be monitored both internally and externally (by either a consultant or organisational monitoring bodies).

1 When there is no « federation » level, the unions assume the roles normally assigned to the federations.

D – Tools required for sound accounting and financial management

To ensure sound accounting and financial management, organisations must set up (i) statistical tools and (ii) accounting and financial tools. Recommended practice is to list all of these tools in a "Handbook of administrative and financial procedures", designed to provide an overview of the tools, their specific roles and the links between them.

D.1 Statistical tools

Statistical tools allow organisations to track and analyse their activities (levels of production, stocks, sales, etc.) by setting up a kind of dashboard (or database). They are also used to evaluate organisations' performances.

SEE LINK ON THE LAST PAGE OF THIS CHAPTER

On the Regional Agency for Agriculture and Food (RAAF) website, various templates can be found, which organisations can use to enter their statistics. These tools can be filled out monthly and annually by all organisations, regardless of size. The information can then be centralised by the unions and the federation to gain a clearer picture of FOs' activities.

The proposed templates concern statistics on the supply of agricultural inputs (Template 1); production (Template 2); stocks (Template 4); and lastly marketing (Template 5). At the suggestion of some of the FOs, a template (Template 3) has been developed to combine the input supply table with the production table.

NB: these templates are provided as examples. Each FO should develop its own templates based on the nature of its activities and organisational structure.

SEE CHAPTER 6

On the issue of statistical tools, we also refer readers to Chapter 6 on information management.

D.2 Accounting and financial tools

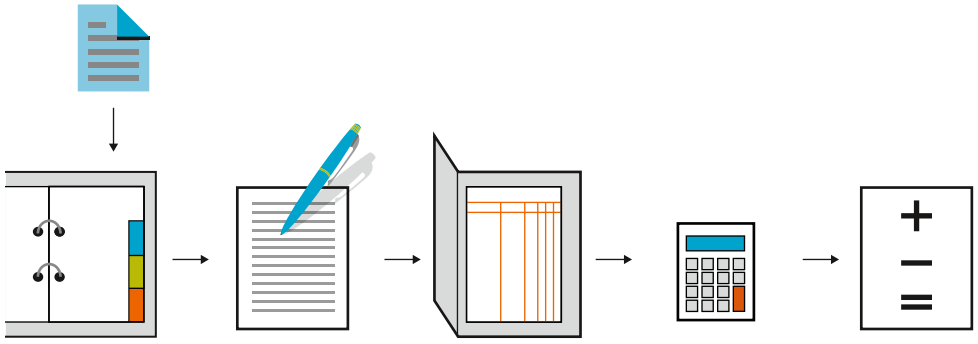
IMPORTANT TOOLS

Organisations' managers or leaders regularly need reliable, operational summary information for sound management and decision making. Financial statements meet these requirements.

SEE GLOSSARY

Drawing up a balance sheet*, for instance, provides data on the enterprise or organisation's assets and economic structure. Income statements are used to evaluate the performances achieved during the accounting year. The financing plan – financially tabulating resources and employees – maps out its financial development.

A certain number of accounting operations need to be done to establish these financial statements; appropriate tools should be used and documents must be well organised. The following diagram provides an overview of the process of chronologically entering accounting operations.



1 Enter and classify bookkeeping vouchers

2 Post entries in the Journal

3 Enter transactions in the General Ledger, i.e. in the accounts

4 Periodic balance of accounts

5 Balance sheet and Net Income

DIAGRAM 2
Process for recording bookkeeping vouchers

BOX 1
Tips for filing accounting documents

Avoid mislaying any journal vouchers: to avoid mislaying expense receipts and proofs of payment, it is very useful to have a folder or a binder in which they can be kept until they are filed.

File documents by type and in date-wise order: records must be carefully filed and kept. The easiest way is to use different binders: one for suppliers' invoices, one for invoices issued by the association, one for pay checks, one for social documents, etc. In order to correctly organise accounting, you need to keep all these documents in chronological order: from the oldest to the most recent.

Records retention period: Depending on the circumstances, documents must be kept for a period of between five years and the organisation's entire existence. For more information on the retention periods.

SEE TEMPLATES N°0 "ONLINE RECORDS RETENTION SCHEDULE" IN THE ONLINE APPENDIX

OVERVIEW OF ACCOUNTING TOOLS

Stock tracking and inventorying are essential operations for managing an organisation. The table below presents the main tools for sound management and the links to online examples of these tools.

Box 3 - Main accounting tools

Designation	Purpose and description	Examples
Stock cards	Provide day-to-day stock amount and track stock inflows and outflows.	TEMPLATE N°6
Purchases sheets	Record all product supply inputs	TEMPLATE N°8.1
Sales day books	Record the organisation's daily sales.	TEMPLATE N°8.2
Inventory sheets	Indicate the quantities and amounts of inventory, the purchase cost of goods sold and the purchase cost of materials and supplies used in the storage process. A distinction is made between: > the physical inventory (non-accounting), which includes two operations: (i) the establishment of a complete list of the various components of the stocks corresponding to the classification of the chart of accounts; and (ii) the assessment of the real monetary value of the assets; > the accounting inventory, which can be either permanent (i.e. it allows you to know the amounts and quantities at any time) or intermittent (i.e. it allows you to know the amounts and quantities at the end of the financial year, after the physical inventory has been carried out).	TEMPLATE N°9
Fixed asset inventory sheets	Allow all the assets held by the organisation to be listed by geographical site/area. They indicate their condition (quality) and monetary value. Additional information on the financing source and the property location can also be recorded.	TEMPLATE N°10

ACCOUNTING TOOLS FOR INVENTORY CONTROL

How to determine the value of a stock?

The stock is the quantity of goods stored pending use. Usually, unless the system is computerised, the stock's value is not known at the time of completing the transaction. However, because the quantities are known, it is sufficient to establish the valuation price. The system generally used for the purpose is the weighted average cost (WAC) method.

BOX 2
The weighted average cost (WAC) method

This method has two variants:

> 1. The weighted average cost method after each purchase. This method is suitable for permanent inventories and requires a computerised accounting system (see an example of WAC calculation after each entry in Template 7.1)◆ ;

> 2. The annual weighted average cost method. This method is more suitable for FOs periodically carrying out their inventory (See an example of Annual WAC calculation in Template 7.2)◆.

◆ SEE TEMPLATES N°7.1

◆ SEE TEMPLATES N°7.2

What is an inventory?

At the end of each accounting year, every organisation must establish the physical quantities, the quality and even the value of the goods held within the organisation. This is why the inventory is a highly recommended and even mandatory practice for accurate financial statements (balance sheet and operating account, for example).

Inventory can be a perpetual (ongoing) or periodic (intermittent) process. Organisations that cannot maintain a perpetual inventory can use the periodic inventory system. In this case, at the end of the financial period and after the physical stocks inventory, they must adjust postings to all inventory changes during the period.

How to determine the value of fixed assets?

Fixed assets are durable goods held by an organisation. We distinguish:

- Intangible fixed assets* (non-material): for instance, study fees, software purchases, etc.;
- Tangible fixed assets* : these assets consist of infrastructures (land - including agricultural and forestry land - buildings, structures, any kind of construction), equipment and materials (production, storage, transport, IT, communication, office automation equipment, etc.).

* SEE GLOSSARY

* SEE GLOSSARY

At the end of the accounting year, a (monetary) value is attributed to each item held by the organisation. The value of the assets and recognised depreciation (impairment loss) appear in the financial statements.

Some real property (computer equipment, vehicles, machinery, etc.) loses some of its value each year due to normal use and advances in technology. Its original value must then be adjusted by calculating what is called depreciation. There are several methods for calculating depreciation, but the straight-line (or constant) method is recommended.

BOX 3
The method to calculate straight-line depreciation

This assessment is carried out at the end of each accounting year. Calculation is based on the asset's original value (OV)

OV = Purchase price (ATI)* + purchase expenses

* For goods not eligible for VAT deduction.

The purchase expenses correspond to transportation, installation and assembly costs

Amortisation annuity corresponds to the asset's annual depreciation. It is calculated as follows

Annuity (A) = OV / lifetime (N)

The Net Asset Value (NAV) corresponds to the value of the fixed asset at a given date N. At the end of the fixed asset's useful life, its NAV must be null. For an example of a NAV calculation, see online Template 11, example of NAV calculation

NAV = OV – Sum of depreciation at a given date N

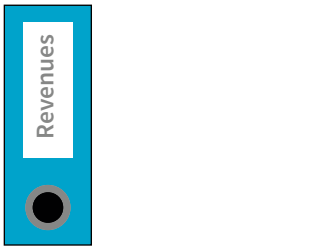
SEE TEMPLATES N°12.0 AND 12.1, AMORTISATION TABLE

For each asset in the organisation's asset base, an amortisation plan is prepared as a chart that represents the loss of value over time.

ACCOUNTING DOCUMENTS

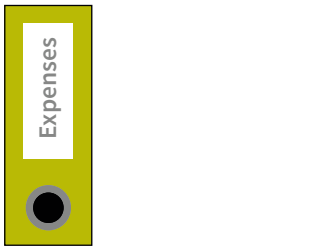
Any kind of document justifying a fund's movement within a structure is considered an accounting document or record, which must be used to underpin all transactions posted in the accounting journal.

There are accounting documents to justify revenues and others to justify expenses. It is mandatory to present documentary evidence for each transaction (cash inflow or outflow, purchase, sale of stocks or goods).



Accounting documents justifying revenues

- credit notices, check cashing slips, cash deposit vouchers or, failing these, a copy of the corresponding bank statement;
- receipts (for donations, contributions, provisions, sales);
- issued and paid invoices.



Accounting documents justifying expenses

- suppliers' invoices (each accompanied by the corresponding order form, delivery note, vendor bill, supplier selection report, etc.)
- proofs of payment (taxes, water, electricity, etc.)
- payslips or allowance slips
- issued transfer orders
- sign-in sheets/ all payment statements issued by the association and signed by the payees
- debit notices (or a copy of the corresponding bank statement) to justify the bank charges to the customer's account
- a copy of the cheque to top up the cash
- mission orders and mission report for mission expenses

DIAGRAM 3
List of supporting documents for revenues and expenses

Accounting records are normally established by the structure that provides the good or service. They are used to justify the use of funds and to certify accounting transactions (purchases, payment of salaries and allowances, sales of goods or services). Invoices, receipts and sign-in sheets are items commonly used by agricultural organisations.

Box 4 – Accounting documents

Designation	Aim and description	Examples
Invoice	An invoice is a document that a supplier sends to customers who do not pay immediately, usually when specific tasks, products or services are produced or provided	Template n°13
Sales receipt	Sales receipts are generally used for products or services provided at the time of purchase, or if customers pay immediately.	Template n°14
Sign-it sheet	They record payments made by an organisation to natural persons (pay-ees). Sign-it sheets are established to pay, for instance, for per diems or for participants' attendance at a seminar or workshop.	Template n°14.1

JOURNAL, GENERAL LEDGER AND ACCOUNTING BALANCE

SEE GLOSSARY

The accounting journal*, the general ledger* and the accounting balance* are basic tools in accounting management. Journals and general ledgers are mandatory documents while balances are optional.

A number is assigned to every completed transaction (purchase or sale) so it can be posted in the right category of transaction. The chart of accounts specifies account nomenclature (classification of transactions). This nomenclature must be controlled by an accountant to ensure that the transactions are correctly recorded in the accounting and financial tools (the accounting journal, general ledger, balance and financial statements). Through constant practice, accountants know these numbers by memory.

Before registering an accounting entry, you must also specify whether it is incoming or outgoing (i.e. credit or debit). This is very important because it determines the accounting quality and reliability.

- Accounting journal: for correct bookkeeping, it is advisable to set up accounting journals, with a mandatory general journal which constitutes the accounts' legal record. For practical reasons, most companies use several accounting books (called subsidiary journals: purchase journal, sales journal, bank journal or cash flow journal), which are then centralised in a general journal (called a centralising journal). For organisations with IT tools and accounting software, these operations are easy to manage. Without a computerised accounting system, however, they are not that simple: organisations in this situation are obliged to keep a single journal based on purchases and sales sheets.

SEE TEMPLATES N°15

- General ledger: the general ledger contains all the accounts that the organisation has used for its accounting. It is a mandatory accounting document for all formal organisations that must keep proper accounting. It produces financial statements such as the balance sheet and the income statement. The general ledger provides a rapid, detailed grasp of all transactions that had an impact on the company accounts. For organisations equipped with accounting software, it is generated automatically. These records must be retained for a period of 10 years from the date of the last entry; they are generally kept on computer media.

SEE TEMPLATES N°16

– Accounting balance: the accounting balance is the organisation's set of accounts for a given period (monthly, quarterly, annually). It is compiled from the general ledger accounts, following the order in the chart of accounts. In accounting, it is not mandatory but it is still extremely useful.

SEE TEMPLATES N°17

CASHBOOK AND PASSBOOK

The cashbook* and passbook* are two indispensable accounting tools for any organisation. They are used to take stock of the organisation's financial resources in cash and in accounts held with financial institutions (banks and microfinance Institutions).

SEE GLOSSARY

– Cashbook: in any organization, there is a fund that contains a minimum amount set by the organisation's administrators to deal with small expenses. The cashbook is used to record all the cash receipts and disbursements. This petty cash fund may be controlled by someone other than the Administrative and Financial Director (such as the Secretary-General). Internal financial management procedures define the roles and responsibilities of petty cash fund management.

SEE TEMPLATES N°18

– Passbook: its purpose is to permanently record all funds received and disbursed by the organisation, for each individual bank account and in chronological order. The passbook is the basic document for bank reconciliation: that is, the act of verifying that that the balance shown on the bank statement is the same as the bank account balance (give or take funds that the bank has not yet received or transferred). Bank reconciliation is not compulsory, but it can be very useful. It is advisable to do it monthly, but the frequency also depends on the number of transactions usually carried out.

SEE TEMPLATES N°19
LIVRE DE BANQUE EN LIGNE

SEE TEMPLATES N°20

FINANCIAL STATEMENTS

Financial statements are a set of accounting and financial documents that present a true and fair view of the organisation's assets and financial position, along with its performance and cash position at the end of the accounting year. Financial statements include: balance sheets; income statements; cash flow tables; and annexes.

These statements are presented in standard formats, according to the accounting standards in force, which each organisation is legally bound to respect so that financial statements can be compared over time (year-by-year) and measured against other entities' annual financial statements.

– The Income Statement* (or Operating Account) summarizes income and expenditure and shows the fiscal year net profit or loss.

SEE GLOSSARY

→ The main incomes consist of cash sales during the accounting year and any operating grants received.

→ The main expenses include purchases of raw materials, taxes, leasing, transport, communication, water, electricity, staff costs, depreciation and provisions, financial expenses and income taxes.

BOX 4
How to calculate the net result?

The difference between income and expenditure is the net result

NET PROFIT = INCOME - EXPENDITURE

SELF-FINANCING CAPACITY = NET PROFIT + DEPRECIATION

SEE TEMPLATES N°21 & 22

The SYSCOHA and IFRS standards provide a standardised, detailed presentation of the summary documents and the income statement. It is advisable to always have a copy on hand for an accurate presentation of all regulatory documents and to bear in mind each accounting system's specific features. Templates globally present the main lines common to both systems.

SEE TEMPLATES N°22.1 & 22.2

BOX 5
How to determine sales revenue?

Sales revenue (SR) is the total cost of sales made by the organisation. It can be obtained by the following operation:

SR = Quantities sold x Unit selling price

For the calculation of Multi-year sales revenues

SEE TEMPLATES N°24
SALES REVENUES

BOX 6
How to determine the purchase cost of raw materials?

The purchase cost of goods or raw materials is obtained by applying the following formula:

Purchase cost = Quantity x Average Unit Purchase Cost

Can be used to calculate this cost over several years, either in the past or in the future (projections).

SEE TEMPLATES N°25

SEE GLOSSARY

– The balance sheet* describes separately what are assets and liabilities constituting an organization's property. It is the financial statements' second summary document. When established, it serves to catch the actual "economic pic" of the organization's property at a certain date and it shows in a structured way which are the organisation's resources and what has been done of them. The balance sheet is usually set up as a two-column table displaying the resources of the organization and what has been done with them:

Table 5 – Composition of the balance sheet	
BALANCE SHEET	
ASSETS	LIABILITIES
The left-hand column (assets) lists the book value (as at the balance sheet date) of all instances of use of the funds.	The right-hand column (liabilities) shows the book value (as at the balance sheet date) of all the resources placed at the organization's disposal.

Templates 25, 26, and 27 provide, respectively, the content, the standard layout and an example of a Balance Sheet. See also Templates 27.1 and 27.2 for an example of SYSCOA.

- The financing plan (or financial table of resources - applications) shows the annual trend in resources (cash inflows) and applications (cash outflows).

SEE TEMPLATES N°28

- The cash budget presents the trend in revenue and expenditure per month. It provides an overview of the short-term situation. See Template 29. The layout of the financing plan and the cash budget are also regulated by the current chart of accounts.

E – Financial control

Financial control, which is part of the "internal control" function is a very important activity in financial resource management. This is because the accounts kept by the accountant or the financial manager may contain errors (voluntary or involuntary), incorrect postings, unforeseen or inappropriate expenditure. It is important, therefore, to have an "outside eye" on the accounts to check them, bring them into compliance with the standards and examine the trends in receipts, expenditure and the different financial ratios.

SEE CHAPTER 2B

The main task of the financial controller is to audit the organisation's accounts and finances. The other activities are essentially:

- to check that the accounts are legal, truthful and reliable from the point of view of the legislation and accounting standards;
- to check expenses and advise on financial management issues and administrative procedures;
- to set up tools to improve bookkeeping practices;
- to make recommendations on audited accounts.

The mission of financial control is exercised independently either by an independent accountant or within the organisation. It can be conducted periodically (quarterly or annually). Financial control is highly recommended especially for federations and unions. It is also recommended for any cooperative managing substantial resources.

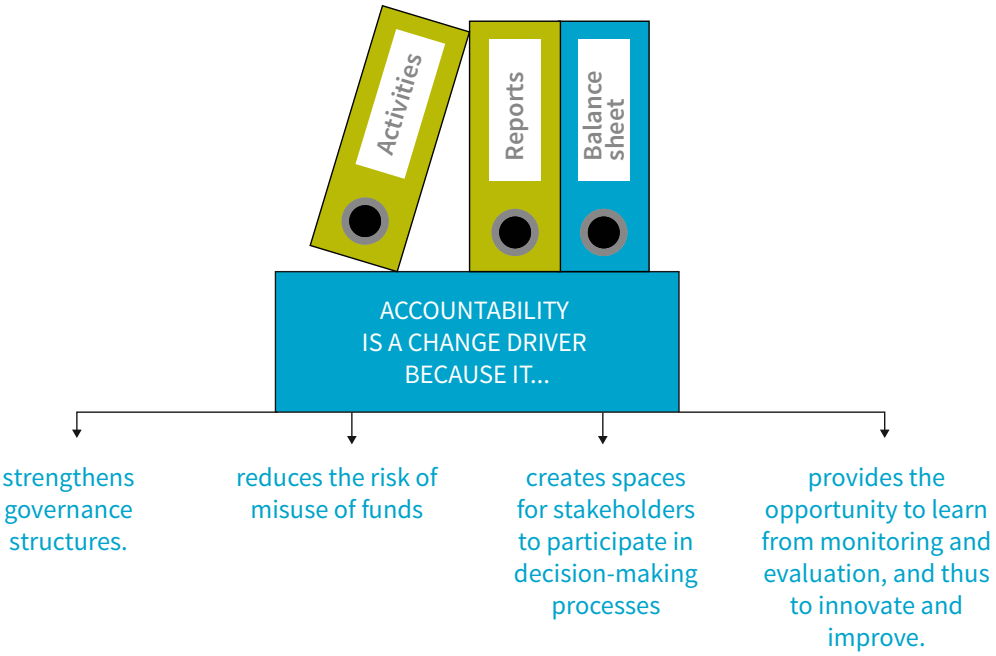
F – Accountability to members

SEE GLOSSARY

Accountability* is a key concern for an organisation's member and partners (especially when they have provided resources to the organisation to carry out its activities). Accountability is the requirement for the organisations' managers and leaders' to give account of the decisions taken, financial transactions and activities carried out as part of their missions.

Any formal organisation has a duty of accountability as defined by its articles of association, the regulatory texts and, possibly, its partners' requirements. Accountability enhances the organisation's credibility and legitimacy. It is also a powerful change driver.

DIAGRAM 4
The importance of accountability to the FO's members



To meet its accountability commitments, an organisation needs to inform stakeholders about its operations and financials. This means building a database on its operations, maintaining accounting and financial tools, and producing regular reporting (weekly, monthly, quarterly and annual).

The main financial documents due to members and the tax authority are the income statement, balance sheet, supply and use table, disposable assets accounts and regulatory appendices.

G – Key points

➔ Good management of financial resources is very important for an organisation. It improves transparency, efficiency and effectiveness in the conduct of its operations. It provides the necessary accountability to members, informs management on decisions to be taken, enables the FO to fulfil its legal obligations and facilitates the negotiation of financing with development partners and financial institutions. It also meets the its partners' information needs.

➔ The FOs' managers must be sufficiently aware of the importance of sound accounting and financial management practices to set up an appropriate organisation and suitable tools.

➔ Organisations (in particular federations and unions) must set up an accounting department with staff who are qualified in accounting and financial management, and equipped with appropriate computer equipment and software.

➔ Federations and unions are advised to have financial control in order to guarantee the quality of financial reporting and of the accounting and financial tools.

➔ Organisations must maintain a database of key indicators to measure their operations' performance. The statistical tables provided online, in addition to this chapter, on supply, production and marketing can be used as references to build a database.

H – Further reading

HAP International (Humanitarian Accountability Partnership). *The HAP 2010 Standard for Humanitarian Accountability and Quality Management.* https://portailqualite.acodev.be/fr/system/files/node/408/the_2010_hap_standard.pdf

IFRS website (International Financial Reporting Standards): https://www.ifrs.com

OHADA website (Organisation for the Harmonisation of Corporate Law in Africa): http://www.ohada.com

Sambe & al., (2017), *Plan des comptes et états financiers SYSCOHADA*, 4e Édition, Editions Comptables et Juridiques.

Veteau, E. & al., (1997), *« Gestion Comptable », Synthétiser, Bilan et résultat,* Foucher, Paris.

Appendix
Chapter **3C**

https://bit.ly/3dIutfU

CHAPTER 4

The economic and social aspects of local food reserves

Introduction

When harvest season arrives (and sometimes even earlier), the farmers' organisations (FOs) operating local reserves of cereals or stockfeed have to make arrangements to replenish their stocks. This entails setting the prices at which they will buy the commodities from their members and/or negotiating supply contracts with their suppliers. Over the following months, they will have to manage the operations involved in selling the stored commodities, which will imply answering such questions as: should they sell all year round or only during the lean season? If the stored produce is being sold to the FO's own members, should it be sold on credit or for cash, and in wholesale or retail quantities? If the FO is selling to customers outside the FO, how does it set a competitive price?

These are all day-to-day issues for FOs engaged in local food reserves, but they also concern FOs' strategies. This is because the decisions made about purchasing and selling the stored products reflect the balances that each FO must strike between the social objectives (such as ensuring its members' food security) and the economic objectives (finishing the year with a positive balance on the profit and loss statement).

This chapter deals with all of the considerations involved in organising purchases and sales within the FOs. It devotes a subchapter to each of the three main systems of local food reserves, namely

- a) group supply systems,
- b) feed banks and
- c) group marketing systems.

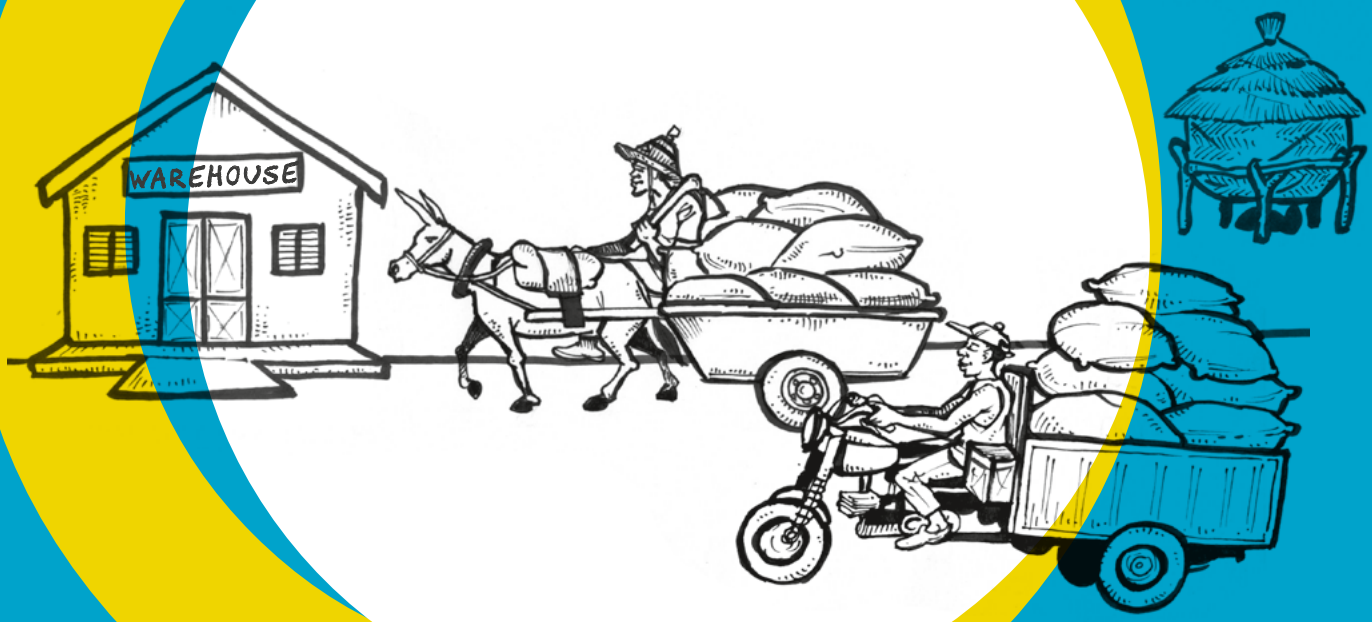
The first subchapter, on group supply systems, deals successively with targeting the beneficiaries, the range of products to be stored and sold, the periods for taking in supplies and selling stocks, and product price determination. It covers the specific provisions to take in the event of inferior quality observed at the time of sale, in the event of a price reversal, and, also, to meet the needs of farmers in hardship or hit by market reversals.

The second subchapter, on feed banks, deals mainly with issues similar to those raised by group supply systems. However, the management of purchases and sales in feed banks must take into account the diversity of livestock farming systems. In particular, when estimating the purchasing requirements and defining the conditions for accessing stockfeed, it needs to factor in the herd mobility typical of transhumant pastoral systems.

The third subchapter is on group marketing systems. It begins by presenting the purchasing and sales practices within these systems. Then it outlines the various markets targeted by group marketing FOs, and in particular institutional markets. Lastly, it looks as how FOs can make their sales and marketing efforts more effective.

CHAPTER 4A

Purchases and sales management in group supply systems



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A – Introduction

Group supply systems operate in a cyclical process comprised of three main stages, namely: (1) build up (or replenish) a reserve of cereals or other foodstuffs; (2) store the reserves for a period of between a few days and several months; (3) destock, i.e. distribute the reserves by making the produce available to members of the farmers' organisation (FO) or the local population. This subchapter deals with stages 1 and 3.

FOR INFORMATION ABOUT STAGE 2 - STORING THE RESERVES - SEE CHAPTER 5

In the majority of the systems, the reserves are built up or replenished (stage 1) by wholesale purchases, often made outside the area, since group supply FOs mainly operate in food-deficit areas. Destocking (stage 3) then consists in selling the reserves, often in small quantities, to members or to the local population. For all of these systems, we will be referring to these operations as «purchases» and «sales».

However, some cereal banks* operate exclusively through transactions in kind: during the lean season, members «borrow» cereals against a promise to return them, in kind, after the harvest (possibly after adding a small surplus). For this sort of system, where the terms «purchases» and «sales» are not appropriate, we will refer instead to "stock replenishment" and "destocking"*.

SEE GLOSSARY

SEE GLOSSARY

This subchapter examines a number of very practical questions that group supply FOs have to address when managing their purchases and sales. This document is structured around the following questions: How are the beneficiaries selected? What products are stored and sold? When and how are the reserves stored and sold? How are the prices set? What specific steps are taken if the product is found to be of inferior quality at the time of sale? How are welfare cases and price reversals handled?

B – Eligibility

Depending on the FO, access to the local storehouses (cereal banks or food security granaries) may be restricted to members or open to the population in general, possibly subject to certain conditions. Within the subregion, situations vary, as follows:

- Viim Baore (Burkina Faso) follows the thinking of the Naam groups, which work for the benefit of the whole community. Accordingly, anyone, whether or not they are a member of the group promoting the scheme, can draw on the food security granaries (FSG). Only traders are barred from using the food security granaries.
- The Federation of Cereal Banks in Fallou (Mali), on the other hand, in principle restricts access to the cereal banks to members, who must pay a one-off membership fee and annual dues. In the event of a surplus, however, the cereal banks can sell products to non-members.
- The Federation of Women's Associations in Kayes (Mali) allows anyone to use its storehouses, but members are given a discount on the prices.
- The Mata Masu Dubara (GFS/MMD) system of women's lean season granaries, in Niger, distributes millet during the lean season*, which the beneficiaries pledge to return in kind after the harvest. These systems, which operate without any money changing hands, are designed for the most vulnerable women, who have difficulty accessing traditional cereal banks' services. Only members (who are exclusively women) are eligible to use the system.

SEE GLOSSARY

Table 1 – Intended beneficiaries of the various group supply FOs

FOs	Intended beneficiaries	
	Eligibility	Other distinctive features
Food security granaries (Viim Baore - Burkina Faso)	Group members and non-members	Traders are ineligible
Cereal banks (Federation of Cereal Banks in Fallou - Mali)	Federation members with no arrears in their dues or member-ship fees	If there is a surplus, anyone can buy
Storehouses (Federation of Women's Associations in Kayes - Mali)	Everyone	Discounts for members
Women's lean season granaries (Mata Masu Dubara (GFS/MMD) - Niger)	Women members of the group	Repayment in kind

The question of the intended beneficiaries and eligibility for accessing the local storehouses' services is very closely related to the FO's mission. There are several options, as demonstrated by the above-mentioned schemes. We recommend that the umbrella FO*, draws up the rules, with input from the grassroots stakeholders, then clearly communicates them to all of the stakeholders.

* SEE GLOSSARY

C – What products should be on sale?

Historically, the first group supply systems confined their services to products composing the basic diet of people living in rural areas. In the Sahel zone, this meant millet and sorghum, hence the name «cereal banks». To meet demand from the local populations, some of these systems tried to diversify their offering by including other foodstuffs (such as maize, rice, flour, cowpea, groundnuts, oil, etc.) or even non-food items (stockfeed, agricultural inputs, etc.), hence the appearance of new names such as «food security granary» (FSG), «village shop», etc. The FOs in the subregion, however, followed different paths, as the examples below show.

Viim Baore is a good example of this development. The oldest food security granaries developed out of the cereal banks, some of which have been in operation since the 1970s. At the time, and up until the late 1990s, the instruction issued by the umbrella organisation, the FNGN (the national federation of Naam groups), was that the banks should supply only millet and sorghum. Under the stimulus plan initiated in 2002, the cereal banks, renamed food security granaries, were encouraged to diversify their offering and include other basic foodstuffs for the dual purpose of meeting the populations' demand and reducing the risks posed by price changes. More recently, also in response to the populations' demand, the food security granaries situated in pastoral zones broadened their offering to include stockfeed. As a result, some food security granaries can offer up to 30 or so different products. However, cereals continue to make up the bulk (around 80%) of the volumes sold.

In Mooriben, on the other hand, the cereal banks have remained true to their original purpose, which is focused on cereals. In response to members' demand, Mooriben, too, set up a system to distribute agricultural inputs. However, it works through a separate network of «agricultural input shops» that are quite distinct from the cereal banks. The agricultural input shops sell seeds, fertilisers, pest-control products and veterinary products. They also rent out agricultural equipment and provide free advisory services.

The Federation of Women's Associations in Kayes sells rice, maize, sorghum, millet, fonio, groundnuts and infant meal.

At the Federation of Cereal Banks in Fallou, the only products sold by the cereal banks are millet, sorghum and rice.

Table 2 – Products sold in various group supply FOs

FOs	Products sold
Food security granaries (Viim Baore - Burkina Faso)	> Various cereals for human consumption (close to 80%) > Stockfeed
Cereal bank (Mooriben - Niger)	> Various cereals for human consumption > Shops selling agricultural inputs and providing free advisory services
Storehouses (Federation of Women's Associations in Kayes - Mali)	> Products for human consumption: rice, maize, sorghum, millet, groundnuts and infant meal
Cereal bank (Federation of Cereal Banks in Fallou - Mali)	> Products for human consumption: rice, sorghum, millet

On the whole, the beneficiaries appreciate the variety of the group supply systems' offering. The group supply systems generally operate in rural areas with few shops, thereby sparing the local residents from having to travel long distances to make their purchases. However, storehouses that offer a wider selection of products are more complex to manage, especially with regard to book-keeping and product conservation: some products (such as cowpea) require specific precautions•.

SEE SUBCHAPTER 5B

Accordingly it is up to each FO to define its own policy regarding the products it will sell, striking a compromise between the desire to meet the beneficiaries' needs and its own management capacity. It is recommended that the umbrella FO* lays down general guidelines (for example, authorising any non-perishable foodstuff), within which each grassroots storehouse can draw up its own list of products to sell, based on local needs and its own capacity. When doing so, FOs at both grassroots and federation level should be particularly attentive to the needs of underprivileged social groups and in particular women.

SEE GLOSSARY

D – Calculating how much of each product to buy

As a general rule, cereal bank managers plan their next year's operations towards the end of the current crop year. More specifically, they need to calculate the projected volume of cereal sales for the year, i.e. the quantity of cereals the bank hopes to sell during the year. The quantity of cereals to be bought logically corresponds to the projected volume of sales less any stocks remaining at the end of the crop year.

To determine the projected sales volume, the managers rely on both their previous experience and their estimate of the population's needs, which vary widely with the outcomes of the winter crop year. For this, they can draw on their own observations and discussions with local farmers, and the formal assessments carried out by the government departments. They should also take into account the following factors:

- It is unlikely that the cereal bank will meet all of the target population's needs: even in the most remote localities, some inhabitants will continue to make at least some of their purchases through other channels;
- To guarantee its long-term viability, a cereal bank cannot sell at a loss, which is why it can only meet solvent demand: it cannot, therefore, serve households that, as a result of various crises or other events, are unable to pay the set price (these households must be served by welfare programmes, not cereal banks; see Section 14 below).

If solvent demand is high, the cereal bank's projected sales volume can be limited by its own capacity for financing, storage or management.

The same reasoning holds for the other foodstuffs: like cereals, they go through an annual cycle, from relative abundance just after harvest to a shortage in the months preceding it.

To calculate the quantities of each product to buy, the umbrella organisation can lay down general guidelines (in particular methods), but the actual purchasing must be done locally. This is because the managers on the ground are best placed to estimate local demand and the local storehouse's capacity.

E – One rotation per year, or more?

The reasoning outlined in the previous section is based on the hypothesis of one rotation per year. Cereal banks and food security granaries typically make their purchases shortly after the winter harvest, when cereals and other foodstuffs are generally in plentiful supply and prices are relatively very affordable. They then sell the produce to the village a few months later, when the products are in shorter supply and more expensive.

As mentioned in the previous section, the quantities of cereals or other produce that a local storehouse can sell in a year may be limited by its financial capacity or available storage space. The storehouse can overcome this constraint by carrying out several rotations per year. In theory, with two or three rotations per year, the volume of sales will be two or three times higher for the same working capital* and the same buildings.

SEE GLOSSARY

Carrying out multiple rotations per year would therefore be more cost efficient*. However, it also requires greater management capacity. Traditional cereal banks' business model, with one rotation per year, is largely based on the price differential between the post-harvest purchasing period and the lean-season selling period. The practice of carrying out multiple, therefore short rotations relies heavily on the storehouse managers' ability to negotiate prices, when they buy the products, that are sufficiently lower than the prices they intend to charge when they sell the products. The last rotations, in particular, are the trickiest. The further on in the lean season, the higher cereal purchase prices rise, in step with mounting social pressure on the storehouse to sell at the lowest possible prices. There is also a growing risk of reaching the end of the crop year with unsold stock, which is why the last rotations can jeopardise storehouses' financial viability. Both practices (i.e. one or several rotations per year) can be seen among FOs in the subregion.

SEE GLOSSARY

- In Viim Baore's case, most of the FSGs continue to operate with a single annual rotation. However, to more effectively meet the populations' demand, some very active FSGs carry out two, three or even more cycles per year.
- In Mooriben's case, 88% of the cereal banks limit themselves to one annual rotation, while the others carry out two or three per year. In many cases, cereal banks are prevented from carrying out additional rotations because they sell products on credit (see Section 12 below).
- Once a year only, the Federation of Cereal Banks in Fallou makes centralised purchases of millet and sorghum to supply the grassroots cooperatives (cereal banks), which therefore carry out just one rotation per year for these products. If the cereal banks manage to make substantial reimbursements ahead of schedule, the federation can sometimes carry out a second round of purchases, this time of rice, and the grassroots cooperatives can accordingly carry out a second rotation.
- The Federation of Women's Associations in Kayes says that some of its member organisations have managed to carry out up to nine rotations in the course of a single season.

Table 3 – Stock rotation practices in various group supply FOs

FOs	Rotation principles	
	Usual situation	Exceptions
Food security granaries (Viim Baore - Burkina Faso)	One annual rotation	2-3 rotations (or more) for the most active FSGs
Cereal banks (Mooriben)	One annual rotation (88%)	2-3 rotations
Cereal banks (Federation of Cereal Banks in Fallou - Mali)	One annual rotation (millet and sorghum)	2nd rotation (for rice) in the event of early reimbursements
Storehouses (Federation of Women's Associations in Kayes - Mali)	Multiple rotations (up to nine, for some organisations)	

As a general rule, any storehouse keen to increase its sales volumes but held back by insufficient working capital or storage capacity should consider carrying out multiple rotations. However cereal banks should think carefully before embarking on this course, since this option calls for strong purchasing skills to negotiate good prices with the suppliers. Umbrella FOs should encourage local management committees with the necessary skills and give them adequate support.

F – Supply procedure: where to buy, and from whom?

Although they usually operate in food-deficit areas, cereal banks and FSGs sometimes have an opportunity to buy certain products from local farmers, especially during the post-harvest period. The advantage of buying locally like this is that the management committees can easily control the purchases. Nevertheless, the managers will need to be careful to strike a sound compromise between wanting to pay these local farmers (sometimes members of the FO) a fair price and needing to buy cheaply so that prices can be kept low for the storehouse beneficiaries.

Usually local purchases are not sufficient to meet the storehouses' needs, so the storehouses then have to look for products from more distant food-surplus areas.

Sometimes storehouse managers can obtain supplies from traders who sell those products and can deliver them to the storehouse. This solution, which has the advantage of being simple, is seldom the most advantageous in terms of the prices charged.

To enable decentralised storehouses to obtain the lowest prices, the FOs organise group purchases at union or even federation level. By combining several storehouses' requirements, the FOs can achieve scale economies and negotiate better prices. The unions and especially the federations also have more highly-qualified staff, who will be able to more effectively identify suppliers and negotiate good prices with them.

To optimise their group purchases, the FOs need to know who is selling the product they need, in what quantities and at what price. To obtain this information, the FOs can either set up their own market information system (MIS) or use the services offered by various public and private stakeholders.

SEE CHAPTER 6

To meet potential suppliers, FOs can take part in commodity exchanges such as those organised by Afrique Verte or organise their own exchanges. New communication technologies are also greatly facilitating remote contacts and many business stakeholders are adopting them. What can we learn about the supply process from the experience of FOs in the sub-region?

WWW.AFRIQUEVERTE.ORG

- Viim Baore's federation runs a specialised service that helps the managers of unions and food security granaries optimise their group purchases. Every year, the service organises an exchange that draws large numbers of traders and managers of marketing FOs. Moreover, within its network, Viim Baore has collection centres in food-surplus areas, where farmers belonging to Naam groups combine their production surpluses with a view to grouped sales. These collection centres supply a large share of the cereals that are subsequently sold by the food security granaries in food-deficit areas.
- Following a number of failed initiatives, Mooriben stopped centralised purchasing at federation level, but still helps the unions organise group purchases at their level.
- The Federation of Women's Associations in Kayes buys cereals and other products in large quantities at exchanges organised by Afrique Verte, then makes them available to its member associations for low-priced sales in small quantities (some member associations also process these products).
- The Federation of Cereal Banks in Fallou also organises centralised purchases.

It should be noted, however, that compared to Viim Baore and Mooriben, the latter two organizations operate on a much smaller territory.

Table 4 – Supply procedure of various group supply FOs

FOs	Supply procedure
Food security granaries (Viim Baore - Burkina Faso)	> Specialised service for group purchases (supports managers and organises exchanges) > Collection centres in food-surplus areas for members of the group
Cereal banks (Mooriben)	> No longer engaged in centralised purchasing (following a number of failed initiatives) > Helps the unions organise group purchases
Cereal banks (Federation of Cereal Banks in Fallou - Mali)	> Centralised purchasing
Storehouses (Federation of Women's Associations in Kayes - Mali)	> Buy large quantities at exchanges, then make the commodities available to the associations for retail sales

As a general rule, FOs are advised to let the local management committees source supplies from local farmers whenever possible. Group purchases by one or more municipalities should also be encouraged. It lies with the federation to establish the support services that will help union managers and local storehouses to optimise their purchases

G – Using contractual agreements to secure purchases

Many cereal banks and village storehouses have found themselves in trouble when a trader has failed to deliver an order that has already been paid for, or has delivered bags containing less produce than indicated or of a lower quality than expected. The key to avoiding this sort of situation is a good contract.

For purchases from local farmers, the most appropriate solution is an oral contract concluded in the presence of witnesses. Storehouse managers should rely on local customs, which are the best way of ensuring that farmers keep their word. If necessary, storehouse managers can use the local dispute-resolution mechanisms, which may involve the traditional systems of chiefs.

For any dealings with a stakeholder outside the local area, it is absolutely essential to have a written contract drawn up in accordance with modern practice. Contracts should specify the type of products to be delivered, the quantities, the packaging, their quality (based on objective criteria), the place and date of delivery, the terms of payment, the dispute resolution arrangements, etc.

It lies with the umbrella FO to establish the support services that will help unions and grassroots storehouses to secure their purchases with a suitable contract.

H – Checking that the products delivered are of the agreed quality

The group supply farmers' networks operate within the framework of a sector deemed to be «artisanal». Accordingly, they are not currently bound by the standards that the national and regional authorities impose on industrial companies. Local storehouse managers, who grew up in the village and have little formal schooling, tend to refer to the standards and methods used in rural areas and this can result in certain deficiencies. To address this situation, most umbrella FOs have drawn up their own standards and inspection methods, based on the recommendations of recognised stakeholders such as the World Food Programme (WFP).

SEE CHAPTER 5B

The issue of quality control for stored produce is discussed in detail in Subchapter 5b.

I – Quantities for sales to consumers

Selling in small quantities makes it possible for the poorest sectors of the population to buy food from the FO's reserves, but it creates more bookkeeping work for the management committee. In food-deficit areas, women are often tasked with purchasing small quantities (by the kilogram), while men buy commodities by the bag. This is why sales in small quantities facilitate women's access to basic foodstuffs.

In Viim Baore, even though it is still possible to buy produce in larger quantities (bags), the food security granaries give priority to selling small quantities, to cater for families' everyday needs. Food security granaries are in touch with the local populations and sell commodities in the local units of measurement: ladle, half-tine, tine and yoruba.

The Federation of Women's Associations in Kayes sells by the kilo, half-bag or 100 kg bag.

At the Federation of Cereal Banks in Fallou, the commodities are generally sold by the 100 kg bag or the 50 kg half-bag.

Table 5 – Measurements used for sales in different group supply FOs

FOs	Measurements used for commodity sales
Food security granaries (Viim Baore - Burkina Faso)	> Sold by the ladle, *half-tine, tine* or *yoruba* (local units of measure-ment)
Cereal banks (Federation of Cereal Banks in Fallou - Mali)	> Sold by the half-bag or 100 kg bag
Storehouses (Federation of Women's Associations in Kayes - Mali)	> Sold by the kilo, half-bag or 100 kg bag

J – When should cereals be sold: all year round or only during the lean season? What should storehouse opening hours be?

The question of the period of sales and storehouse opening hours is closely tied to the question of diversification and the size of the sales unit. A FO that offers a small number of products (cereals) sold in large quantities (by the bag) can afford to open for a short period of the year and have reduced opening hours. On the other hand, a FO that aims to meet the daily needs of poor families by selling a wider range of products, in small quantities, needs to open all year round, if possible, with long opening hours. However, the FO will also have to factor in the availability of the manager and the costs incurred in the manager's presence. A few examples of FOs in the subregion follow:

- In the case of Viim Baore, the FSGs are open all year round and the opening hours are set by the management committee. The FSGs are generally open every day with long opening hours, depending on the manager's availability;
- In other federations, such as the FBC in Fallou, the storehouses are only open during the lean season, generally for the last three months before the harvest (August, September and October) and for only one or two days a week. The period and the opening hours are set every year at the general assembly of the grassroots cooperative;
- In the Federation of Women's Associations in Kayes, the storehouses open three times a week.

Table 6 – Storehouse opening periods and hours in various group supply FOs

FOs	Opening period and hours
Food security granaries (Viim Baore - Burkina Faso)	> Open all year round (every day, with long opening hours) > Opening hours set by the management committee
Cereal banks (Federation of Cereal Banks in Fallou - Mali)	> Open during the lean season (1-2 days per week) > The grassroots cooperative sets the opening period and hours at the general assembly.
Storehouses (Federation of Women's Associations in Kayes - Mali)	> The storehouses open three times a week

On this question also, it lies with the umbrella FO to lay down a framework that is consistent with the organisation's mission, but leaves the local storehouses sufficient latitude to set their opening hours to suit the needs of the beneficiaries and their own capacity.

K – How to set the selling price of each product?

The purpose of group supply organisations is to ensure that food is available and accessible for the population. They usually aim to sell at a below-market price. As a result, they try to strike a sound balance - sometimes hard to find - between pursuing their welfare objective and maintaining their financial viability.

The prices set must factor in the need to cover all of the storehouse's costs, including: the initial cost of purchasing the products; losses resulting from storage and a decline in quality; the financial costs (interest), if any, associated with borrowing working capital; the costs incurred in renting and maintaining the buildings; personnel costs (manager); etc. Ideally, the selling price should not only cover all of these costs but also include a margin for covering contingencies and building up the storehouse's working capital.

As a general rule, it is better to set the prices several times a year to adjust to changes on the market, rather than setting a price for the whole season.

In the Viim Baore cooperative, prices are set by each FSG at a general assembly of the group promoting the FSG, which accordingly meets every time a price adjustment seems necessary. The prices are first set by the bag, then converted into the local measurement units.

At the Federation of Cereal Banks in Fallou, cereal prices are set during a general assembly of the cooperative, for the entire season.

In the Federation of Women's Associations in Kayes, produce is always sold below the market price, generally CFAF 10/kg (US$ 0.016) lower than the price on the Kayes market, which serves as a benchmark price for the federation. Anyone can buy from the reserves, but association members are charged a price slightly lower than the price for non-members.

Table 7 – Methods for setting selling prices in various group supply FOs

FOs	Methods for setting selling prices
Food security granaries (Viim Baore - Burkina Faso)	> Prices are set at a general assembly of the group promoting the granary > A meeting is held every time the prices need to be reviewed > The price is set per bag, then converted into local units of measurement
Cereal banks (Federation of Cereal Banks in Fallou - Mali)	> Prices are set at a general assembly of the cooperative for the entire season
Storehouses (Federation of Women's Associations in Kayes - Mali)	> Selling price is CFAF 10/kg (US$ 0.016) lower than the benchmark price (the price charged on the market in Kayes)

L – Whether or not to allow sales on credit

Deciding whether cereals should be sold for cash or on credit is not an easy decision to make. There is a crucial balance to find between, on one hand, making life easier for the most vulnerable populations and, on the other, guaranteeing storehouses' economic sustainability, given that one of the biggest problems is, precisely, failure to pay off credit. As the experiences below show, the decision whether to sell on credit or for cash is linked to such factors as the FO's history and objectives.

Since the regeneration programme kicked off in 2002, Viim Baore has been instructed to sell only for cash and to refrain from granting its customers any credit whatsoever. This is because many cereal banks in the 1980s and 1990s lost their working capital because of accumulated debt that was never paid off. This commitment is set down in the «local food granary charter» that the unions promoting the granaries signed and which entitles them to the cooperative's support services. On the ground, no-one can claim that sales on credit have totally disappeared, but the practice is clearly far less widespread than in the cereal banks' time. Moreover, the fact that many FSGs operate to a large extent with funds lent by the cooperative spares the managers from social pressure: everyone in the community knows that the FSG must pay back its working capital to the cooperative at the end of the crop year to be able to continue operating the year after, so they cannot afford to grant loans to their own customers.

SEE CHAPTER **3A** ON FINANCING INSTRUMENTS

Mooriben grants cereals on credit during the lean season (known as «crop year credit») so that cereals are more readily available when work on the farm begins. At that time, if the family granary's reserves have been depleted, the farmers have to spend one out of every three days doing paid work - a practice that reduces farm yields. However, in the event of a bad crop year, the rate of loan non-repayment can reach 35%, putting many storehouses' viability in peril.

At the Federation of Cereal Banks in Fallou, sales on credit are tolerated, but the loans must be paid off by the end of the marketing year so that the grassroots cooperative (the cereal bank) can settle its debt to the federation. Under this system, the federation takes charge of centralised purchasing and sells the grassroots cooperatives the agreed quantities on credit. Once the grassroots cooperatives have sold all of their reserves to the population, they settle their debts to the federation.

The Mata Masu Dubara FSGs grant credit in kind during the lean season at 20% interest (also to be repaid in kind). This has enabled the cereal banks to be replenished to 72% of their capacity, which is not a bad result, given the population involved. Even so, the question remains as to the system's long-term viability should outside aid be withdrawn.

Table 8 – Choice of sales terms (on credit or in cash) in various group supply FOs

FOs	Choice of sales terms
Food security granaries (Viim Baore - Burkina Faso)	Cash sale
Cereal banks (Federation of Cereal Banks in Fallou - Mali)	Sale on credit tolerated, but repayment by the end of the marketing year
Cereal banks (Mooriben)	Sale on credit (but high risk of non-repayment in the event of a bad crop year)
Women's lean season granaries (Mata Masu Dubara (GFS/MMD - Niger)	Credit in kind during the lean season, at a 20% interest rate (repayment in kind)

As a general rule, sales on credit should be avoided, especially in systems open to the population in general rather than members only. In the short term, credit ties up part of the organisation's working capital, which the storehouse can no longer use to fulfil its role of buying and selling foodstuffs. For example, sales on credit might prevent a storehouse from carrying out an additional rotation. Experience shows that non-repaid credit tends to mount up in the longer term, bringing the storehouse's operations to a complete halt. Selling in very small quantities may be an alternative to selling on credit for FOs keen to serve poor populations (see Section 14).

M – What should be done if the product is found to be of inferior quality at the time of sale?

Despite the precautions taken when products are received and during their storage, it can happen that beneficiaries complain about spoilage they have noticed, for example concerning part of the bag they bought.

To prevent situations like this, we recommend that storehouses carry out further checks on samples taken from the bags when the bag is given to the beneficiary. Various tools are used for sampling (most are improvised and hand-made).

If, in the days following the transaction, the storehouse detects a quality issue attributable to the storehouse, the bag concerned must be reimbursed or replaced.

N – How are the needs of the underprivileged addressed?

Group supply FOs storehouses cater for low-income rural populations with the means to buy the cereals and other basic foodstuffs they need to supplement their own production. However, the storehouses are important institutions in the local community, so unavoidably receive appeals from the destitute or requests to contribute to weddings and funerals, etc. Accordingly, most of Viim Baore's FSGs put one or two bags aside to meet these types of request. Some of Mooriben's cereal banks have set up a system of solidarity known as an emergency reserve•.

FOR FURTHER DETAILS SEE CHAPTER 8

All of these systems should be encouraged, providing they involve only a marginal portion of the storehouses' activity, so that their costs can be covered by the profits made on the organisation's routine business.

However, without government or humanitarian aid, the storehouses would be incapable of meeting the population's needs if, following a crisis, the population could no longer pay the market price for the basic foodstuffs they need. If such a situation were to arise, the storehouses and the welfare programmes would need to work together to organise an appropriate response to the populations' needs without jeopardising the storehouses' survival•.

SEE CHAPTER 8

O – What should be done in the event of a price reversal* ?

SEE GLOSSARY

As mentioned earlier, group supply systems' «business model» relies, at least in part, on the price rise usually observed between the post-harvest period and the months preceding the next harvest. In some years, though, cereal prices fall instead of rising. For example, cereal prices can be high in the post-harvest period after a poor crop year, then fall as the next harvest approaches if it looks likely to be abundant. When this happens, the cereal bank is faced with a dilemma: should it sell at a loss, or depart from its business purpose and retain the reserves until prices eventually rise?

To guard against the repercussions of this sort of situation, cereal banks can make sure they set aside sufficient profits during good years to offset their losses in bad years•.

SEE CHAPTER 7 "RISK MANAGEMENT"

Another possible strategy is to diversify the range of products. The profits made from selling products whose prices remain stable or follow different cycles can offset the losses made on cereals if prices plummet.

To a certain extent, carrying out multiple rotations can also be solution, since this strategy is based primarily on the storehouse's capacity to buy in supplies at low prices, rather than taking advantage of a seasonal difference.

P – Key points

➔ It falls to the umbrella FO, with input from its members, to define the main lines of the mission undertaken by its group supply system. To do so, it should answer the following questions: Is access restricted to members or open to the population at large? Is the service limited to a handful of products (cereals) or is there a highly diversified product range? Does it sell in large quantities (bags) or in small quantities?

➔ Opting for a highly diversified range and sales of small quantities is more useful for the poorer segments of the population, but requires a longer opening period and opening hours, and more substantial management capacities.

➔ Organising group purchases by one or a few municipalities makes it possible to obtain better prices, but requires support from the unions and the federation, which must have ample capacities.

➔ It also falls to the umbrella FO to set up support services to secure the storehouses' purchases with appropriate contractual provisions.

➔ We recommend carrying out multiple rotations if the working capital or storage space are too restrictive, providing, however, that the organisation is capable of efficiently managing purchases and sales.

➔ Given the high risk of outstanding payments, selling on credit is generally inadvisable, especially for FOs that cater for the entire population, not just members.

Q – Further reading

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Appendix
Chapter **4A**

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CHAPTER 4B

Purchases and sales management in **livestock feed banks**

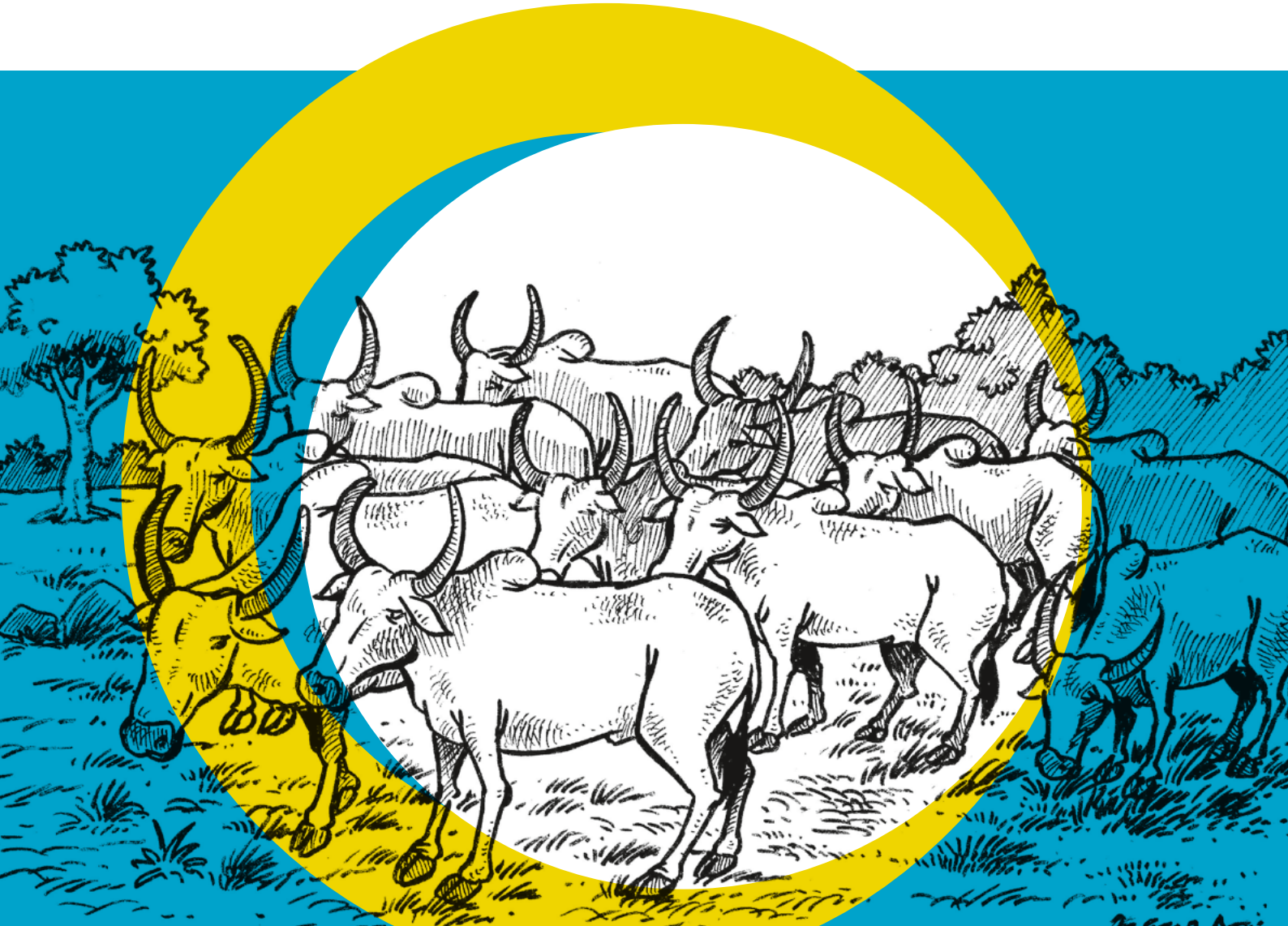


Table of Contents

A – Introduction

This chapter is intended for the managers (elected officials and technicians) of the unions and federations of livestock organisations that set up livestock feed banks (LFBs) at local level. It deals with the purchase and sale of livestock feed, considering the need to meet the requirements of different types of livestock farmers. It is based on the main documented experiences in the Sahel region of the West African region (see bibliographic references in the section «Further reading»).

SEE GLOSSARY

How to define livestock feed*?

Ruminants (cattle, sheep, goats and camels) reared in West Africa are fed on a wide variety of products that fall into four main categories:

- Forage resources (grass from pastures and leaves or fruits of associated species on the rangelands), which are the main resource for Sahel pastoralists;
- Crop residues (cereal and legume stubble) that are either left in the fields after harvesting or harvested and stored;
- Agro-industrial by-products* (AIBs): cotton seeds and oilcake, groundnut, palm and palm kernel oilcake, wheat and rice bran, brewer's grains, molasses from sugar cane, etc. which are attracting growing interest from farmers;
- Feed, which are relatively little used.

SEE GLOSSARY

It is these last two categories (AIB and feed) that are referred to here as livestock feed.

What is the place of livestock feed in livestock systems?

Livestock feed is mainly used in the dry season from April onwards, given its high cost and often rarity, as a supplement to pastures. It's use is more or less intense and prolonged depending on the conditions that year, breeding practices and the farmer's resources. Feed plays different roles depending on the type of farming and the period considered:

- for less mobile or small-scale transhumant agro-pastoralists, access to feed makes it possible to maintain animals' weight during the dry season, maintain and intensify dairy herds' production, ensure the finishing of animals intended for slaughter or even fatten males sold for animal traction;
- for pastoralists practising long-range transhumance in times of crisis (when drought and exceptional forage deficit or insecurity prevents access to rangelands), access to the feed makes it possible to secure a nucleus of breeding animals in order to facilitate the reconstitution of the herd after the crisis.

In both cases, the contribution of feed is one element, among others, of farmers' strategies to ensure the reproduction of their herds. Mobility and the sale of animals to maintain a balance with available resources are other key elements of these strategies.

On the scale of a territory or country, access to feed is considered by public decision-makers as one of the avenues to be encouraged to develop intensive forms of livestock farming, particularly in the vicinity of urban centres. Access to feed is also seen as a means of partially limiting large-scale herd movements, particularly in times of fodder deficit; this concerns in particular cross-border movements, which are increasingly difficult for livestock farmers due to mounting insecurity, restrictive policies on the part of the host countries and the closure of traditional rangelands as a result of the expansion of cultivation areas.

What are the difficulties for livestock farmers to access livestock feed?

In the Sahel, livestock farmers' access to feed is made difficult by:

- a low supply on the feed market compared to the needs expressed by livestock farmers, in particular in the event of a fodder crisis; this low supply results in frequent stock shortages;
- the random nature of supply and demand; this is because feed supply is highly dependent on the economic situation in other sectors (cotton, cereals) and other areas of West Africa; as for demand, it varies greatly from one year to another and from one territory to another, depending on the availability of forage resources and the mobility of livestock;
- the long distances between feed production areas (coastal countries) and consumption areas (Sahelian countries), except for cotton cake and rice bran;
- the small number of feed suppliers controlling the market, which leads in particular to speculation and a spike in prices in the event of a feed crisis;
- the general lack of any guarantee of the quality of the feed placed on the market, especially given the risk of the presence of aflatoxins* in the event of poor storage conditions;
- competition between regional demand and exports, mainly to European markets, particularly for oilseed meal.

* SEE GLOSSARY

What is a "livestock feed bank"?

A livestock feed bank* is a grassroots community organisation that buys, stores and sells feed for animals. Generally, it is created to allow the greatest number of livestock farmers to access feed during the lean season and at affordable prices. The food managed by the LFB is mainly intended for cattle and small ruminants.

* SEE GLOSSARY

LFBs for livestock farmers engaged in livestock fattening and dairy farmers operate throughout the year. Increasingly, dairies are installing LFBs that barter milk for feed in order to keep farmers close and thus have a stable supply. In addition to these permanent LFBs, there are seasonal LFBs to bridge the gap during the lean season for herds in pastoral areas.

LFBs are only one of the feed distribution systems. Traders with sufficient cash reserves also play this role; however, in the event of a pastoral crisis, farmers will face a sharp increase in the prices that traders charge for feed. When a pastoral crisis occurs, humanitarian actors sometimes carry out free distributions of feed. While this type of crisis response can be useful on an ad hoc basis, it is not sustainable.

LFBs were originally located only in pastoral areas, but are now also present in agricultural areas alongside cereal banks. Some LFBs' management issues are similar to those facing cereal banks, in particular the tension between economic objectives and objectives in sales to members. Other issues are specific, such as the need to take into account herd mobility in forecasting needs and access to feed for different types of livestock farmers.

B – Livestock Feed Banks supply management

SEE GLOSSARY

The issue of supply management primarily concerns ordinary supplies, i.e. the constitution of stocks for the pastoral lean season* March-June). During this period, pastures become unproductive and their nutritional value is very low, due to the lignification of grass. This issue also includes emergency supplies, where the severity of the forage shortage and the lack of feed justify intervention to save the herd's reproductive core.

B.1 How can a LFB assess livestock feed needs?

The needs assessment is carried out by different actors at different scales. On the one hand, there is the overall assessment of the agricultural and pastoral campaign by official services, which allows state organisations and other humanitarian stakeholders to quantify the volume of feed assistance needed to cope with an ordinary lean season or an emergency situation. This assessment of the general situation is supplemented by the measures put in place by each livestock organisation to determine the quantity of feed required in its intervention area

THE DIFFERENT APPROACHES THAT CAN BE USED BY LFBs' TO ESTIMATE NEEDS

The assessment of livestock feed needs by LFBs is very complex to carry out.

Each pastoral household knows what it needs, depending on the categories of animals it raises (young animals, heifers, suckler cows, old cows, fattening animals, draught animals, etc.), the objectives pursued and its practices with regard to complementary animal feeding. Each livestock farmer determines how much he/she can or will invest in his/her herd.

The main factors that influence the level of feed needs are as follows:

- The number of livestock in the herd and its composition;
- The scale of the forage deficit;
- The late arrival or not of the rainy season
- The dynamics of herd growth (which is difficult to establish, given the lack of regular counts and a livestock monitoring system).

Ideally, each LFB should be able to define its needs based on those of each member. In practice, many LFBs base their calculations on the demand for feed in previous years, after adjusting their estimates to factor in the following criteria:

- The changes in animal husbandry systems and in farmers' herd management practices;
- The consequences of the deteriorating security situation in pastoral and agropastoral areas;
- The trends in the prices of animal products (meat and milk) which, for the most part, determine the profitability and use of livestock feed;
- The quantities of feed remaining in the LFB.

The estimated needs are based on the type and quantity of feed to be purchased. This is a complex operation and for greater accuracy, farmers' organisations rely on the grassroots organisations and other mechanisms such as the RBM pastoral monitoring.

BOX 1
Estimation of livestock feed needs by the CRUS (Burkina Faso)

The Conseil Régional des Unions du Sahel (CRUS) uses two approaches to assess the needs:

> The expression of needs by grassroots organisations. Each of them completes a form that specifies their feed needs, the financial resources available and any additional resources required. This form is sent to the central level. This stage takes place during the months of October and November. It is followed by the verification and confirmation of the information transmitted by telephone;

> The FO's internal monitoring system, which analyses the campaign trend and warning signs, and provides a reliable assessment of forage availability.

The synthesis of the information from these two approaches makes it possible to define the volumes of feed needed for the next season. This estimate is submitted to the members for their consideration at the campaign review workshop, which is generally held in December or January. The overall expression of needs is decided at the end of the workshop with 30% of the total volume reserved for transhumant pastoralists.

Once the needs have been estimated, the storehouses' available financial resources and storage capacities can sometimes seem inadequate. If there are insufficient financial resources, the organisation may seek additional funding through loans or grants. In the event of insufficient storage capacity, the management committee must find an additional storehouse before making purchases. The use of rotation (i.e. successive sales and purchases during the same campaign) is a strategy developed by FOs to overcome these two constraints. The FO then splits feed orders over time while monitoring changes in prices and the pastoral situation•.

SEE ALSO CHAPTER **4A**

IMPORTANCE OF TARGETING IN ESTIMATING NEEDS

Targeting* is a process that identifies and selects stockfeed recipients on the basis of well-defined criteria. This is to ensure that the feed will go on sale to individuals, households or groups according to well-defined criteria that are in line with the LFB's objectives. Since the LFB cannot cover all the needs of the areas in which they operate, they generally give priority to the most vulnerable pastoralists, since the wealthier members can afford to buy their own supplies.

SEE GLOSSARY

Targeting occurs when needs are identified and resources are allocated to cover them, then again when sales are made during periods of fodder deficit (see below).

Commonly used targeting methods are generally designed for sedentary populations (available data, stable interlocutors, geographical clustering). The Billital Maroobé Network (RBM) in particular has reported that these approaches fail to include pastoral communities - often involuntarily. This is often due to the mobility and isolation of this category of livestock farmers.

Including transhumant herders in the estimation of needs therefore remains a difficult task, due to the multiple changes (variability of transhumant populations and modification of corridors) that occur in herd management from one year to another. To address this uncertainty, organisations have developed approaches ranging from quota setting to mobile phone surveys•"). For its part, APESS (an association promoting

SEE THE EXPERIENCES OF THE CRUS AND TASSAGHT IN CHAPTER **6** "INFORMATION MANAGEMENT"

SEE GLOSSARY

livestock raising in the Sahel and in the savanna) uses the simplified assessment* to inform the targeting of vulnerable households•.

THIS EXPERIENCE IS PRESENTED IN BOX **3** OF CHAPTER **8** "CONTRACTUAL RELATIONS WITH FOOD CRISIS PREVENTION AND MANAGEMENT STAKEHOLDERS"

B.2 Buy locally or from a great distance?

Stocks of livestock feed are purchased by livestock organisations from their own funds, loans or subsidies. Often, organisations combine these three types of purchases. Once financial resources are available, organisations need to decide whether to purchase locally or from suppliers located at great distances, in the same country or in a neighbouring country. Several criteria determine this choice, including the quantities available, the quality of the feed on sale, the prices and costs associated with each option.

Local purchase corresponds to a direct purchase from the factory (with or without prior reservation) or a purchase from suppliers and/or traders. In times of crisis, if local purchasing is for very large volumes, it could have a negative effect on the local market and limit the population's access to the purchased product. However, local purchasing helps to boost the economy of the affected area.

Local availability of livestock feed is often insufficient, in terms of quality and quantity, to meet the herds' needs. In this case, the LFB must opt for long-distance purchases.

The table below presents the main advantages and disadvantages of the different supply locations.

	Advantages	Disadvantages
Local purchase	> Fast delivery time > Lower transport costs > Strengthens the local economy	> Can generate competition between organisations for the purchase of a product > May lead to a shortage on local markets and/or a price increase, due to high demand
Long-distance purchase	> Possibility of obtaining better quality and large quantities > Possibility of ordering specific products	> Longer delivery times > Higher transport costs > Does not benefit the local economy

B.3 Where to source livestock feed?

Four main categories of livestock feed suppliers are identified by the Billital Maroobe Network (RBM):

- Industrialists who process cotton, groundnuts, palm, palm kernels, etc. and market oilcake;
- Food manufacturers, in particular those in the milling industry (wheat bran), brewing industry (brewer's spent grain -BSG- or draff) and sugar industry (molasses). Rice processors whose by-products (bran, broken rice) are used as animal feed may be included in this category;
- Livestock feed manufacturers who buy basic products and prepare formulas adapted to each type of livestock farming. They focus on poultry feed, supplements for dairy cows and those for cattle and sheep fattening;
- Distributors positioned in consumer areas and most often working on small volumes and a wide variety of products.

In addition to these relatively structured operators, there are small-scale manufacturers making fodder from various residues and by-products available very locally.

B.4 What are the steps in the feed supply process?

The feed market is characterised by strong growth in demand and a supply of agro-industrial by-products that is growing more slowly and is more variable. In this context, the production plants and distributors have no difficulty selling their products in the region's markets; moreover, it is easy for them to sell on international markets (especially groundnut meal and cottonseed). These market specificities must be taken into account in order to have stocks of livestock feed at the best price/quality ratio, on time and in the right place

The general procurement process includes:

- Pre-selection of suppliers, through the creation of a directory of potential suppliers of different types of livestock feed (raw products or compound feed).
- Product specification. Given the high variability of feed characteristics, it is important to determine precisely the products' nutritional specifications (energy and protein content, cellulose content) and quality standards (moisture content, impurities, aflatoxins, etc.).
- Price composition. Quotation requests and offers - regardless of the method of acquisition - must include: (i) the price of the feed per tonne including all taxes (incl. VAT), (ii) the cost of transport including VAT and (iii) handling costs including VAT (loading at the departure site and unloading at the delivery site).

B.5 What are the procurement procedures?

The procurement of LFBs can be carried out through different procedures: direct (or over-the-counter, OTC) agreement with a supplier without going through the competitive process; the request for quotation, which is limited to requesting price proposals from a small number of suppliers; and, finally, the call for tenders, which can be open (anyone can bid) or restricted (the call for tenders is sent to a pre-determined list of potential suppliers).

BOX 2
Procurement procedures: the experience of the Bilital Maroobé network (RBM)

Based on its members' experience, the regional network of RBM farmers' organisations drafted a manual of procedures for LFBs' procurement.

This manual distinguishes between the three purchasing methods presented above, specifying the conditions of use of each of them. OTC contracts must be reserved for emergency situations resulting from unforeseeable events and must concern contracts for an amount of less than CFAF 3,000,000. The request for quotation is appropriate for buying small quantities of feed; it must be addressed to at least three suppliers, in order to ensure competitive bidding. For large contracts, the call for tenders makes it possible to select the best proposal, based on objective criteria of which the candidates were informed beforehand.

The RBM Manual of Procedures specifies the thresholds, in terms of contract sizes, to be respected when choosing a particular procurement method.

Acquisition method	Threshold (approximate volume)
Direct or over-the-counter	Less than CFAF 3 million (or 10 tonnes), or in an emergency
Quotation request	Between CFAF 3 million and CFAF 10 million (10 to 50 tonnes)
National call for tenders	Between CFAF 10 and CFAF 100 million (50 to 500 tonnes)
Regional call for tenders	Over CFAF 100 million (or 500 tonnes)

Source : Réseau Billital Maroobé. Manuel de procédure de passation des marchés de fourniture d'aliments du bétail. Septembre 2017. See Appendix (document in French).

B.6 How to properly manage a livestock feed order?

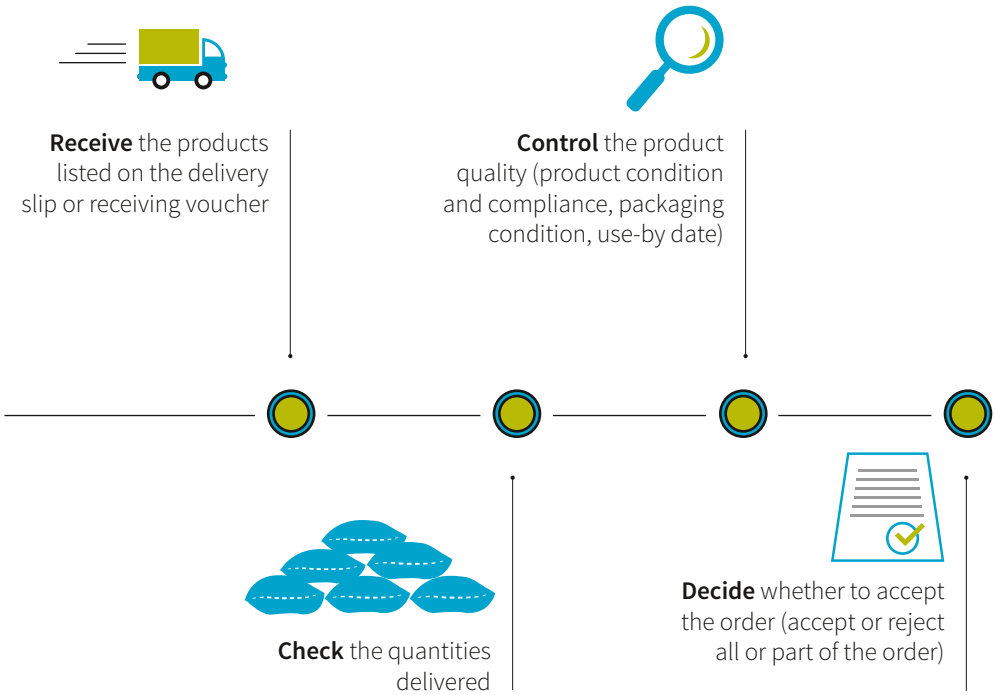
Weak quality-control systems and inconsistent feed lots can give rise to misunderstandings between LFBs and their suppliers and result in contract breaches. Feed orders must be expressed clearly and accurately. There are a number of points to consider. They are shown in the table below.

ACTIVITIES	DESCRIPTION
Appointment of a manager	A single, clearly-identified person is responsible for placing the orders
Clarity of the order	The purchase orders include all the characteristics of the products re-quested
Negotiation of the best price	The best price is negotiated without compromising quality
Preparation of the contract	The contract should clearly specify the terms of payment and the arrange-ments made to ensure product availability and delivery. It also sets penal-ties for non-compliance with clauses or breach of contract.
Bagging and identification of feed bags	The bags must be sufficiently resistant. The names and addresses of the sender and recipient must be indicated on each bag.
Size, shape and weight capacity	The contract must specify the packaging's size, shape and weight capaci-ty. As loading and unloading is generally carried out by hand, it is recom-mended to use packaging with a maximum capacity of 25 kg or 50 kg.
Frequency of orders	This depends on the needs detected, the volume of distribution and stock control. However, managers must not wait until the last minute to place new orders. The time taken for the new shipment to arrive and the trend in prices should always be taken into account.
Order tracking	Orders must be numbered and dated in such a way that they can be tracked individually. To find out about an order in progress, you must pro-vide the order number and date.

B.7 Precautions and procedures for receiving products

It is vitally important that farmers' organisations check feed consignments on receipt. This is a decisive step in ensuring proper storage.

DIAGRAM 1
Steps to take on receiving the products



Acceptance is based on a delivery note/receipt slip issued by the supplier, which sets out, in summary form, full details of the content of the consignment. It is a single printout in duplicate, with only the title changing. The first copy is called a "delivery note" and is kept by the carrier. The second copy is called a "receipt slip" and is kept by the FO. The FO should check the consignment against the initial purchase order for compliance with the delivery time; the condition of the products (weight, size, quality, etc.); the conformity of the products; the condition of the packaging and, finally, the use-by date for each product.

Once these checks have been carried out, the FO can either:

- accept delivery if no irregularities were found. In this case, it signs the delivery note, gives the supplier the signed delivery note and keeps the signed receipt slip;
- refuse delivery if too many major irregularities were found. In this case, the FO does not sign and the carrier leaves with the delivery and the unsigned delivery note;
- partially accept delivery if there are only some irregularities. The FO then accepts delivery by signing the delivery note, but also details its reservations about the irregularities observed on the note. These reservations must then be confirmed by registered letter with acknowledgement of receipt within 72 hours (3 days). The processing of the complaint regarding the volume of products containing the anomalies is the subject of an agreement between the two parties. Depending on the extent of the irregularity, the product may be either returned to the factory for processing or sold at a discount.

In practice, there are very few challenges because FOs do not have effective product quality verification criteria. Products are only refused if they have been seriously dam-

aged. It is important for FOs be able to acquire the human and material resources necessary to effectively control the feed they buy, given the high risk of mould or aflatoxin contamination, which can be harmful to animals.

B.8 Transport and specific provisions

The choice of transport type depends on a series of variables such as needs (urgency, size and type of load, etc.) and possibilities (available transport, destination, access conditions, road conditions, etc.).

The transport sector in general, and road transport in particular, plays an important role in the LFB supply system. Product transport remains the weak point of the system, since FOs do not have trucks and suppliers do not deliver. Accordingly, FOs commission private carriers. This operation is severely hampered by numerous obstacles, such as unsuitable or unroadworthy vehicles, high transport costs, highway extortion and harassment, risks related to product packaging during transport, and transport delays.

Carriers are liable to the FOs for delivering the goods on time and undamaged. However, contracts between FOs and carriers are often not very precise, as they are based on relationships of trust. Accordingly, it is advisable to make the following points very clear in the contracts:

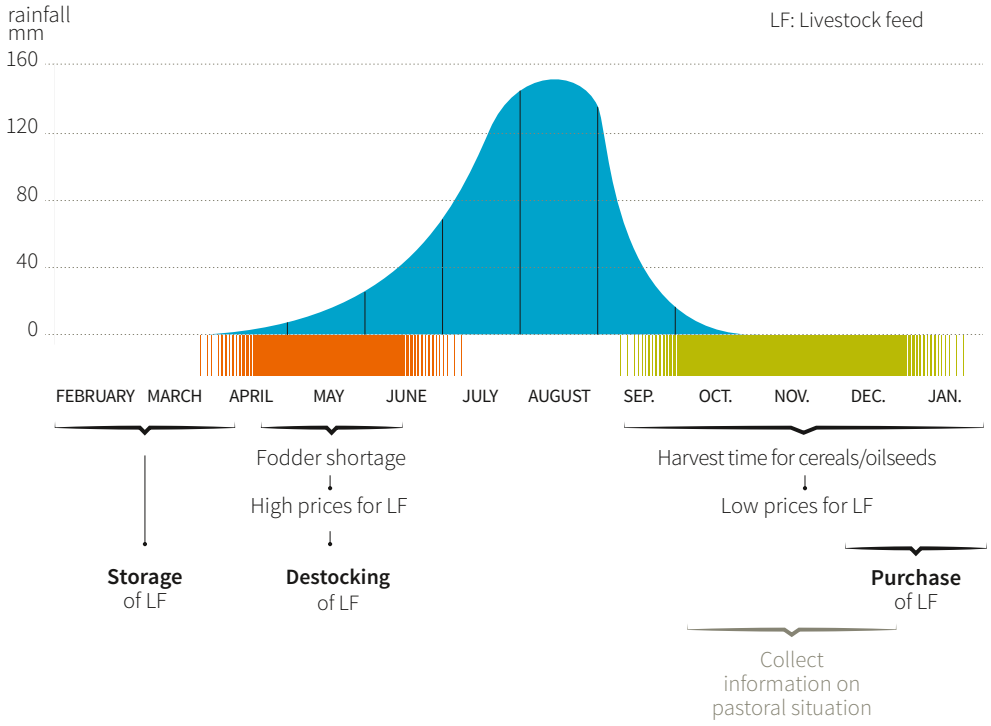
- Effective date: the carrier's liability is engaged from the beginning of loading; it ceases when unloading is completed at the site indicated in the contract.
- Liability: in the event of loss of or damage to goods between loading and unloading, the carrier's liability shall be determined in accordance with the regulations governing transport.
- Method and limitation of liability: in the event of loss or damage, the value used to calculate compensation for the FO is the intrinsic value of the goods on loading, excluding the profit margin, interest, commissions, etc.
- Deadlines: the carrier undertakes to ensure that the goods arrive at the place of delivery on a specified date; it is liable for direct or indirect damage resulting from a delay.

In striving for more professional management of the feed supply, FOs should ensure that the stakeholders' responsibilities are clearly identified in contracts. This will reduce the risk of conflict in the event of a problem.

C – Sales of livestock feed by a LFB

LFBs dispose of the stock of livestock feed when fodder is in short supply during the dry season.

DIAGRAM 2
Livestock feed banks' storage and destocking operations



Fresh stocks (rotations) can be brought in during the season, depending on needs and availability.

C.1 How to define the terms and conditions of the sale?

Before a LFB starts to sell its stock, the members of the management committees must make several choices. The most important is to set the price at which the feed stored before the fodder deficit period is to be sold. Then come questions on the terms and conditions of sale (whether or not stock can be bought on credit), wholesale or retail quantities, or the capping of the quantities available to each livestock farmer.

SEE GLOSSARY

HOW TO SET THE SELLING PRICE* OF FEED?

Two principles are involved in setting prices. The first aims to curb speculation and guarantee access to feed for as many farmers as possible, which means applying moderate prices. The second is concerned with replenishing stock from one year to the next or during a season (rotation), which implies selling feed at a sufficiently high price.

The approach generally adopted is to determine the cost price of feed and apply a margin that allows operating costs to be covered while remaining below market prices. To determine the cost of feed at LFB level, the expenses to be taken into account, other than the cost of purchasing feed, are as follows: the cost of transport from the feed production areas to the storage location, including taxes (legal or illegal) related

to the transport of goods; the cost of handling and storage; the costs of managing and guarding the stock (salary).

To ensure that LFBs can maintain or replenish their capital, and in particular the storage building, it is advisable to factor in its depreciation over a number of years.

To reduce the cost of purchasing feed and certain expenses, particularly transport, the usual solution is to make group purchases. This is the approach taken by the Association for the Revitalization of Livestock Production in Niger (AREN) with the establishment of LFB networks by region, sometimes supported by specific projects.

The LFBs calculate an amount per bag to cover running expenses (salaries in particular) and to top up the fund (for purchases of feed and transport, etc.). In addition to these costs, the increase in the cost of feed (all costs included) makes it possible to replenish the stock and cope with major shocks.

Transparency about the method used to calculate the selling price of feed is key for sound long-term management of the LFB and to avoid both malpractice and suspicions of malpractice. This is why the members of the management committee have the General Assembly vote on the price (and other terms of sale) applied for the coming season. This vote is an opportunity to inform members as widely as possible about the LFB's situation.

BOX 3
Some examples of how charges per bag of feed are calculated

- Mini-dairy run by the Association pour le Développement de Namarel (ADENA) in Senegal, selling price of CFAF 6,500/bag (US$ 10.6), broken down into:
  - CFAF 3,250/bag (US$ 5.3) to replenish the initial fund (50%)
  - CFAF 1,625/bag (US$ 2.6) to pay the storehouse workers (25%)
  - CFAF 1,625/bag (US$ 2.6) for the management committee's operating costs (25%)
- Theoretical business model of the LFBs supported by AREN in the Bermo region of Niger, increase from CFAF 1,400 (US$ 2,3) to CFAF 1,700 (US$ 2,8), in addition to the cost of purchasing feed per 25 kg bag:
  - CFAF 1,000/bag (US$ 1.6) for transport
  - CFAF 100 to CFAF 200/bag (US$ 0.15 to 0.30) for handling
  - CFAF 100 to CFAF 200/bag (US$ 0.15 to 0.30) as distribution costs (management committee expenses, remuneration of the security guard or manager)
  - CFAF 50 to CFAF 100/bag (US$ 0.07 to 0.15) for building maintenance
  - CFAF 100 to CFAF 200/bag (US$ 0.15 to 0.30) for securing working capital
  - CFAF 50 to CFAF 100 (US$ 0.07 to 0.15) for building maintenance

Source: Bénard, C. 2016. Analysis of local disaster risk reduction measures, FAO, p. 30. and Bénard, C. et al. 2017. Mechanism of Livestock Feed Banks in Niger, IRAM, p.18 and following.

LFB's economic sustainability is threatened when they fail to factor in all of their costs, in particular the costs initially covered by a grant as part of a project (e.g. construction of storage buildings or initial working capital). It is also threatened when instability and the difficulty of forecasting feed prices on the market forces LFBs to sell below the cost price of stocks that had been bought at too high a price•.

SEE SECTION **D** FOR MORE DETAILS ON SUSTAINABILITY

Replenishing stock several times a year (rotation) when necessary limits risk for the LFB. The Kawtal dairy cooperative is trying to establish this practice in the peri-urban area of Niamey, but higher feed prices during the dry season are undermining this strategy. Price stability over a given season is another factor that secures farmers' access to feed. Year-on-year price stability is not a realistic objective for LFBs in the current feed market.

Many LFBs or LFB networks have received grants to purchase feed. Examples include the AREN LFBs in Niger, which are supported by a number of partners, and the PAPE project in Burkina Faso and Benin. These subsidies make it possible to lower the price of feed for farmers. Free distributions should be ruled out because they cannot secure the schemes' long-term viability. Moreover, as subsidies bring the selling price below the market price, it becomes more difficult to choose the beneficiaries. This issue is discussed below.

WHEN TO OPEN THE STOCK?

The sale of the feed must take place late enough to cover at most the fodder deficit period during the dry season, but early enough to fulfil its role in protecting the herds.

LFBs' responsiveness to state or international NGO mechanisms is one of their strengths, particularly in a pastoral crisis. To fulfil their roles in these situations, LFBs must base their decisions on when to release the stocks on early warning systems concerning the pastoral situation at regional level[1].

CASH OR CREDIT SALE?

Cash sales mean that farmers pay for their feed purchases at the price set by the LFB at the time of sale. Credit sales let farmers pay for their purchases at a later date.

Many farmers face cash flow difficulties that may limit their ability to buy feed, even at moderate or subsidised prices. Credit sales make it easier for them to buy feed. However, experience shows that credit sales can undermine LFBs' economic viability in the very short term. Several livestock organisations, such as AREN in Niger and the CRUS in Burkina Faso, have banned credit sales.

Dairy farmers earn more regular incomes that enable them to buy on credit. But even then, it is better for LFBs not to grant credit directly but to go through a specialised microfinance institution (this is what the LFB in the Kita area of Mali did with the micro-credit institution Nyèsigiso) or through milk collectors. In the latter case, the farmers repay in kind (an example of this is the Kawtal milk producers' cooperative in the conurbation of Niamey).

Traders are sometimes able to make sales on credit. This is one of the reasons why private distribution networks are complementary to the LFBs managed by livestock organisations.

1 Provided they factor in the pastoral lean season?.

SELL BY THE BAG OR IN RETAIL QUANTITIES?

Most LFBs do not retail; their unit of sale is the bag.

Feed is packaged in 20 to 50 kg bags, but some farmers may have difficulty paying the price of a 20 kg bag, especially when forage is in short supply. This sales method can therefore prevent the most vulnerable livestock farmers from using the LFB. Sometimes farmers buy a bag together, then split the bag's content between them.

However, retail sales would require micro-packaging and entail extra work for stock managers, thereby generating additional costs.

In the case of the LFB working with the Kawtal cooperative's milk collection network in Niger, the collectors take on this extra work themselves so that they can retail feed to livestock farmers. Some LFBs, such as those in the AREN network, also let the most vulnerable households buy in retail quantities. This option raises the issue of targeting beneficiaries (see above).

Traders will sometimes make retail sales. This is another reason why private distribution networks are complementary to LFBs.

BOX 4
A LFB involved in milk collection

The Kawtal milk producers' cooperative in the peri-urban area of Niamey has set up a LFB alongside its milk operations. The initial stock of 80 tonnes of wheat and rice bran was purchased with project financing. An amount of 20 tonnes is stored on a regular basis and the stock is replenished once or twice a year from Burkina Faso.

The cooperative relies on milk collectors to deploy decentralized stocks of between 200 kg and 500 kg (10 to 50 bags). The milk collectors sell small quantities (less than a bag) of feed and sell on credit to farmers who supply them with milk. There is no quota and no targeting of vulnerable households.

Source : Bénard, C. et al. 2017. Mechanism of Livestock Feed Banks in Niger, IRAM, p.5

C.2 How to guarantee farmers' access to LFBs?

On the whole, stockfeed is in short supply during the dry season in the areas of the Sahel with the highest concentration of herds: the quantities are insufficient and the geographical coverage is patchy. This shortage is exacerbated during droughts. The objective of a LFB is to offer feed at below-market prices. In the section on procurement, we saw that targeting takes place upstream to determine the needs and allocate the resources. In connection with this initial targeting, it is important, during the forage deficit period, to determine who will have priority access to the products stored in the LFB.

The first rule is to restrict access to the LFB to livestock farmers, to prevent feed sold at below-market prices from being bought for resale, thereby fuelling speculation. Beyond that, based on their experiences, managers have laid down various rules to ensure fair access to feed. It lies with each management committee to draw up its own rules, based on the target herders' needs, the specific local contexts and the pastoral situation in a given year.

Apparently, it is possible to find ways around the rules set by the farmers' organisations themselves. The largest livestock farmers often manage - directly or through straw men - to seize a large share of the feed. Thus, however useful these rules may look on paper, it is important to ensure transparent management of LFB stocks to ensure effective compliance.

BOX 5
Example of bias in targeting beneficiaries in Niger

In Niger, a project supplied 800 tonnes of feed to livestock feed banks, mainly through NGOs and farmers' organisations. The idea of distributing these inputs free of charge was abandoned in favour of selling them at a subsidised price, with smallholders taking priority. During the droughts of 2009 and 2011, the Niger government officers were unable to take into account the number of animals owned by pastoralist families. The only criterion they could apply was whether or not the farmers belonged to a particular municipality. However, this criterion is meaningless for transhumant pastoralists, who may have to leave their home grounds for more or less remote areas. It was not possible, with this criterion, to guarantee fair access to the feed, even though the departmental and municipal services responsible for selling it had capped sales at the feed bank (2 to 5 bags per farmer, depending on the site). The large farmers used family members or friends as straw men to circumvent the system, and took over the feed for their own farm.

Source: Bénard, C. 2016. Analysis of local disaster risk reduction measures, FAO, p. 47

SHOULD THE LFB BE OPENED TO FARMERS WHO ARE NOT MEMBERS OF THE ORGANISATION?

When a local farmers' organisation takes the initiative to make a group purchase of feed before the market price goes up, it has every right to reserve access for the members who have set up the fund. However, to support the livestock sector and livestock farmers, especially in a crisis, for example to increase the volume of feed available, management committees often choose to open the LFB to non-member livestock producers. To encourage non-member farmers to sign up, while at the same time rewarding members for their commitment, farmers' organisations will often give member farmers a discount.

When they receive subsidies, LFBs must be able to show that the main beneficiaries of their action are most vulnerable livestock farmers. Some farmers' organisations are experimenting with lower prices for the most vulnerable farmers.

APPLYING A CEILING TO ENSURE FAIR ACCESS TO STOCKFEED

Independently of targeting, and before targeting kicks in, LFB managers may cap the amount of feed available per farmer over a certain lapse of time. For CRUS LFB networks, the threshold has been set at between 250 and 500 kg per farmer over a 10-day period.

This provision also makes it easier to forecast the stocks to be replenished.

C.3 How to target the beneficiaries of subsidised feed sales?

LFBs managed by local livestock organisations are often considered to be more effective at targeting than state or NGO schemes. Nevertheless, LFBs' targeting of beneficiaries is one of the main points to watch, particularly during a pastoral crisis.

The first level of targeting identifies the areas (municipalities or departments) eligible for subsidized feed. Mostly the responsibility for targeting falls to the State's technical departments or directly to the NGOs operating at national level. It is important for livestock farmers' organisations to ensure that these early warning systems take account of the specific features of pastoralists in the definition of vulnerability.

Given their limited capacity, LFB management committees focus on community-based targeting at the local level: the members of a community themselves identify the most vulnerable households. This targeting is often guided by objective criteria. These predefined criteria allow the combined assemblies to assign a score themselves by adding and weighting a limited number of observable variables correlated to the level of vulnerability of households or individuals. The number of variables must remain limited in order to keep targeting operational and transparent.

BOX 6 The RBM targeting system

The RBM targeting system is based on the development of an "Individual Household Economy Analysis" (IHEA) for the pastoral context.

The IHEA methodological approach has already been tested as part of the FISOREP project (for "social safety nets tailored to the realities of pastoral livestock farming"). It aims to: (i) identify the profile of pastoral households; (ii) define the thresholds for survival and livelihood protection of these basic socio-economic units; and (iii) define the conditions for their viability.

The IHEA approach provides information about: (i) the household food insecurity access scale; (ii) the household food insecurity threshold in risk areas; (iii) the livestock mortality rate; (iv) the herd increase rate; (v) the herd off-take rate; (vi) the increase/decrease in income; (vii) the increase/decrease in expenditure; and (viii) the adjustment strategies developed by households.

The IHEA is developed through a sample, which means that the result is not a list of targeted beneficiaries, but a type of beneficiaries. Currently, the IHEA categorizes beneficiaries as follows:

Food security	Criteria	Criteria	Types of access	Types of sup-port
Low food security	≥ 3.5 TLU	Herd size + offtake rate = household viability threshold	Sale at normal price	Livestock feed
Moderate food insecurity	< 3.5 TLU and > 3 TLU		Sale at discounted price	Livestock feed
Severe food insecurity	< 3 TLU and > 1.6 TLU		Sale at discounted price Sale at social price for cereals	Livestock feed + cereals
Severe food insecurity	≤ 1.6 TLU		Free distribution of cereals and livestock feed	Livestock feed + cereals

TLU: Tropical Livestock Unit

> To produce a list of targeted beneficiaries, it is necessary to develop with these actions:

1. Collect pre-existing lists (from camps, lists of borehole users or town halls' lists).
2. Prepare a primary exhaustive list.
3. Prepare a final exhaustive list, weeding out duplicates and missing items.
4. Organize assemblies to select vulnerable households.
5. Make an initial selection of vulnerable households.
6. Make a second selection based on available resources.

C.4 How can we take transhumant pastoralists into account?

LFB management committees are usually made up of sedentary agro-pastoralists. Commonly-used targeting methods are often designed by and for them. The observation, relayed in particular by the Billital Maroobé Network, is that these approaches leave out transhumant pastoralist groups. Their exclusion can often be attributed to their mobility and the absence of legitimate representatives.

Again because of the mobility of this category of farmers, it is a challenge for LFBs' managers to forecast stocks for them.

To address this difficulty, some LFBs set aside part of the stocks for transhumant pastoralists, for example 30% in the case of the CRUS (Burkina Faso). In Niger, AREN has set up a system to mobilise stocks of livestock feed at the departmental and regional (sub-state) levels, by locating them on the paths in areas frequented by pastoralists in transhumance.

In the Gao region of Mali, Tassaght has set up feed banks at sites where nomadic herders gather. These sites are situated along the major transhumance or nomadic herding corridors. The feed banks are built in either local materials or permanent materials.

WWW.TASSAGHT.ORG

C.5 Mobile feed banks*

Given how difficult it is for humanitarian stakeholders to access conflict areas and the fact that transhumant pastoralists' rangelands are constantly changing, FOs and pastoral communities are heavily involved in setting up mobile LFBs near areas with a high concentration of transhumant pastoralists. Examples include AREN in Niger (in the Diffa area, which has become almost inaccessible to state organisations due to security problems) and the CRUS in Burkina Faso, which are developing approaches to ease access to livestock feed for transhumant pastoralists.

SEE GLOSSARY

SEE CHAPTER 8

AREN has set up a flexible system of networked LFBs that can adjust to pastoralists' movements. During the critical periods, herds are mobile. If the LFBs still have stocks, they can deliver stockfeed to farmers whose herds are unable to return. This approach was tested during the 2007 crisis in Diffa, where animals were trapped by the conflict and the group was able to deliver feed to the site. Following this successful experience, LFBs now deliver feed to transhumance areas.

BOX 7
The CRUS' experience of mobile LFBs

The CRUS has tested a system of decentralised, mobile feed stocks. The aim is to cope with the radical changes in livestock routes prompted by mounting insecurity. There are both central and intermediate storehouses. The mobile stock is taken from these stores to supply herds in watering areas or areas that are difficult to access. Farmers can place prepaid orders to ensure that feed will be available in the area where they will be in a certain time.

Moving stocks of feed generates additional costs. At the same time, the security crisis is dampening livestock markets and thus reducing the cash flow available to livestock producers. Under the circumstances, it is complicated for the approach being tested to demonstrate its feasibility.

D – Economic and social viability of livestock feed banks

Feed supply management cannot be considered as an isolated action, it is an integral part of the overall food safety management system. It contributes to positively changing the shortage situation of the pastoral population during the lean season.

However, it appears that LFBs are not always economically and socially viable. LFBs, in their current operating modes, face situations that impact their profitability.

The LFB supply system is characterized by poor coordination of actors. The actors concerned are states operating free or subsidized feed distributions, development and humanitarian organizations, governmental or non-governmental (cooperation, NGOs, United Nations, etc.), engaged in emergency interventions in the event of a pastoral crisis and producer organizations directly involved in supplying their members in normal and/or crisis situations. This lack of coordination with humanitarian action can lead to the depletion of stocks.

SEE CHAPTER 7 "RISK MANAGEMENT"

Slowdown may also be related to poor needs estimation.

How can a more solid financial balance be established to cover all costs, including those related to monitoring and external control? LFB can increase the diversification of sales products to meet the needs of members and improve the financial profitability of the system.

How could the supply system be secured on the basis of advance orders, taking into account the challenges of storage capacity (central warehouse), the organisation of means of transport (rental or purchase of trucks) and the mobilisation of working capital (access to credit, alliance with financial institutions)? LFBs must have better internal organization and anticipation capacity to succeed in placing early orders in order to benefit from the advantage of low prices and reduce transport costs.

How to ensure the sustainability of working capital and guarantee funds? An increase in the working capital of the LFB through members' contributions is possible through the deduction of a fixed amount from sales transactions. This strategy can help the LFB meet the growing needs of its members. Another option that is increasingly being used is to ban credit to avoid the risk of non-repayment.

E – Position and role of women and youth

Women and young people are strongly involved in the breeding of short-cycle species (small ruminants and poultry).

Women generally manage the milk collection centres for large and small ruminants. The issue of access to livestock feed is strategic in enabling women to directly control the production of fresh milk. In Niger, solutions have been identified to facilitate women's access to livestock feed: women who sell fresh milk to collectors obtain their supplies of livestock feed from them.

Women's participation in LFBs' management is also strategic to strengthen women's position in the sector. They must be involved in the choice of strategic orientations and the management of LFBs. For the time being, though, they are poorly represented in management bodies.

Young people are more likely to adopt innovations in livestock management, in particular the practice of managing smaller but better-fed herds, which gives them greater control over productivity. Involving young people in a project to modernise livestock raising increases its chances of success.

In the future, information technology will have a major role to play in LFBs' management•. Young people have mobile telephony skills that their elders do not, so it is vital to involve them in upgrading LFBs' management methods. However, young women have a lower rate of mobile phone usage than their male peers, so it is essential to ensure that women have access to training and to mobile phones.

SEE CHAPTER **6** "INFORMATION MANAGEMENT"

F – Key Points

➔ LFBs are a key factor for livestock farmers faced with the structural feed shortage in West Africa. The management of livestock feed reserves depends on the pastoral situation each year:

- In normal years, feed is mainly used for less mobile animals (lactating cows, feedlots, draught animals, etc.);
- In times of exceptional fodder deficit, access to feed allows transhumant farmers to secure a nucleus of breeding animals and facilitates the rebuilding of the herd.

➔ The economic viability of the LFB depends on a good assessment of needs, clear targeting standards and a supply under favourable conditions, well in advance of the pastoral lean season.

➔ The price determination must ensure both equitable access to feed for as many farmers as possible and the sustainability of working capital for stock replenishment (once or several times a year);

➔ Beyond the selling price, many provisions can facilitate fairer access to all categories of farmers: ceiling threshold per farmer, share of stock reserved for transhumant farmers, possibility or not to buy at retail and/or on credit... These are all decisions that LFBs' managers must take before starting transfer operations.

G – Further reading

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Réseau Billital Maroobé, *The process of operationalizing the livestock feed component of the ECOWAS Regional Food Security Reserve: Progress and prospects.*

Réseau Billital Maroobé, (2012). *Critical assessment of interventions carried out in pastoral areas by public crisis prevention and management mechanisms and livestock organisations.* 36 p. https://urlz.fr/awrj

Réseau Billital Maroobé, (2018). 3 capitalization notes from the project to study and operationalize a pilot project to implement the "livestock feed" component of the regional food security reserve (PROPILAB) https://urlz.fr/awrF

- *L'accès à l'aliment du bétail, clé de la sécurisation des pasteurs et éleveurs. Vers des procédures d'approvisionnement des marchés institutionnels harmonisés, adaptés et reconnus*. 8 pages.
- *La décentralisation et la mobilité des stocks d'aliments du bétail dans la zone du Niger oriental pour s'adapter aux exigences des systèmes d'élevage mobile*. 4 pages.
- *Les défis liés à la pérennisation des banques d'aliments du bétail dans la perspective de la promotion d'économies pastorales viables au Sahel et en Afrique de l'Ouest.* 8 pages.

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Appendix
Chapter **4B**

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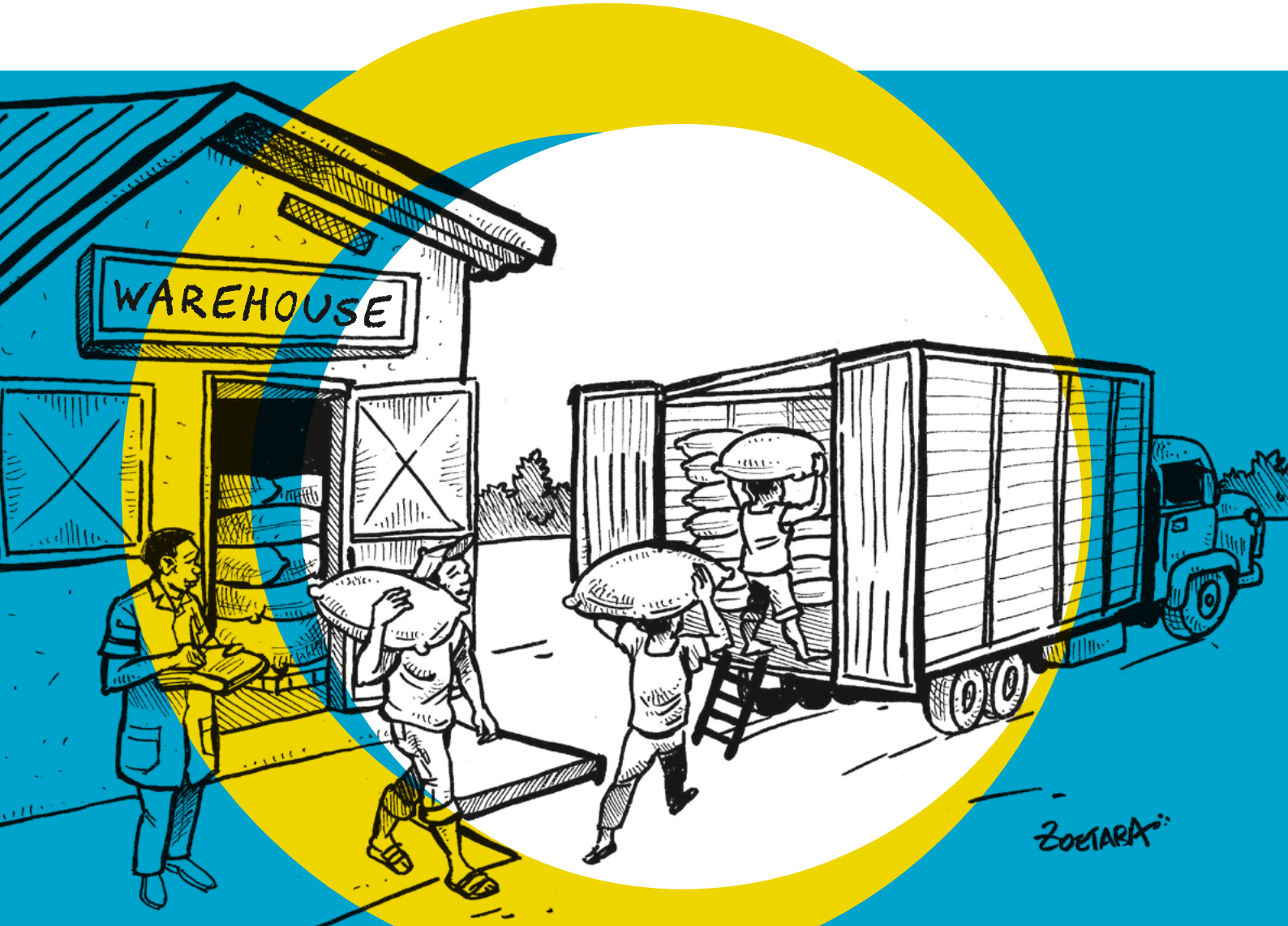
CHAPTER 4C

Purchases and sales management in **group marketing systems**



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A – Introduction

Group marketing consists in the joint marketing of surpluses of cereals or other foodstuffs by producers and/or farmers' organisations (FOs), who pool their stocks and sell them collectively. This activity is also sometimes called "external marketing", as opposed to sales of foodstuffs to members of the FO.

FOs are the first link in the marketing chain. They account for part of the domestic cereal supply on the market, since they undertake most of the operations involved: producing, harvesting, drying, threshing, winnowing, packaging, storing, treating and selling.

Group marketing has several benefits, including:

- A substantial reduction in the marketing costs (such as bagging, storage and phytosanitary treatment) and transport charges borne individually by each farmer or FO, which allows them to sell their products more competitively;
- Easier access to financing, since the cooperatives are very efficiently run and backed by assets and guarantee funds;
- Greater negotiating power: banks and buyers are more likely to offer terms on 2,000 tonnes than 20;
- The possibility for smallholders or FOs with only small quantities of produce to sell at prices that will yield a greater return;
- The ability to fill large orders placed by agents in urban centres, buyers in neighbouring countries and public-sector stakeholders. Selling to outside stakeholders obliges FOs to meet requirements such as stock bulking and bundling, improved quality and batch standardisation, all of which enables FOs to expand their market share.

This chapter begins by looking at how FOs' organise their external marketing. It then gives a brief overview of the different markets in which the FOs operate, and, finally, suggests ways for FOs to make their marketing more efficient.

B – What internal organisation do FOs adopt for marketing?

B.1 Developing a marketing plan*

* SEE GLOSSARY

There are at least five stages to drawing up a marketing campaign:

1. Analyse the previous campaign's results and identify the lessons learned, during the FO's general meeting. This phase also involves the management committee, which will meet to review the problems encountered during the previous campaign and decide how to solve them. This is a crucial phase for the marketing process because it enables the FO to lay stronger foundations for the next marketing campaign.
2. During the same general meeting, assess the needs for the next crop year and divide up the tasks among the FO's different bodies. The aim is to estimate how much cereal the FO can sell or how much it will need to buy in for its members. That amount will depend on the local populations' needs for its own consumption over a given period, and the FO's storage capacity and financial resources. Under- or overestimating these figures jeopardises a marketing campaign's success.

BOX 1
Marketing plan: Faso Jigi's experience (Mali)

Faso Jigi's marketing plan includes the following steps:

> Needs planning: the marketable surplus of each farmer in the cooperative is assessed. Individual applications are examined by the cooperative's village assembly. Once approved, they are recorded in the campaign plan and in the contract between the cooperative and each member;

> Needs aggregation and funding request: all of the individual requests are aggregated in the union's database. This allows the union to establish the financing needs and ask the bank to activate the credit line;

> Disbursement: the local funds pay out the advances to the farmers, after deducting the value of the inputs (fertilizers and seeds) delivered by the union;

> Monitoring of the marketing campaign: this makes it possible to identify farmers in difficulty and anticipate any repayment problems;

> Collection of cereals from village storehouses: before harvest, the union provides grassroots cooperatives with collection equipment (empty bags bearing the union logo, needles and markers); the actual collection includes quality and weight control by cooperative managers, followed by transport from village storehouses to central storehouses.

> External marketing: this is carried out by the union; if the FO makes a profit, each farmer receives a bonus.

3. Canvass for new business. This is carried out on local markets and populations and enables planners to determine how much to sell (or buy), when, where and at what price. If there are plans to buy or sell abroad, it is important to be aware of cereal import and export regulations, the different transport costs, taxes and duties, etc., in order to plan the marketing campaign accordingly. Sales information (pricing, supply and demand) provided by public and/or private structures• is useful at this stage to help the FO position its offering on the market.

SEE CHAPTER 6

BOX 2
Canvassing for new business: JUSSAF's experience (Nigeria)

> Advertising in digital and print media;

> Exhibiting at agricultural trade fairs to present and promote the products;

> Direct marketing to the agrifood industry by presenting samples of products and offering attractive prices;

> Retail sales to existing customers, with enhanced service delivery and product quality;

> Using other cereal traders;

> Running weekly surveys on product pricing;

> Leveraging social media.

4. Draw up a provisional budget and profit and loss statement. The provisional budget includes all the expenses entailed in the year's sales (the cost of the cereals, packaging, financing, handling, storage and transport, etc.). It can be used to calculate the total amount needed to fund the next marketing campaign. The provisional profit and loss statement* , which summarises expenses and income, helps estimate of the revenue that the campaign (or crop year) can be expected to generate. See Chapter 3c• for a detailed description of accounting and financial management tools.

SEE GLOSSARY

SEE CHAPTER 3C

5. Arrange financing. Once a realistic provisional budget has been drawn up, the FO needs to find a way to fund it, ideally through discussions in the general assembly. Possible options (which can be combined) are: the FO's own funds* members' contributions in cash or in kind, or a seasonal loan from a financial institution. The relative importance of each of these sources of funding depends on the FO's drive and energy in obtaining financing. For more information, see Chapter 3a• "Financing instruments for local food reserves".

SEE GLOSSARY

SEE CHAPTER 3A

B.2 Cereal aggregation system and method for setting prices for members

FOs purchase and aggregate their members' marketable surpluses. The organisational arrangements for aggregation (in particular setting the purchase prices) vary from one FO to another, but there are four main methods.

Cash advances, reimbursed in kind after harvest

At the beginning of the crop season, the FO advances a sum of money to the farmers to cover the costs of ploughing the land, buying seed and fertiliser, then crop upkeep and harvesting. In return, each farmer undertakes to hand over a certain amount of cereal to the FO after harvest. The amount is determined by applying an interest rate to the advance granted and setting a value for the cereal that will be handed over to the FO as repayment. If the FO makes a significant profit on the sale of the aggregated cereals, it pays back a portion of the profit to the farmers in the form of bonuses.

Input advances, reimbursed in kind after harvest

Under this second method, the FO provides farmers with a certain amount of inputs (mainly fertiliser) at the beginning of the crop season. These input advances are reimbursed after the harvest, when farmers hand over a certain amount of their cereal to the FO. The same approach as in the cash advance method is used to determine the quantity of cereal to be handed over to the FO. Here again, if a sizeable profit is made, the farmers may be paid bonuses. This cereal aggregation system is used by the FEPA-B (a farmers' federation in Burkina Faso) and the Union des professionnels agricoles pour la commercialisation des céréales au Mali (PACCEM Faso Jigi), a farmers' cereal marketing union in Mali.

BOX 3
Cereal aggregation through repayment of the inputs credit: the experiences of FEPA-B (Burkina Faso) and Faso Jigi (Mali)

The FEPA-B (*Fédération des professionnels agricoles du Burkina*) group ordering operation was initially implemented in eight provinces in 2002 and now extends to 20 provinces in the area covered by FEPA-B, which is equivalent to 80% of the country. This strategy of group ordering high-quality inputs aims to encourage FO's members to make judicious use of inputs to generate more agricultural surpluses for family consumption on the one hand, and for group marketing by the FO on the other. The scheme involves not only FEPA-B and farmers but also financial institutions, input suppliers and input quality-control services.

Faso Jigi has set up a financing system for its members through a CFAF 417 million (US$ 685,000) guarantee fund* held at the *Banque Nationale de Développement Agricole*. It is used to obtain a credit line of around CFAF 1.5 billion (almost US$ 2.5 million) at an annual rate of 9% to finance the agricultural inputs the farmers need. At the beginning of the season, Faso Jigi uses the line of credit to grant farmers an advance of between 50% and 60% of the estimated harvest value to cover the cost of the inputs (fertiliser and certified seed), ploughing and transplanting. That advance is repaid in kind to the cooperative's management committee, and any surplus produce is sold back to the union at the price set at the beginning of the season. When Faso Jigi has sold all the aggregated cereal, it makes a second payment to the producers (the remaining 40% or 50%) plus, potentially, bonuses.

* SEE GLOSSARY

Purchasing from members at market prices

This is the most commonly-used method. At harvest time, farmers are paid cash for the produce they contribute. The main advantage is that as soon as the harvest is over, the farmer has enough cash to cover his/her needs and expenses. The potential disadvantage of this system is the difficulty of selling at a profitable price, given the intra-annual fluctuations in cereal prices

Purchasing from members at support prices

This method consists in buying farmers' surplus produce at above-market prices so that they do not have to turn to remote markets, which are often less lucrative because of the additional costs entailed in transport, storage losses, handling, etc. However, this practice encourages producers to sell the bulk of their output, thereby jeopardising farming households' food security during the lean season. In addition, in some cases, an overly high support price can block the system by creating conditions that lead to the non-repayment of marketing loans taken out by the FO. This system also increases price risk and does not encourage members ' loyalty* to the FO (understood as prioritising the collective interests of the cooperative).

SEE GLOSSARY

All four methods of commodity aggregation involve taking out credit ("marketing credit" or "input credit") from a financial institution, bank or microfinance institution (MFI). The way aggregation is organised will depend on the quantity of cereal involved (the smaller the quantity, the more likely that aggregation will be local and fragmented), the season's yield (in a deficit year, aggregation may require extensive travel) and mutual trust among FO's members (since they trust another person with the money to buy the cereals). It is important that the choice of aggregation methods is made by consensus at an FO's General Assembly.

There are certain cases where FOs need to exercise caution when setting the price for purchases from producers•.

SEE CHAPTER 7 "RISK MANAGEMENT" FOR ADVICE ABOUT SETTING A CAUTIOUS PURCHASE PRICE

B.3 Determining the sales price for external purchasers

Prices are generally determined by the market. However, FOs use various methods to determine the prices charged to their buyers:

- Production-based pricing: some FOs include all of the production costs and add a profit margin (rice growers, for example);
- Cost-based pricing: the cost factors in the purchase price, financial expenses and, for some FOs, amortisation. Once the cost has been calculated, a percentage markup is added to determine the sales price;
- Market-based pricing: this is the commonest method among FOs. It is advantageous when the market price is higher than the cereal's production cost, so FOs often wait for prices to reach a certain level before selling their stocks. However, this strategy can have drawbacks, particularly when prices remain low, as often happens during a surplus season, when supply far exceeds demand.

Whichever pricing method is chosen, FOs must demonstrate good negotiation skills.

B.4 Women's role in marketing

Commodity marketing is often carried out by men's FOs or mixed-gender FOs. In the latter case, women seldom hold positions of responsibility that require them to make strategic decisions about group marketing. Against this backdrop, women's FOs and their federations are increasingly looking to manage the different marketing phases themselves. This can be seen in specialised organisations such as associations of women rice farmers and women's organisations that store and market raw fonio, millet, sorghum and maize. Evidence shows that group marketing managed by women's organisations yields better results because they apply good inventory and financial management strategies.

C – Which markets do FOs operate in?

Cereal distribution channels are complex in structure because of the hierarchy of markets and the multiplicity of operators. There are four main channels through which FOs market their products.

C.1 Local markets

Local markets include village markets and bulking markets*. Village markets are held at different intervals depending on the region (once, twice or three times per week). The amount of agricultural produce found in these markets depends on the results of the harvest in the village's immediate vicinity. The type of products sold depends on the local population's dietary habits and practices. The buyers on these markets are from the village or its surroundings, although sometimes city consumers come to stock up, as do farmer aggregators.

* SEE GLOSSARY

The main purchasers at bulking markets are stall-keeper aggregators* (who act as intermediaries for wholesalers). Products are sold in larger quantities there than in village markets. There is also a wider variety of products but, as a rule, most are grown and consumed in the region. Bulking markets are held at the same intervals as village markets.

* SEE GLOSSARY

C.2 Urban markets

Being located in the big cities, these markets draw all the different stakeholders in the farm produce marketing chain, though the majority are wholesalers, retailers and consumers. Urban markets offer a wide range of cereals and other commodities in very large quantities, and they always have produce for sale, even during shortages (poor crop yields or the lean season) when prices rise. During shortages, stocks are transferred from urban storehouses to bulking markets and village markets.

Several different types of FOs' customers operate in urban markets, but the main ones are traders, agrifood processing plants and industrialists. The traders supply produce to the consumption areas (that is, cities and rural areas where there is a production deficit) from the food-surplus areas. There are two different types of trader, depending on their financial resources and market coverage:

- Semi-wholesalers: although they have limited financial capacity, they are dynamic players on the local cereals market. They buy and sell all year round, occupying a wider market share at regional and even inter-regional level. In rural areas, they supply wholesalers, while in urban areas, they are supplied by wholesalers and

deliver to retailers. Rural semi-wholesalers are also FOs' partners. These operators rarely attend bulking markets, instead sending intermediary aggregators on their behalf;

- Wholesalers: these are the most important and influential players on the cereals market. They have significant spending power, ample storage capacity and, for the most part, their own means of transport. Wholesalers mainly work with rural intermediaries, regional semi-wholesalers and, increasingly, farmers operating within group marketing systems. Wholesalers are responsible for the principal market functions: the financing of other stakeholders (intermediaries, semi-wholesalers etc.), transport and storage.

Processing plants (both small-scale and semi-industrial) are small and medium-sized enterprises (SMEs) that process local cereals into a very wide range of end products made from millet, sorghum, maize, rice, fonio and peanuts, such as flour, broken grain, semolina and baby flour. These plants, which are generally run by women's organisations, are widespread in certain capitals and secondary cities in West Africa. Whatever their size, these processing units have stringent quality standards for the unprocessed cereals sold by FOs (and other players) on the markets. They play an increasingly important role in the way the agricultural sector functions, by driving up the quality of products supplied to urban centres.

There are growing numbers of industrial plants in West African capitals. They produce husked rice, semolina, broken kernels, infant flours and by-products (such as bran and bales), which are used as feed for poultry and cattle. These types of plants buy large quantities of cereal and demand an extremely high quality of raw products.

C.3 Public-sector contracts

A public-sector contract enables an operator (either individual or collective) to purchase goods or services from a supplier under certain predefined conditions. It is the preferred procurement arrangement used by the management bodies of national food security reserves, the Regional Food Security Reserve (RFSR) of the Economic Commission for West African States (ECOWAS), international institutions such as the WFP, FAO or UNICEF, and non-governmental organisations (NGOs). Public-sector contracts typically (i) concern a large volume of cereals, (ii) impose rigorous quality standards and (iii) offer staggered payments pegged to the different phases of a contract.

Public-sector stakeholders

The institutions that draw up and sign food purchasing contracts vary in nature, status and size. They include:

- structures commissioned at regional level (ECOWAS RFSR), national level (State services responsible for food crisis prevention and management) and local level (decentralised local authorities) to set up and manage food security reserves;
- services tasked with supplying school and university canteens, and food services in hospitals, barracks, prisons, etc.;
- international institutions (the WFP, UNHCR, etc.) and NGOs carrying out food aid operations.

Public-sector procedures

SEE GLOSSARY

The rules for drafting and executing an institutional purchase contract* are laid down by the procurement code of the State, regional organisation or international institution making the purchase. Regardless of the institution, these codes provide different rules depending on the amount, purpose or circumstances of the contract. These codes are generally governed by three principles: procedural transparency, equal treatment of the candidates and free access to public contracts.

Contracts are awarded on the basis of one of the following scenarios: (i) without advertising or competitive bidding (this is called direct contracting); (ii) a call for tenders restricted to a limited list of suppliers, which may include FOs (an adapted procedure); (iii) an open call for tenders. Any potential supplier that complies with the conditions in the call notice may participate in an open call for tenders. FOs therefore often find it difficult to tender and be competitive in those cases.

As regards duration, public-sector food purchasing contracts are generally short-term contracts to be completed in one month. However, that requirement is not always respected because of the difficulties some suppliers have obtaining supplies. For example, FOs often find it difficult to mobilise the funds necessary for aggregating the produce that they will have to deliver to public-sector purchasers. Most contracts provide for and apply late penalties.

There are some procurement procedures that are favourable for FOs, such as the restricted calls for tender, direct contracting and contracts with simplified administrative requirements. However, few contracting authorities reserve part of public-sector contracts for FOs with these simplified procedures.

BOX 4
Examples of procedures that ease FOs' access to public-sector markets

In Burkina Faso, Decree No. 2017-077/MINEFID/CAB of 13 March 2017, supplemented by Decree No. 2017-142/MINEFID/CAB of 5 May 2017, authorises direct contracting for purchases from non-profits and NGOs on the one hand, and from umbrella organisations of farmers, breeders and artisans on the other. This decree makes it easier to order local produce in markets reserved for farmers' organisations.

Under its Purchase for Progress (P4P) programme, the World Food Program (WFP) encourages local sourcing of agricultural commodities to fulfil a portion of its food aid initiatives. Through this programme, the WFP has supported and trained FOs from 18 countries in Africa, Asia and Latin America to be able to tender for procurement contracts. The programme has shown that some FOs are capable to meeting the requirements of public-sector contracts. The WFP is also starting to buy locally-processed flours as part of its early childhood support programme.

BOX 5
Documentation required for RFSR/ECOWAS calls for tenders

To submit a bid to the Regional Food Security Reserve, the following administrative documents are required:

- Certificates of completion for similar contracts, as proof of prior experience of public-sector contracting;
- Proof of payment of social security contributions;
- A tender guarantee or tender guarantee statement;
- A line of credit equivalent to 60% of the amount of the bid;
- The technical approval/receipt issued by the competent authority;
- Bank account details;

- Balance sheets for the past three years.

In addition, the bidder must complete the following technical documentation:

- The submission form;
- The applicable pricing forms;
- Written confirmation of the signatory's authority to commit the bidder;
- The duly signed declaration of integrity, eligibility and environmental and social commitment;
- Documents certifying that the bidder is eligible to compete, including the bidder information form;
- A copy of the agreement or letter of intent to form a group, signed by all the members and accompanied by a draft agreement for groups of companies.

Once all these documents have been duly completed, the bid must be stamped, initialled, sealed and submitted in a closed envelope.

C.4 Contracts with private operators in neighbouring countries

There are many commercial commodity transactions that take place between operators in different West African States. These cross-border exchanges are based on complementarities between the agro-ecological zones of the region and the relative levels of surplus or deficit in each country. These contracts cover large quantities and involve traders and occasionally FOs. While these markets are quite dynamic, they are structured according to specific legislative and regulatory procedures that operators must respect.

D – How can FOs make external marketing more effective?

D.1 Satisfying contracting requirements

Trade legislation in several West African countries defines a "contract" as a document that clearly indicates the commitments undertaken by each of the signatories. A contract is therefore a reference instrument for the signing parties that enables them to defend their interests. There are two different types of contracts. The first is verbal contracts, which, until recently, were the most commonly used, especially by traders and agrifood processing plants. Verbal contracts are easy to establish; however, they have the major disadvantage of not being recognised (in general) by the judicial institutions, which complicates dispute resolution when disagreements arise between the parties. The second type is written contracts. These are the preferred contract type when i) there is considerable distance between the vendor and the purchaser; (ii) there is no previously established trust between the parties; (iii) the agreement is very detailed; (iv) the agreement covers a long period of time; and (v) the agreement concerns a significant sum of money.

A written contract for commodity marketing must include the following main provisions:

- Subject matter: the contract should specify the quantity and quality of the goods to be sold. With regard to quality, the contract may either provide specific requirements or refer to existing standards (at a national, regional or international level). The quality criteria usually applied to cereals are: i) moisture; ii) the dockage percentage; (iii) the proportion of grains damaged by insects; (iv) the proportion of grains affected by mould; (v) the amount of broken kernels; (vi) the percentage of grain damaged by other factors; (vii) the percentage of sand, dust and other inert matter; viii) the percentage of organic foreign matter; (ix) the degree of infestation (type and quantity of insects); x) the percentage of healthy grain; and xi) the germination rate (in the case of seeds).
- Delivery: the contract must indicate the date and place of delivery; it must also specify the obligations of the parties with regard to the transport and delivery of the goods, by determining the point at which responsibility for damage risk passes from the vendor to the purchaser.
- Pricing: the contract must clearly indicate the unit price, the price, the currency (for example: CFA franc, euro or dollar), the method of payment (cheque, bank transfer or documentary letter of credit) and the payment date (prior to shipment, on delivery or at another date, as determined by the parties).
- Ownership: the purchaser does not automatically become the owner of the goods when the sale or the delivery has been made. It is possible to determine the moment when ownership is transferred, namely, when full payment of the goods is complete. That specification allows the vendor, under certain conditions, to repossess the goods in the event that the purchaser defaults on payment.
- Applicable law: all contracts are governed by the applicable law in the relevant country, which complements any provisions that are undefined in the contract. In general, the applicable law is that of the vendor's or purchaser's country. In the case of cross-border trade, the contract must specify the applicable law.
- Dispute resolution: If a dispute arises between the parties and the parties fail to resolve it amicably, they should have recourse to a dispute settlement mechanism. The parties may choose between legal proceedings before the competent courts

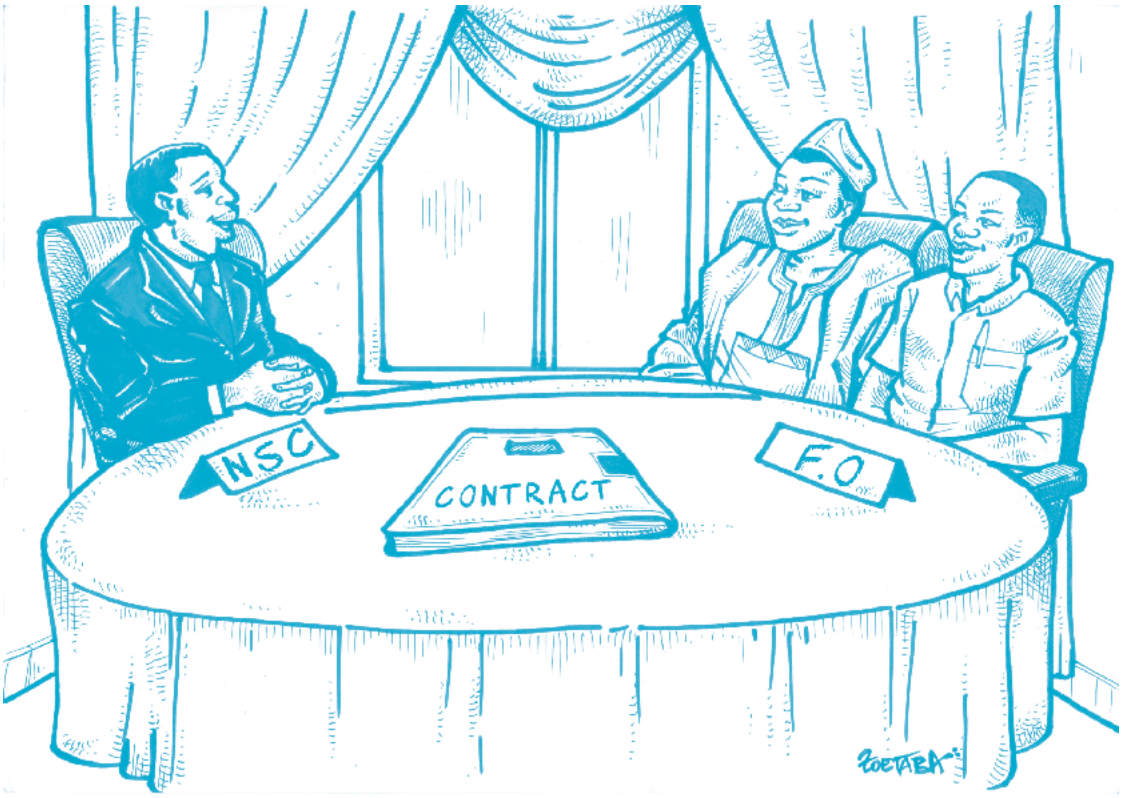
or arbitral proceedings before one or more arbitrators. That choice should be indicated in the contract. If no such choice is made, each party may appeal to the competent courts.

D.2 Respecting export procedures

One of the main objectives of ECOWAS is to promote economic integration in the region through the creation of a common market. The principal instrument created for that purpose is the ECOWAS Trade Liberalization Scheme (ETLS). The ETLS guarantees the free movement of goods, i.e. free from payment of customs duties or taxes. It also reduces the many administrative formalities at the borders. The ETLS is open to any company that is located and operates in ECOWAS and intends to export its products within the region. All companies are required to comply with the rules set out in the ETLS protocols and regulations.

WHICH ARE AVAILABLE AT WWW.ETLS.ECOWAS.INT AND WWW.ECOWAS.INT

While trade between ECOWAS member countries is exempt from taxes, operators must nevertheless provide all the necessary border-crossing documents, in particular the certificate of origin and the phytosanitary certificate. Operators must also obtain export permits from the competent national authorities (usually, the National Directorate for Trade and Competition). FO must be legally recognised in order to obtain each of these different documents.



D.3 Adapting to the requirements of public-sector markets

Often, institutions that purchase food products indicate that they would be willing to award FOs a larger share of their purchases. However, that intention faces many obstacles in relation to both the institutions concerned and the FOs.

Table 1 – Constraints limiting FOs' abilities to supply public-sector markets

Constraints for public-sector purchasers	Constraints for FOs
> A lack of awareness of FOs' capabilities at a given time and in a given area. > A lack of means and deficiencies in the procedures for verifying the origin of purchased products. > Budget insufficiencies, which result in low purchase prices that are sometimes lower than market prices. > Internal dysfunctions, which can complicate calls for tender and, once contracts are awarded, often lead to delays in payment. These late payments carry no financial consequence (the supplier does not receive compensation from the public-sector purchaser). > Lack of an internal information system that enables the review of previous purchases of local produce.	> Difficulties accessing information regarding calls for tender. > Insufficient financial capacity to access major contracts. > A lack of personnel who are available and trained to respond to calls for tender, which often involve complex procedures. > The expensiveness of the process: the cost of the financial guarantee; costs of the fees. > The refusal by some banks to grant a bid bond. > A limited capacity within large numbers of FOs to meet the quality standards demanded by public-sector purchasers, particularly with regard to aflatoxin levels. > Difficulties meeting the quantities to be supplied and the delivery lead times, as defined in the contract signed between the FO and the public-sector purchaser. These difficulties are heightened when the market price surges between the time of supply and the time of delivery.

In order to overcome these obstacles, it is necessary, on the one hand, to implement certain changes in public-sector purchasing procedures (see the document entitled "Multi-stakeholder Support Framework for Local Grain Storage in West Africa", on the RAAF website) and, on the other, to improve practices in FOs. These improvements include:

- The ability to spot market opportunities and act swiftly to seize them, thanks to dedicated staff who have acquired the necessary skills and have a network of contacts;
- The ability to build loyalty* among the member farmers so that they hand over the bulk of their marketable surplus to the FO. To this end, the FOs develop financing services with credits that are repayable in kind (see the « cereal aggregation system » section above);
- More secure cash reserves in order to finance the aggregation of produce•. Indeed, quick payment of the producer is an important incentive to prevent it from selling on other markets;
- Greater storage capacity and quality control. In this regard, many FOs need to improve the quality of their buildings• and increase the amount of quality-control equipment they use, such as moisture meters, calibrators, etc. (see post-harvest equipment chapters, particularly•;

* SEE GLOSSARY

SEE CHAPTER 3A "FINANCING INSTRUMENTS").

SEE CHAPTER 5A

SEE CHAPTER 5B

SEE CHAPTER 1

- Introduction of a certified accounting system in order to be able to meet the requirements of public-sector contracts and the possibility of transforming the FO's legal status to comply with OHADA guidelines (where required). Any move towards cooperative society status requires changes in FOs' internal organisation and governance structures;
- Greater capacity to meet all the needs of public-sector contracts, in terms of the quality of the delivered product, the financial strength of the FO and pricing levels. Pricing is a strategic element that is of utmost importance in the competition between suppliers of public-sector purchasers. It must allow the FO to cover its expenses and generate a profit while at the same time reflecting the value of the product as perceived by the customer.

BOX 6

Public-sector purchasing from FOs: Experiences in Burkina Faso and Ghana

The Burkina Faso National Union of Cotton Grower Cooperatives (UNPCB) markets the cotton and cereals grown by its members. In recent years, the UNPCB has been awarded several calls for tenders issued by public-sector stakeholders. Between 2008 and 2016, it handled 24,000 tonnes of cereal and aggregated 10,700 farmers' produce to fill various public-sector contracts, mainly those of Burkina Faso's National Food Security Stocks Management Company (SONAGESS) and the ECOWAS RFSR.

The factors behind the good results recorded by the UNPCB for these contracts are mainly: the availability of cereal stocks at the UNPCB level and the efficiency of aggregation from the members; the existence of a technical commission within the organisation responsible for monitoring cereal marketing; the ease of collaboration with financial institutions and the availability of partners willing to support UNPCB with marketing. However, there were also a number of difficulties, in particular: the inadequacy of certain documentation related to the status of FOs stipulated in the call notices; delays in the processing of calls for tender and, once contracts were signed, delays in payments; the influence of fluctuations in cotton production on cereal marketing.

In Ghana, ***the National Food Buffer Stock Company*** (NAFCO) is a national food security reserve management company. Since 2017, as part of the "Plant for Food and Employment" initiative, NAFCO has supported most registered FOs in the country, including those set up by women or youth farmers. Each FO guarantees the quality and quantity of foodstuffs supplied. In 2018/19, NAFCO purchased 8,874 tonnes of maize and 10,456 tonnes from FOs to supply school canteens. The direct contracting arrangement with FOs eliminates intermediaries and therefore offers producers a minimum set price that is profitable for them. The high volumes processed allow NAFCO to absorb increases in production, which in turn contributes to a certain degree of price stabilisation.

D.4 Overcoming the difficulties of obtaining financing and limited transport

External marketing is often hindered by the insufficiency, if not the complete lack, of available financing structures suited to FOs' specific needs, mainly because of high interest rates and difficulty providing the guarantees required by financial institutions•. This bottleneck curbs growth in production, productivity and cereal sales that will generate returns for FOs.

SEE CHAPTER **3A** "FINANCING TOOLS"

The transport of cereals marketed by FOs is hindered by a shortage of means of transport suited to certain main transit roads, on the one hand, and by an increase in transport costs owing to the worsening state of many main transit roads on the other. This situation diminishes the competitiveness (in terms of quality and price) of the produce marketed by FOs located in areas with poor road infrastructure•.

SEE ALSO CHAPTER **7** "RISK MANAGEMENT"

Capacity building for FOs' managers is highly necessary in order to overcome the different obstacles discussed in this section. FOs need to further plan and deliver training on i) drafting proposals for public-sector calls for tender; ii) cross-border trade laws and regulations within the ECOWAS space; iii) pricing and contract negotiation techniques; and (iv) drafting marketing and transport contracts.

E – Key points

➔ In all of their external marketing activities,FOs must act as fully-fledged economic operators in order to be able to meet the competition and the requirements of other agricultural stakeholders: traders, small-scale and industrial processors, public institutions in charge of food security, etc.

➔ However, FOs face a number of challenges in this respect, including:

- Improving organisation, in terms of internal structure and legal status, in order to be competitive in any market;
- Ensuring the quality of the products sold in a deregulated and increasingly competitive market;
- Fully understanding the cross-border trade legislation and regulations applicable within the ECOWAS region;
- Acquiring the professional capacity to be able to respond successfully to calls for tender issued by public-sector stakeholders.

➔ The success of group marketing operations hinges on meeting members' commitments to the FOs and vice-versa. The FOs need to be dynamic and honour the commitments they make to their members during cereal aggregation. Since producers' main objective is to increase their revenue, the FOs need to reorganise themselves in such a way as to increase and diversify their sales channels. If the FOs succeed in retaining customers by meeting all their contractual requirements, the knock-on effect will be that the producers which supply them will also be retained.

➔ Public-sector contracts are an opportunity for family farms and their related organisations to sell their produce on local and regional markets.

➔ One of the objectives of public-sector purchasing is to build FOs' capacities to access private contracts that value quality.

➔ Public-sector purchasing of local foodstuffs is a lever for structuring local value chains, promoting "local consumption" and establishing new partnerships with the private sector.

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WAREHOUSE

Appendix
Chapter **4C**

https://bit.ly/2YIWbok

CHAPTER 5

Technical aspects

Introduction

Proper conservation of the commodities stored by farmers' organisations (FOs) is essential, at once to ensure that the stored food does not present any health risks and to guarantee the storage systems' economic viability. To this end, it is important for the FOs operating local food reserves to operate in well-designed, properly maintained buildings, and to take the necessary steps to maintain the stored commodities in good condition.

This chapter focuses on the technical aspects of managing local food reserves. It is comprised of two subchapters.

The first concerns the characteristics of the buildings used for storage, often referred to as storehouses. It deals successively with the choice of a plot of land on which to build the storehouse, the building specifications to be factored in right from the design phase, the various construction phases, the choice of construction materials and, lastly, maintenance of the building once in use.

The second subchapter deals with the techniques for warehousing and maintaining the commodities stored in the FOs' buildings. It begins by recapping the main causes of quality losses, namely moisture, insects, moulds, rodents, etc. It then presents the main recommendations (or obligations) for preparing the storehouse prior to taking in the products, the inspections and treatments to be carried out on reception of the commodities, packaging of the products received and stacking of the bags inside the storehouse, the necessary maintenance operations and, lastly, remedial actions if the stored commodities are damaged in any way.

CHAPTER 5A

Storehouse
Technical Specifications

Table of contents

A – Introduction

Storehouses are a decisive factor in storage. This chapter provides useful technical information for managing and implementing the process of building and setting up storehouses for agricultural products and stockfeed. It details the various steps involved, from choosing the plot of land through to final acceptance of the storehouse. It presents the different types of storehouse, which vary with size, the materials used and the storage purposes.

What do we mean by «storehouse»? A storehouse is an infrastructure intended for storing various products or items of equipment. This handbook relates more specifically to structures that store agricultural products, stockfeed or agricultural inputs. A distinction should be made between a «storehouse» and domestic storage facilities located within the household, such as the traditional or enhanced granary or small metal silos.

What are the different types of storehouse? The storehouses discussed here are managed by farmers' organisations (FOs), which generally own the infrastructure. There are three main types of storehouse: local (or village) storehouses, intermediate storehouses and central storehouses.

This typology should not be seen as a rigid, permanent framework. Given the diversity of local grain storage solutions in West Africa, its purpose here is simply to facilitate the document's subsequent presentation of advice and recommendations for building and maintaining storehouses.

Table 1 – The three main types of storehouse

	Local or village storehouses	Intermediate storehouses	Central storehouses
Storage capacity	Meets the storage requirements of a village and covers household emergencies. Capacity: 10-50 tonnes.	> Meets the storage requirements of a group of villages. > For the livestock farmers' organisations in charge of storing stockfeed, these storehouses are known as «pre-positioning storehouses». > Average capacity: between 50 and 500 or 1,000 tonnes.	Meets the storage requirements of a relatively large zone (in terms of both area and population) for sale and supply purposes. Capacity: between 500 and 1,000 or 2,000 tonnes.
Managed by	Village group	> Union of village groups	Union or federation of village groups
Construction materials	Traditional or local materials (adobe bricks)	> Very often made of permanent materials: concrete, breeze blocks/ cinder blocks, metal sheets, etc.	Permanent materials
Funded by	The FOs and sometimes individual farmers	> Development projects; municipalities	Development projects; government

B – What are the essential preliminaries to setting up a storehouse?

Given the inherent difficulties of setting up and managing a storehouse, it is important to take into consideration the decisive factors involved in the planning process.

DIAGRAM 1
Essential preliminaries to setting up a storehouse

The main steps in preparing to build a storehouse are as follows:

1. Define the storehouse's stated objectives, based on the stakeholders' problems and expectations. Is the future storehouse seen as a means of coping with occasional food crises, or is it is focused more on selling to institutional markets? Once the objectives have been clearly identified, project stakeholders can decide on the type of storehouse: its size, technical specifications and the materials used;
2. Identify the resources required for the project: labour, time, know-how and financial contributions. The budget estimate should include not only the storehouse's construction but also its equipment, such as pallets or weighing scales, for example•;

SEE CHAPTER **5B** FOR FURTHER DETAILS

3. Examine the project for compliance with administrative and regulatory requirements (land laws, environmental standards, etc.);
4. Define the stakeholders' rights and responsibilities, form a committee to manage the storehouse, and draft a set of regulations•;

SEE CHAPTER **2B**

5. Conduct a socio-environmental impact study: this type of study is an increasingly frequent stipulation on the part of the donors that finance infrastructure. If so, the study must be carried out by a qualified consulting firm.

C – How to choose the storehouse building plot

C.1 Physical characteristics of the plot

The plot chosen as the site of the storehouse must be:

- flat (or with a very slight slope);
- not flood-prone, so situated on well-drained soil;
- situated at a distance from zones likely to be a source of contamination (field, waterholes, toilets, etc.).

A geotechnical* investigation is required for any project involving a large-sized storehouse built in permanent materials. Based on a study of the soil structure and its physical properties (resistance and stability), the investigation will calculate the depth of foundations required to give the building the necessary stability.

SEE GLOSSARY

C.2 Siting the intended storehouse plot

When a commercial storehouse is to built, the question of location always arises. As far as possible, the chosen plot should be readily accessible for trading purposes. Whatever means of transport is used to load and unload produce must be able to manoeuvre easily around the site. The storehouse should be readily visible to the local population to deter thefts (in addition to the security guard system that will have to be set up). The site must allow air to circulate freely (so not be surrounded by large trees) and must not be flood-prone. In some instances, though, the village that will house the storehouse is hemmed in and difficult to access. If so, there is no need to shelve the plans to build a storehouse: instead, find solutions to adapt to the layout.

BOX 1
Managing the issues raised by hard-to-reach villages in northern Benin

In West Atacora in the north of Benin, most of the villages are hemmed in and difficult to reach. When the heavy rains set in, lorry access becomes impossible. Despite this, storehouses have been built and food reserves are stored there. The farmers' organisations have adopted the strategy of completing their destocking and marketing operations before the heavy rains start.

C.3 Siting by type of storehouse

The choice of site mainly depends on the size of the storehouse and its primary purpose: supply or marketing. The table below sums up the factors to take into consideration.

Table 2 – Choosing the storehouse site to suit its function

Type of storehouse	Preferred site
Local storehouses (servicing a village)	> In the centre of the village or in the central settlement, if the village is made up of more than one settlement. > Small storehouses such as these are less affected by accessibility issues, since the goods are often transported by cart, motorbike or tricycle.
Intermediate storehouses (servicing a cluster of villages)	> In the central village. > Given that the goods are transported by small lorries or minibuses, the plot chosen needs to be accessible to this type of vehicle. Ideally, this type of storehouse should be located near a main road in the chosen village.
Central storehouses	> In the central village. > Central storehouses need to be situated near a main thoroughfare for easy lorry access.

C.4 Securing land tenure

When choosing a plot of land to house the storehouse, an important factor to take into consideration is secure land tenure.*

SEE GLOSSARY

Quite often, disputes about land ownership arise once the storehouses have been built. To avoid this problem, it is absolutely essential for the FO to have guarantees as to the plot's land tenure before beginning any construction work. Land tenure procedures vary from one country to another, depending on the local legal framework. There are two possible approaches:

- A deed of covenant or a land use agreement: the deed is drawn up between (i) the traditional authorities (e.g. village chief), (ii) the presumed landowner and (iii) the FO. The deed must be a written document and subsequently registered with the competent department. The plot is made available during a formal village assembly attended by various local stakeholders.
- A deed of sale between (i) the presumed owner of the plot (traditional authority, regional authority, individual) and (ii) the FO. Here again, it is important for the deed to be registered with the competent department.

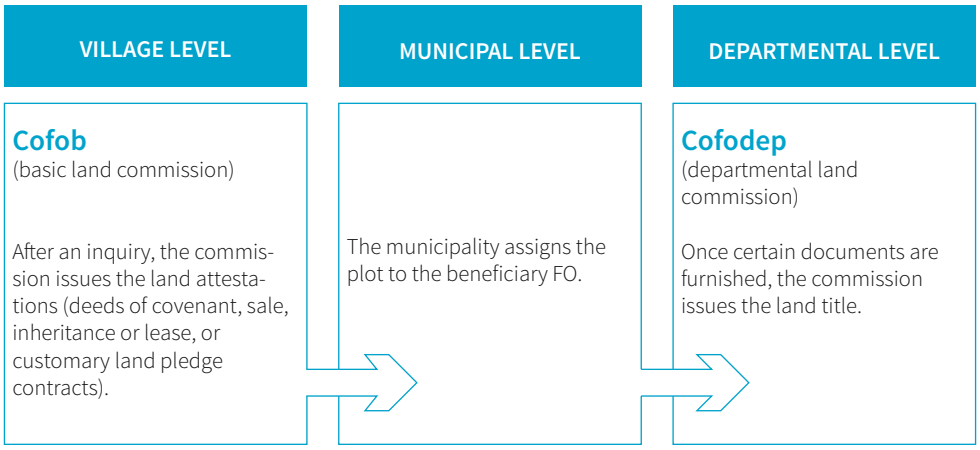
These steps, which can sometimes take time, are essential for avoiding disputes in the future. They also reassure the partners contributing to financing the storage infrastructure.

5

EXAMPLE 1
Procedure for securing land tenure in Niger

In Niger, particularly in the southern band, the growing stakes associated with land ownership and the prospects for investing in land are heightening competition for access to land and the insecurity of land tenure (Lawali, 2014). In the past, only the traditional systems of chiefs had the power to assign usage rights to users. They continue to have considerable power, but today represent only one of a number of voices. Land and natural resource management is accordingly a more collective undertaking. There are land commissions at different levels - village, municipality, department, region and national level - and each has a specific role to play.

Watertight contracts are necessary for plots chosen to be a storehouse construction site.



EXAMPLE 2
Procedure for securing land tenure in Benin

IDENTIFY THE SITE OF THE STOREHOUSE AND THE PRESUMED OWNER OF THE PLOT

VILLAGE ASSEMBLY

The whole village confirms that the plot belongs to the presumed owner. Make sure that the plot is not a bone of contention.

DEED OF COVENANT

The owner signs the deed of covenant conferring title on the group (or undertakes to do so later). The deed of covenant can be obtained from the town hall of the municipality responsible for the village.

TOPOGRAPHICAL SURVEY

The FO calls in an expert topographical surveyor to produce a topographical survey, which specifies the exact dimensions and shape of the plot.

MUNICIPAL ORDER

The deed of covenant and the topographical survey are sent to the town hall. The town hall issues a municipal order that assigns the portion of land to the group. The municipal order gives the group full authority over the plot.

This process is seldom completed before the storehouses are built. Most of the time, construction work begins as soon as the deed of covenant has been signed and the process of securing land tenure carries on afterwards. This is because the groups are often granted time-limited financing (development projects), whereas the process of securing land tenure is slow to be completed.

EXAMPLE 3
Procedure for securing land tenure in Nigeria

Two land tenure systems coexist in Nigeria: customary tenure and statutory tenure. Land law recognises people's land rights under customary law. There are several recognised methods of acquiring land from federal and state government, groups and individuals. Land can be acquired from States through the recognition of «customary land use rights». The acquisition of land from private citizens is a transfer from the owner to the buyer under customary law; this type of transfer is formally recognised by a registered «deed of transfer». After this step, a petition is submitted to the governor requesting him to issue a «land use certificate». The right to use the land is granted in the form of a lease certified by a «deed of occupancy» for a specified period of time. The land may also be obtained by subcontracting the lease. This requires approval by the President of the Federal Republic of Nigeria, the state governor or the chairman of the local government council, as applicable.

D – What are the main features to factor into storehouse design?

Various factors should be taken into account when building a storehouse, namely:

- orientation: it is important to orient the storage building so that air can circulate (by situating air vents in the direction of the prevailing winds) and to reduce direct sunlight entering the building;
- layout: it is necessary to have separate buildings for storing foodstuffs and agricultural inputs. If constructing two buildings is not an option (for financial reasons, for example), the storehouse must be divided into two compartments to eliminate any possibility of chemical inputs contaminating foodstuffs. In large storehouses, provision should also be made for the manager's office;
- lighting: prefer natural lighting through transparent roof panels rather than electric bulbs: this will reduce electricity consumption. Also, if the building has electricity, it is important to make absolutely sure that water pipes are sufficiently distant from electrical wiring to avoid fire hazards;
- drying area*: it is essential to include a drying area in the storehouse's design. The drying area is used to dry grain and/or make use of solar disinfection. It is situated outside the storehouse in a position where it will be in direct sunlight for most of the day;
- in addition to the drying area, provide a goods receiving area where foodstuffs can be unloaded and inspected prior to storage in the storehouse;
- storehouse entry: prefer sliding doors to swing doors. Also, leave an empty space at the storehouse entry so that bags don't block access or impede movement;
- termite control: structural timber and woodwork must be treated for termite control prior to installation.

* SEE GLOSSARY

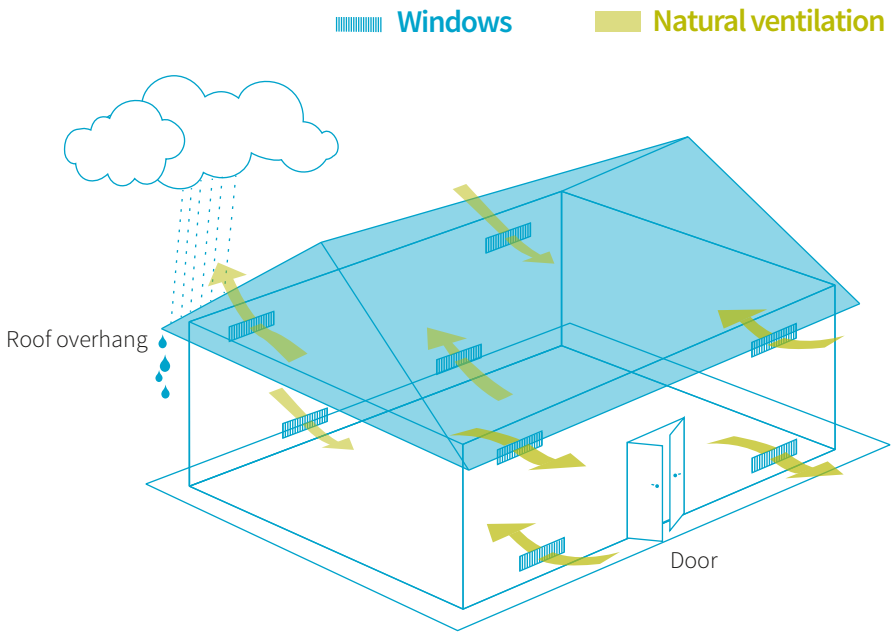


DIAGRAM 2
Storehouse aeration and protection

E – What are the different phases involved in building a storehouse?

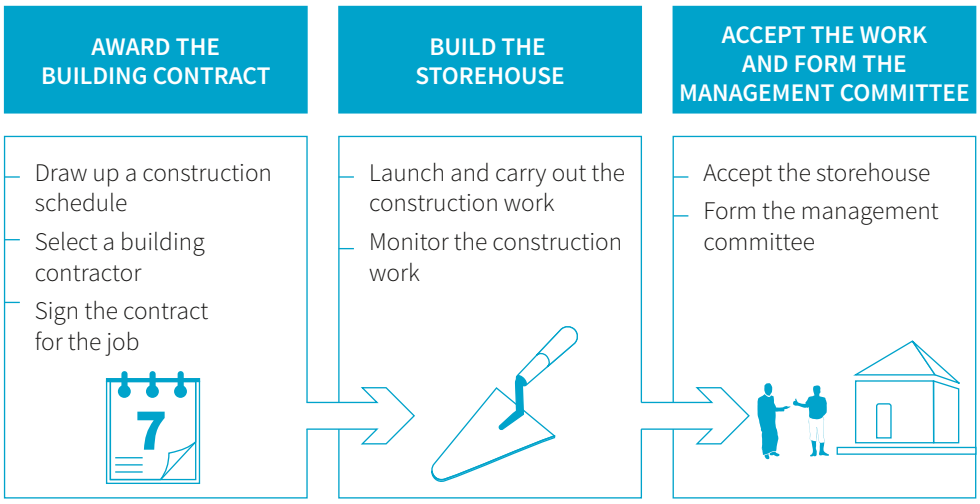
After identifying the site, obtaining financing, securing land tenure, designing the building plans and obtaining building permission, planners can issue a call for construction tenders.

E.1 Draw up the tender file

For intermediate and central storehouses, an outside firm has to be recruited to help the FO prepare the tender file, then analyse the proposals and select the building contractor. The FO can then engage the same firm to conduct the external building inspection.

Once the call for tenders has been issued, the construction of the storehouse unfolds in three phases, each consisting of various steps as shown in the diagram below:

DIAGRAM 3
Storehouse construction stages



E.2 Award the building contract

During this phase, the aim is to:

draw up a calendar for awarding the contract and carrying out the construction. This calendar should include the time taken to publish the call for tenders, receive and analyse the tenders, select a contractor, negotiate the contract, then sign the contract. Taken together, these activities generally span three months;

select a professional contractor with proven experience in building storehouses. The selection is based on a tender file setting out all of the FO's requirements;

draw up and sign a contract with the contractor. The contract clauses specify various points:

- the roles and responsibilities of each of the parties (the construction company and the FO or other parties sponsoring the work);
- the building's technical specifications;
- the construction time frame;
- the payment schedule, which should be scrupulously followed•. Part payments are

SEE SAMPLE CONTRACT IN THE APPENDIX

made as the work progresses, as advised by the oversight committee. If an advance payment is made on signature of the contract, the contractor must furnish a bank guarantee to the value of the advance.

The contract must clearly specify the contributions made by the beneficiaries, the reuse of existing materials (if applicable) and the choice of the construction site.

E.3 Build the storehouse

As the construction work proceeds, particular attention should be paid to the following points:

- the beneficiaries contribution to the building work, which may be in kind and/or in cash. For contributions in kind (supplying labour on the work site, or water, sand or gravel, for example), there must be some means of quantifying the value of the contribution. It is very important that the beneficiaries contribute to the project: it gives them a sense of responsibility for sound management of the infrastructure. When the beneficiaries make a contribution in kind, it can sometimes result in longer construction lead times than with a contractor; this factor should be taken into account when the construction schedule is being drawn up. When there is no voluntary labour available, the contractor has to be asked to supply all of the necessary labour;
- in the case of a rebuilding project, useful materials can be retrieved from the old building for use in the new building (e.g. iron bars for the roof, doors, windows, equipment and supplies, etc.). It is essential to visit the site to analyse the materials' condition and also check whether the construction site is suitable;
- contingency management mechanism: 5% to 10% of the price of the construction work must be set aside to cover contingencies. If, in the end, this money is not used during the construction work, it can be used to buy equipment and supplies.

Oversight and monitoring of the work are very important activities during the storehouse construction phase. They must be carried out by both the specialised technician recruited for the purpose (essential for intermediate and central storehouses), who acts as an external inspector, and the members of the FO (internal control). Every week (or at most every fortnight), the FO is to organise a site meeting/inspection to check that the work is running to schedule, that the construction meets the contract stipulations and that the workmanship is up to standard.

E.4 Accept the work

Acceptance of the completed storehouse is a two-step process: (i) the provisional acceptance, which takes place at the end of the work, and (ii) the final acceptance a few months later (usually six months later). Provisional acceptance concludes with a report signed by all of the stakeholders. Final acceptance only takes place if no defect has been observed in the infrastructure. In the event of defects, the contractor must rectify them before the final acceptance. A sum equal to 10% of the final payment due to the contractor will be withheld [1], pending final acceptance.

1 If site meetings are held every week or every fortnight, it will be sufficient to withhold 5% of the final payment.

F – What construction materials should be used?

F.1 Storehouses built using local or traditional materials

In Sahel areas, produce is often stored in constructions made of earth or adobe brick. These construction materials are less suitable for coastal areas, where moisture can seep through the walls and cause mildew to develop. Even in Sahel areas, soil moisture can rise by capillarity into the walls unless certain precautions are taken. Storehouses made of adobe brick are inexpensive and can be built with local materials, but a specialised builder must be called in for the purpose. As the building dries, cracks often appear in the walls. To prevent this happening, chopped straw or grass can be mixed into the mud. Alternatively, a bamboo frame can be built, then covered with the mud. Adobe brick buildings have a shorter useful life. This type of construction is suitable for storing cereals, oleaginous products, legumes and yams for between six and nine months. If they are to be used for several years, adobe brick storehouses need to be covered by a roof in corrugated iron.

F.2 Storehouses in semi-permanent and permanent materials

Storehouses in semi-permanent materials: to obtain a semi-permanent building, the walls of earthen constructions can be made more impermeable by applying any of the following three methods:

- build walls with a mixture of 90% earth or clay and 10% cement;
- paint or coat outside walls with coal tar, asphalt, organic oils, water-repellent paints, or resins;
- apply a coat of waterproof mortar on the walls or possibly paint them with coal tar, etc.[2]

Whitewashing the walls helps keep the interior of the building cool and fills any small cracks. The foundations can also be made with a cement-based product. The cost is slightly higher, but it makes the building sturdier. This type of building is suitable for storing any agricultural product for a period of up to a year or possibly even longer, depending on the product being stored.

Storehouses in permanent materials: cement is the main component of this type of construction. Storehouses in permanent materials are the commonest and most resistant type of construction in both arid and humid zones. They are expensive, though, so unaffordable for FOs unless they can call on projects/programmes or the government for financing. Produce can be stored there for over 15 months.

The following table sets out the materials, the characteristics and the price range of each type of storehouse.

2 Source: Hayma, J. (2004). Le stockage des produits agricoles tropicaux. Agrodok 31, Fondation Agromisa Wageningen; 55p.

Table 3 : characteristics of the different types of storehouse, depending on the materials used

	Materials required	Benefits	Drawbacks	Price range
5 - 20 t storehouse in adobe brick	Walls: Clay or mud, with cement, sand, coal tar and whitewash coating. Roof: Zinc (corrugated sheet metal)	Low-cost to build and maintain. Uses local materials and simple technique.	Susceptible to humidity (when ground water rises through capillary action or rain water seeps in). This shortens products' storage life and the building's lifespan	CFAF 1-5 million (US$ 1,644-8,088)
20 - 250 t storehouse in permanent materials	Walls: concrete or brick, with plaster. Roof: zinc (corrugated sheet metal) or aluminum pan.	Large capacity; long lifespan; better product conservation and protection	Expensive; demanding technique; costly maintenance, sometimes beyond the FO's purchasing power	CFAF 20-25 million (US$ 32,883-41,104)

Source: local storehouse builders & contractors in Benin (for the building costs)

The appendix ◆ shows, by way of example, the cost of building a 250-tonne storehouse in southern Benin in 2017. For a quote to be valid and complete, it must take into account a certain number of factors, as mentioned in the appendix.

◆ SEE THE APPENDIX OF THIS CHAPTER

G – The importance of building maintenance

Investing in infrastructure is the first step; the second is to acquire the means to keep the infrastructure in good condition through appropriate maintenance. There is regular maintenance (cleaning and minor repairs, etc.) and periodical maintenance (more extensive repairs and upkeep).

REGULAR MAINTENANCE	PERIODICAL MAINTENANCE
Replace damaged parts of the roof or plasterwork.	Repair roofing, plasterwork and waterproofing.
Replace leaking taps, blown light bulbs and door hardware.	Repair the electrical system, plumbing and water supply pipes.
Plaster over cracks and repair damaged floor paving.	Replace damaged woodwork.
Replace damaged tiles.	Repair cracked walls.
Keep the facilities clean (sweep, clean, weed, etc.).	Touch up the paintwork.

H – Key points

➔ Any plan to store food reserves requires well-constructed storehouses that are appropriately dimensioned for the requirements, and well equipped and maintained. With a good storehouse, a FO can conduct its food reserves operations on a lasting basis.

➔ Before embarking on the construction of a storehouse, it is very important to secure the land tenure, draw up a suitably detailed and specific contract with the building contractor, and follow the technical recommendations to avoid design faults.

➔ Whatever the ultimate purpose of the reserves (sale, food security or stockfeed), the storehouse should be capable of keeping the produce safe and fit for consumption throughout the storage period.

➔ The choice of the materials used and the siting of the storehouse are largely determined by its size and function.

I – Further reading

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Appendix
Chapter **5A**

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CHAPTER 5B

Warehousing and Maintenance Techniques for Stored Commodities

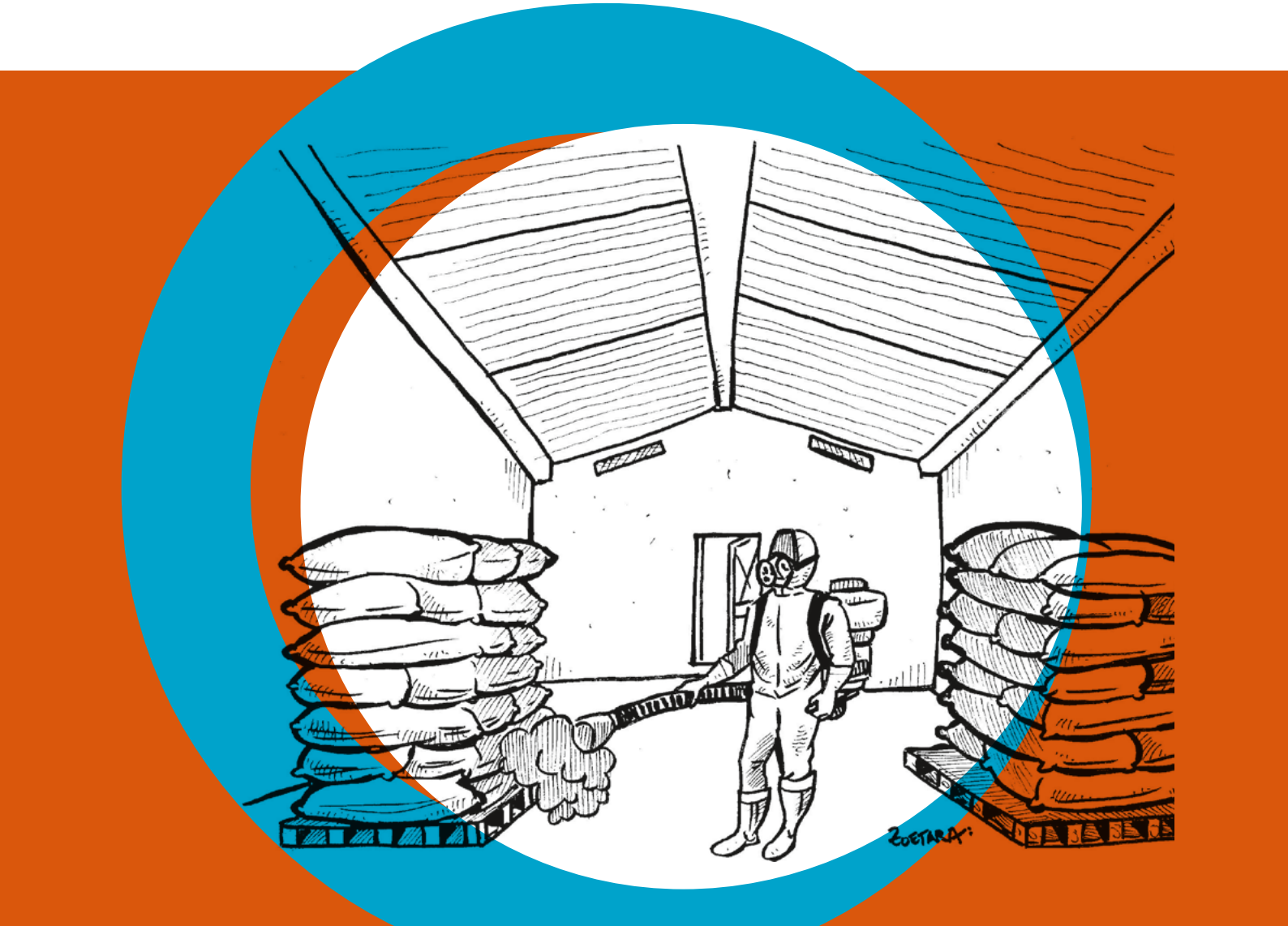


Table of Contents

A – Introduction

Storage is a decisive factor in farmers' organisations' marketing strategy for cereals and stockfeed. This subchapter describes the technical operations required to properly store grain and stockfeed and prevent any loss of quality. More specifically: (i) prepare the storehouse and its surroundings; (ii) check the stock prior to warehousing; (iii) warehouse the stock; and (iv) perform ongoing storehouse maintenance during storage.

Farmers and farmers' organisations (FOs) are still recording numerous losses, most of which can be attributed to poor storage practices and the use of inappropriate equipment, which leave the stored products vulnerable to mould, bacteria, insects and rodents. These losses can be greatly reduced, however, by employing suitable storage practices, which preserve a maximum of the grain and stockfeed's original qualities.

BOX 1
Definition of key terms

> Stock: all of the products (cereals, legumes, stockfeed, etc.) placed in storage for use at a later date.

> Storage: operation that consists in stocking products in special buildings for a given period and applying standards and practices that will ensure their proper conservation. These structures are purpose-designed to house and protect a large quantity of commodities.

> Grains: cereals, beans, oleaginous seeds, etc.

The main quality criteria for good grain storage are as follows: no rotten, perforated or empty grains; dockage content below 0.5%; no insects (live or dead) in the stored commodities; a sufficiently low moisture content; no abnormal smells or tastes in the stored products; levels of mycotoxins*, heavy metals and insecticide residues that are within the threshold values defined by the public health standards.

* SEE GLOSSARY

For stockfeed, the main storage quality criteria are the absence of contamination by plant pests*, chemical products or other harmful substances during their production, transport or warehousing. Products of animal origin that could be a source of the bovine spongiform encephalopathy (BSE) agent must not be used to directly feed ruminants or manufacture stockfeed for them.

* SEE GLOSSARY

B – What factors can deteriorate the quality of stored products?

Three types of factors - physical, chemical or biological - can affect the quality of stored grain or stockfeed.

Physical factors include various impurities, debris and damaged grains, or even grains of a different species to those stored. These foreign bodies can damage the grains and be a nuisance for the end consumer. They can be a source of contamination for stockfeed.

Chemical contamination is caused by the presence of heavy metals or residues of insecticide or disinfectants. It can cause serious health problems, in particular neurological problems.

There are many biological factors, the main ones being insects, rodents, moulds and bacteria.

- Rodents are among the most widespread pests* and cause heavy losses. They contaminate the stored produce with urine, faecal matter, hairs and pathogens. Since it is difficult if not impossible to remove rodents' soiling of the products, the infested batches must often be labelled as unfit for human or animal consumption. There are around 50 diseases that are can be transmitted to humans by rodents, including typhoid, paratyphoid, trichinosis, scabies, the plague and haemorrhagic fevers such as Ebola or Lassa fever.
- Contamination by mould fungi causes both quantitative and qualitative damage to stocks of grain. Moulds secrete mycotoxins (mainly aflatoxins)* which are indestructible and cause incurable diseases.
- Insect pests cause the most significant losses and can sometimes even cause the total loss of stored cereals.

* SEE GLOSSARY

* SEE GLOSSARY

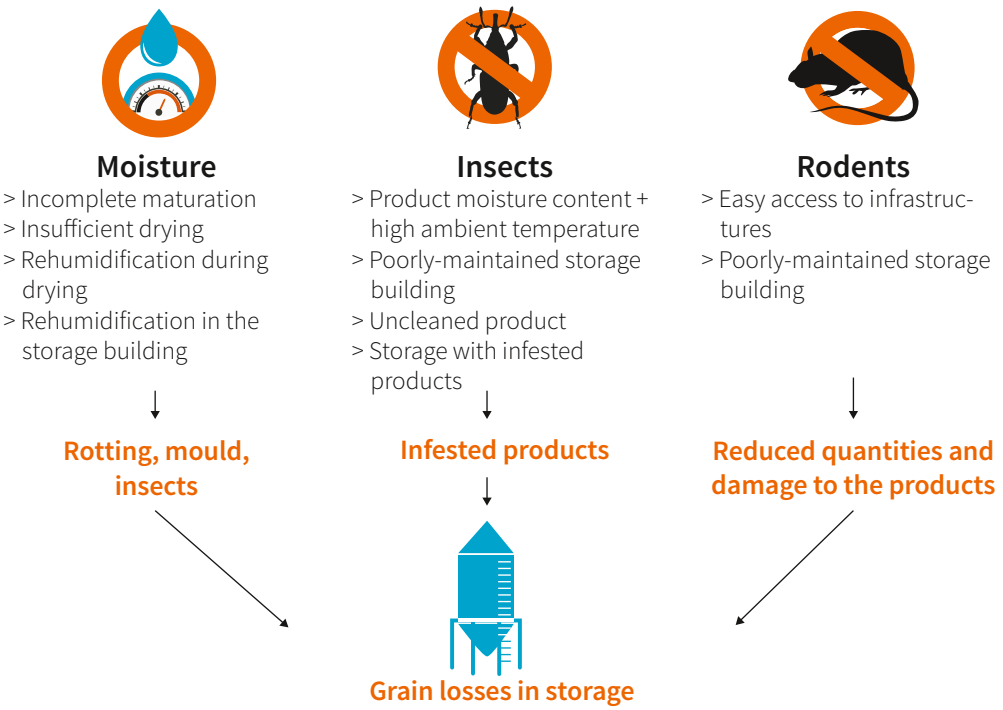


DIAGRAM 1
The effects of biological factors on the quality of stored produce

C – Preparing the storehouse and its surroundings prior to storage

C.1 Cleaning storage premises

The best preventive measure is to keep the storehouse and its surroundings clean.

Outside the storehouse, it is important to ensure that:

- the immediate vicinity of the buildings (a strip of land at least five metres wide around each building) is well maintained. This means weeding areas not covered in concrete, cleaning the receiving pits, cutting down the trees in the storehouse's immediate vicinity, and sweeping up and burning all waste. The frequency of this operation depends on the zone: it will have to be carried out once a year in the Sahel zone and several times a year in the humid tropics;
- there is good drainage;
- rodent traps have been set around storehouses holding foodstuffs and stockfeed. Check rodent traps regularly and follow the instructions for use.

Inside the storehouse, the following steps should be taken:

- before products are stored in the storehouse, the walls, the floor and the pallets should be properly cleaned and any cracks in the floor or the walls repaired;
- buildings in which grain and stockfeed are to be stored should be kept dry, well ventilated and sheltered from rain (see Chapter 5a);
- protect the premises from groundwater and moisture condensation;
- prevent rodents, birds or insects from entering buildings through windows or other air inlets by either keeping the windows and inlets closed or fitting them with netting or wire mesh screens;
- minimise areas in which birds could roost or nest, or which might shelter or attract vermin;
- close up holes that serve as a hiding place for insects or rodents;
- do not use bitumen or similar products to waterproof the building;
- clear any unnecessary items (empty bags, remnants of products, etc.) out of the interior;
- prepare all the work tools required to receive and manage stock;
- check that the weighing scales and other tools are in good working order and have been recently calibrated, etc.;
- spray the empty storehouse as a preventive pest-control measure; be sure to follow the instructions for using the treatment products (dosage, user protective measures, etc.).

SEE CHAPTER 5A

C.2 Equipping the storage premises to prevent contamination by chemical products

When setting up the premises, it is important to take steps to prevent any chemical contamination of the stored foodstuffs. The main provisions are as follows:

- store chemical products and pesticides in watertight facilities, well away from the main storage facilities. Pesticides, fertilisers, seed and substances deemed to be hazardous or unfit for consumption should be stored in premises that are completely separate from those used to store grain and stockfeed, to prevent any accidental mixing. In practice, however, storehouses intended for storing grain and stockfeed are also used to store cash crops (cotton, shea nuts and cashews) and agricultural inputs (seed, fertilisers and pesticides). As a result, inputs that are toxic for health are in fact stored in the same space as products intended for human or animal consumption. When this happens, it is important to take the following safety precautions: never store grain or stockfeed concurrently with fertilisers or pesticides; once the stocks of fertiliser and pesticide have been removed, it is important to thoroughly clean the buildings and impose a period of quarantine so that any toxic residues can be completely eliminated; label substances considered hazardous or unfit for consumption to avoid any confusion;
- do not place products used to eliminate rodents in areas used to store foodstuffs, and preferably use boxed bait;
- as far as possible, prevent vehicles that are not exclusively reserved for the storehouse (trucks and fork-lift trucks) from parking or driving in storage areas;
- prevent animals from entering the storehouses;
- separate animal feed from cereals and other foodstuffs intended for human consumption. Most stockfeed can be stored in the same building as cereals, providing there is some form of physical segregation. Animal protein meals and fishmeals, on the other hand, must be stored in specific storehouses.

D – Receiving stock for storage in the storehouse

Receiving stock typically entails two operations: conducting a technical inspection of the grain or stockfeed; entering the details of the stock in the receipt book.

D.1 Technical inspection of the commodities

SEE GLOSSARY

Every time the storehouse receives a delivery of products, an initial external olfactory inspection* (and visual) of the goods must be carried out and samples taken in order to analyse the moisture content and dockage content. For bulk grain consignments, the temperature must also be checked.

EXTERNAL INITIAL INSPECTION

Start by examining the condition of the bags, i.e. whether they have tears or holes, whether they have been wet or have lost a large part of their content. Damaged bags should be emptied then either stitched up again or replaced before being refilled. Next, examine the content of the bags[1]. If there is an obvious problem with the bags' content, such as a wet patch or live insects, or if the bag gives off floury dust or a strange smell, a more detailed inspection will have to be made. At this point, the delivery may be rejected for non-compliance without any need for sampling.

Some FOs systematically rebag cereals on receipt; this enables them to conduct a thorough inspection and ensures that the bags in which the products are stored are of good quality.

ENHANCED INSPECTION

SEE GLOSSARY

After the external inspection, take samples in order to explore the specifications of the products delivered, in particular the moisture content and the presence of mycotoxins*.

Moisture content is defined as the quantity of water contained in the grains, expressed as a percentage of the weight of the grain sample. The collection period is a decisive factor in managing grain's moisture content. By way of example, the table below shows the moisture content stipulated by the Regional Food Security Reserve (RFSR) for various cereals. These figures may vary from one organisation and from one country to another. When ambient temperatures are higher, the maximum value set for moisture contents should be lowered. To curb insect development, the moisture content should be capped at 9%.

Table 1 : RFSR-stipulated moisture content for grains

Rice	13 %
Maize	11 %
Sorghum	11 %
Millet	11 %

Source : RRSA

1 The duration of the quarantine varies from one product to another. In principle, it is mentioned on the label listing the product's specifications.

Moisture content can be determined by a variety of methods. The traditional methods are inexpensive and rely on the sound and the feel of the grain: with experience, it is possible to tell by biting or pinching the grain, or by the little clicking sound made when grain is poured, whether it is above or below the threshold values for healthy storage; the salt method: because salt absorbs the moisture in grain, it can be used to determine whether the moisture content is above or below 15%; the precipitation method is used to check cowpea's moisture content. Moisture metres are more expensive but yield more accurate measurements, more quickly.

Checks for mycotoxins consist in taking a representative sample from each trailer load received and analysing the samples. The RFSR has set up a system of onsite inspections to limit the risk of rejection on receipt, but an onsite inspection does not guarantee that the product will be accepted on delivery.

SAMPLING METHOD*

* SEE GLOSSARY

A representative sample is a small portion of a stock. As far as possible, it should have the same characteristics as the whole consignment from which it was taken. The results of analysing the sample must be roughly the same as if the whole consignment had been analysed.

To obtain a representative sample, the method used by the Economic Community of West African States (ECOWAS) consists in systematically taking one bag from every batch of 10 bags, regardless of the volume received. The method suggested by the World Food Programme (WFP) is as follows:

- when the quality of the grain is likely to vary widely because it comes from non-controlled sources (such as smallholders), a sample is taken from each bag. This applies to the FOs' collection points. In the collection point's receiving area, 25 grams of cereals are taken from each 50kg bag. The quality of the grain can be assessed from this sample. If the moisture content has to be checked with a moisture meter, broader samples will need to be taken;
- when the quality of the grain is likely to be relatively consistent, for example when quality control measures have already been applied at the beginning of the chain, there is no need to take samples from every bag. A representative sampling method will suffice in this case. The number of bags to be sampled depends on the size of the lot.

Table 2 : Number of bags to sample, according to the size of the lot

Total number of bags	Number of bags sampled
1 - 10	All of the bags
11 - 25	5 randomly-selected bags
26 - 50	7 randomly-selected bags
50 - 100	10 randomly-selected bags
Over 100	The approximate square root of the total number of bags in the lot received, selected at random. For 500 bags, 22 bags should be sampled; for 2,000 bags, the sample size is 45 bags.

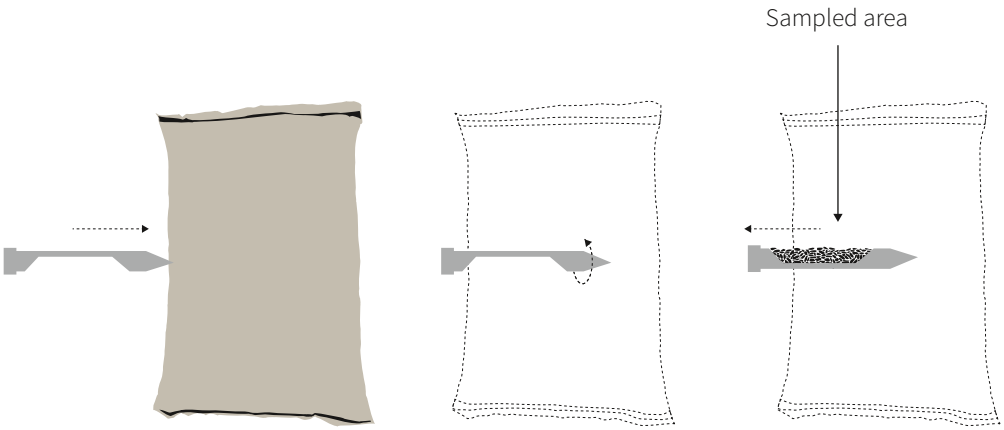
Source : WFP, 2011
NB : For bulk stock, the number of samples taken is calculated on the same principle as for bagged inventory.

Samples are taken at random, but care should be taken to ensure that the bags selected are not all situated in the same place. The recommended method is to select bags, on a proportional basis, from all sides of the consignment. A truly random selection can be made by referring to a table of random numbers, either on paper or generated by a computer program◆. It is also possible to draw numbers written on pieces of paper from a hat.

◆ SEE THE APPENDICE OF THIS CHAPTER

Sampling is performed with a probe. For proper sampling from the middle of the bag, the probe should be between 40 and 45 cm long. The correct way to take a sample with a probe is to insert the probe with the opening facing downwards. Insert the probe as far as possible, then rotate it 180° so that the slot opening is facing upwards. Use depth probes that are capable of taking samples at different levels. There should be at least three levels: high, middle and low.

DIAGRAM 2
Correct method for taking a sample with a probe



Source: WFP, 2011

D.2 Recording the data in the receipt book

Once the technical inspection of the stock has been completed, record the information in the receipt document. Identify each lot by recording details of: the name of the product; the type of packaging (i.e. bags of a certain capacity); the date of receipt and the quantity received.

Carefully fill out the delivery slip, including details of any anomalies observed (e.g. bags that are missing, damaged, incorrectly filled or infested), then sign it. If the stock is in poor condition, it should be rejected or treated before being stored in the storehouse.

D.3 Treating cereals prior to storage

Once the products have been inspected and prior to their actual storage, the products should be treated. This operation, which is not carried out on stockfeed, consists in the following tasks:

- pre-clean the produce by winnowing and hand sorting to eliminate any materials that might be carrying fungi or fungal spores;
- dry grain that still has a high moisture content. If the grain cannot be dried immediately, it should be aired by ventilation and then dried as soon as possible. To maintain the grain's nutritional quality and suitability for milling or other processing operations, it must not be overdried or dried at excessively high temperatures;
- perform a final pre-warehousing sorting operation to eliminate any foreign bodies;
- remove and treat any damaged bags.

E – Warehousing

The stock should be warehoused in an area that is well-ventilated and dry, with relative humidity kept at a suitable level. Start placing the products in storage when the ambient temperature is still low, i.e. early in the morning or late in the evening. Once the stock has been warehoused, it is important fill out the stock card. For each stack, lot or heap of cereals, the stock card should contain the following details: date warehoused, type of cereal, place of origin, general condition, and treatment performed. This makes it easier to properly track and manage stock.

E.1 Primary and secondary packaging

Grain must be packaged in recipients that keep it clean and protect its nutritional, technological and organoleptic qualities. All recipients, including secondary packaging, must be produced with materials that are safe and fit for purpose. They must not impart any toxic substance or undesirable smell or taste to the product. When the product is packaged in bags, these bags must be clean, robust and solidly stitched closed or sealed. Commonly-used containers in the region include polypropylene bags, jute bags, plastic bags (more specifically for cowpea) and ZeroFly storage bags. PICS bags, which consist of three separate layers, are increasingly used to store legumes.

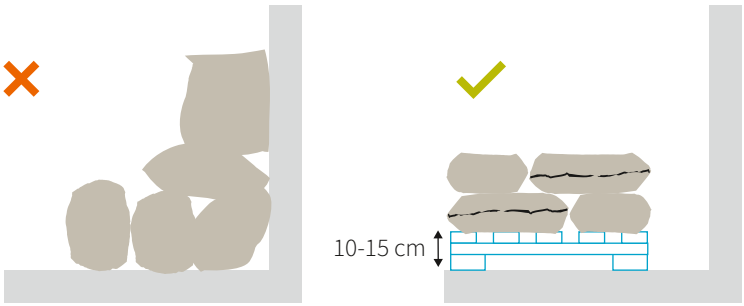
Polypropylene bags and jute bags are far more commonly used for stockfeed. Jute bags are more suitable for Sahel areas than coastal areas. Coastal countries are far more likely to use polypropylene bags.

E.2 Bag arrangement inside the storehouse

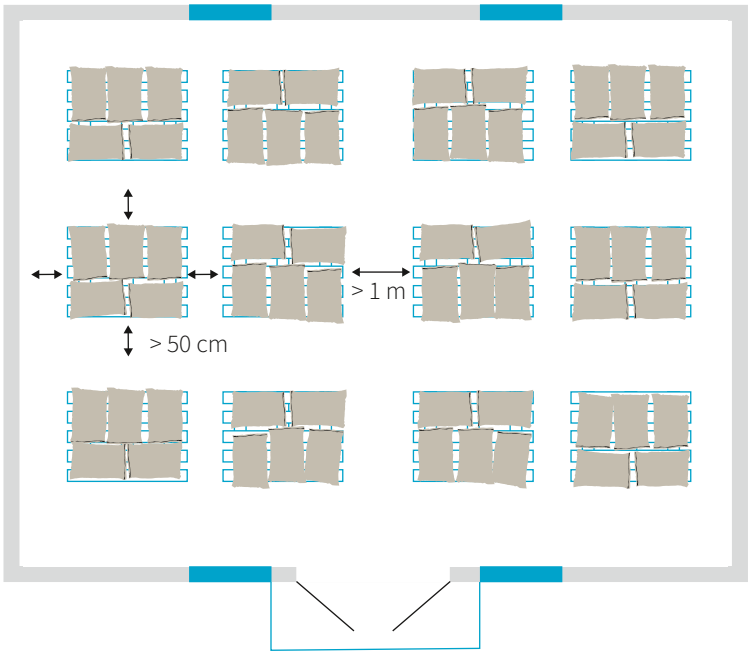
Bags must not be stored directly on the ground; they should be placed on perforated pallets at a height of 10 cm to 15 cm above floor level. Each pallet holds a stack of homogenous stock (rice, maize, cowpea, etc.), in bags with the same capacity (25kg, 50kg, etc.) and of the same type (jute, plastic, etc.). The area actually used corresponds to between 70% and 80% of the storehouse's total floor area. It is recommended practice not to mix new and old stock, but when it has to be done, the produce should be stored in separate lots and kept well apart.

An aisle at least 1 metre wide must be left between the stacks and the wall, and between each stack. This makes it easy to reach all of the stacks for inspection, cleaning, treating and destocking purposes.

DIAGRAM 3
Bag arrangement inside the storehouse



View from above



Opposite the main door, make a main aisle the same width as the door for easy movement of incoming or outgoing stock. There should be an aisle at least two metres wide between the main door of the storehouse and the stock. The aisles must not be obstructed with bags.

The following instructions are the recommended practice for stacking bags: do not build stacks around pillars or at the entrance to the storehouse; arrange bags in alternating layers: one layer lengthwise and the next layer crosswise (see diagram); the ears of the bags should always be placed towards the inside to facilitate handling and limit attacks. For maximum stability, do not place large bags on top of small bags.

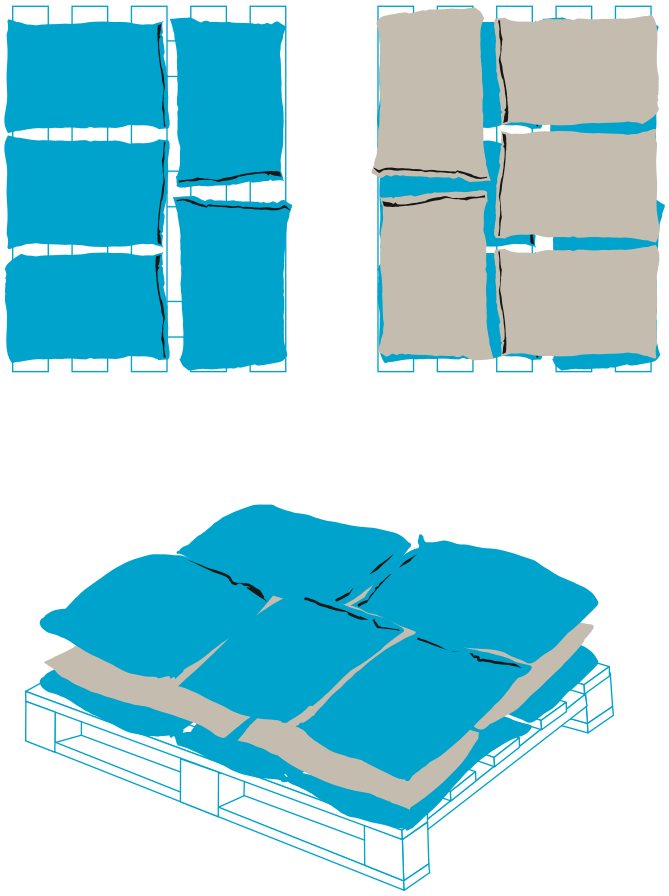


DIAGRAM 4
bag stacking techniques

Stack height depends on the size of the storehouse and in particular its height. Leave a space of at least 1 metre between the top of the stacks and the roof girder. Even if the storehouse dimensions allow for tall stacks, it is best not to go beyond 15 layers of bags for jute bags and 12 layers for polypropylene bags. Jute bags are less slippery, so can be used to build taller stacks. For large quantities of stock in plastic packaging, recommended practice is to stack bags in pyramid-shaped stacks.

Good stacking technique makes it easier to count and periodically check the bags, and clean and treat the storehouse. It also makes it more difficult for rodents to attack the bags. It helps protect the bags and their content and prevent falls, which can cause unfortunate accidents. It facilitates proper aeration of the storehouse and the stock.

F – The principle storehouse maintenance operations

F.1 Regular inspection of the stored products

It is important to inspect the storehouse at the beginning of each day. This means checking for signs of water leakage (traces of water on the floor or on top of the stacks of bags) and signs of damage to the bags (grain scattered underneath or around the pallets) caused by rodents or insects. It is handy to have a torch to inspect parts of the storehouse that are not well lit. It is also important to smell the bags to check for fermentation of the cereals, to spot bags with holes that need to be repaired, and to check the bags' "ears" and the spaces between bags.In the afternoon (the hottest time of the day), it is a good idea to listen to the noises in the storehouse to detect whether there are insects eating the grain. During these regular inspections, take samples to check the quality of the stored products.

BOX 2
Using the "Blue Box" to check the quality of stored products

The Blue Box is a testing kit for screening grain quality, launched by the World Food Programme to enable interested parties to assess the quality of their grain. The box contains grain sampling equipment, grading equipment, an aflatoxin testing kit and a power supply device. It contains a set of equipment for field quality testing and screening, with visual and written instructions for the user. However, the box is not fully available and accessible on the West African market.

F.2 Routine storehouse inspection

A routine inspection should be carried out on a daily basis to detect any damage (to the walls, roof, doors or windows) and make the necessary repairs.

The following tasks should also be carried out periodically:

- sweep the floor from the back of the storehouse towards the exit, being sure to thoroughly clean underneath the pallets (every evening). The sweepings should then be destroyed or buried;
- brush the walls, the beams, the inside corners of the roof, the doors and windows to remove cobwebs and dust (once a week);
- clear any unnecessary items out of the storehouse (at least once every three months).

G – What equipment and facilities are necessary in the storehouse?

For the stock to be properly stored and managed, the storehouse must be equipped with all the necessary equipment. The items of equipment listed in the table below are generally important for running a storehouse. However, depending on the type of storehouse and the storage objectives, some items of equipment may not be necessary. For example, the bag stitching machine and the electronic register will not be necessary for a small local cereal storehouse.

BOX 3
List of useful items of equipment for storehouse management

- Needles (for the bag stitching machine)
- Fumigation* sheets
- Sheet to cover the floor during re-bagging
- Sheets to cover or isolate stacks
- Broom for the floor
- Broom for the bags
- Platform scale
- Long-handled brush for walls and ceiling
- Lockers
- Cloth
- Fumigation tablets (phosphine gas is the only fumigant accepted by the WFP)
- Phosphine meter or a phosphine gas detector tube
- Ladder
- Fire extinguisher
- Thread (for the bag stitching machine)
- Moisture meter
- Emergency contact list
- Bag stitching machine
- Pallets (increasingly made of plastic)
- Shovel (to collect waste)
- Scoops for bagging grain
- Rat traps or rodenticides
- Spraying products
- Brown tape
- Ziplock bags/ plastic bags
- Soap
- Spare bags
- Buckets
- Sand bags
- Sampling probe
- Spot lights
- Sieves
- Thermometer
- Torch
- First aid kit

Source : WFP, 2011

* SEE GLOSSARY

H – Treating damaged products

H.1 Products spoiled by moisture

As soon as signs of moisture are observed, the following measures should be taken: empty the grain out onto an inclined sieve; sieve the grain to remove dust and damaged grain; manually sort the grain to finish off the sieving operation; dry the grain again; re-bag the grain in suitable bags and place the bags on pallets.

H.2 Insect-infested products

If the stock is infested with insects, it must be covered as soon as possible with a plastic sheet, securely held in place by weights on the floor to prevent cross-infestation of healthy grain by damaged grain.

SEE GLOSSARY

Next, establish whether pest control action such as fumigation*, is necessary. Phosphine, the gas used for fumigation, is potentially lethal for humans and fumigation must be carried out by a team led by a certified fumigator. To ensure that the fumigation is correctly performed by the team, it is important for the storehouse managers to be familiar with the recommended fumigation procedure. In RFSR storehouses, fumigation is carried out regularly every three months. For FOs, the frequency of fumigation is determined by the level of infestation.

BOX 4
What is fumigation?

Fumigation begins by placing a gas-tight sheet over each stack of bags in the storehouse. Solid tablets of aluminium phosphide are placed on trays underneath the pallets (or at least underneath the sheet): two tablets per tonne of grain. On contact with air, the tablets release a toxic gas that kills the insects and could also kill humans.

Fumigation must last at least five days. Stringent safety measures must be applied during this time: during the fumigation, the storehouse must be locked and no-one must be allowed to enter it; a warning sign is to be displayed on the storehouse door, warning people that fumigation is in process and that no-one must enter the building.

To ensure that the treatment is safe and effective, it is essential to call in a contractor. Fumigation can also be carried out by government technical departments.

Source: WFP, 2011

When the stored commodities are unfit for human or animal consumption in spite of preventive or curative treatments, they must be destroyed in accordance with the specific standards defined in each country.

H.3 Moulds and aflatoxins

Moulds (also called fungi) can cause grain to heat up and harden, then change colour. Moulds can also produce toxic chemical substances called mycotoxins*, which are potentially dangerous if consumed by humans or animals. The most dangerous mycotoxins are aflatoxins, which can be lethal.

* SEE GLOSSARY

Aflatoxins can be found in any grain that has been attacked by moulds, and they cannot be destroyed or eliminated by cooking or heating the grain. There are easy-to-use kits available to detect the presence of aflatoxins in stored grain. The easiest way for smallholder farmers to prevent mould growth is to dry the products to be stored until they reach a safe moisture content. However, the most effective mould prevention begins in the production phase, since the moulds that cause aflatoxins are already present in the soil when the seed is sown.

In institutional purchasing, the issue of harmonised standards and requirements with regard to acceptable aflatoxin levels varies from one institution to another. To avoid the risk of a shipment being rejected, farmers are advised to take the lowest acceptable aflatoxin level as their baseline.

H.4 Rodent control

Rodent control initiatives rely on a combination of several types of action: place netting across all air vents (and run regular checks); set traps (both inside the storehouse and in the immediate vicinity) and check them every day; if necessary, treat with raticides and other special-purpose products suitable for foodstuffs.

I – Key points

→ Large quantities of grain and stockfeed are lost through poor storage practices. It is important, therefore, to:

- keep the storehouse and its surroundings clean at all times;
- check the condition and moisture content of grain prior to storage;
- comply with the technical standards for storing cereals and stockfeed;
- take the necessary safety measures to prevent chemical contamination of the foodstuffs in storage;
- regularly inspect the inventory;
- undertake fumigation if the grain becomes infested by insects.

→ A thorough command and application of the appropriate storage techniques for cereals and stockfeed can:

- significantly lower the risks of food deficits during the lean season;
- counter production fluctuations;
- overcome occasional consumer shortages;
- more effectively manage inventory on the basis of market prices;
- boost farmers' resilience to natural hazards and their capacity to recover quickly after a shock.

J – Further reading

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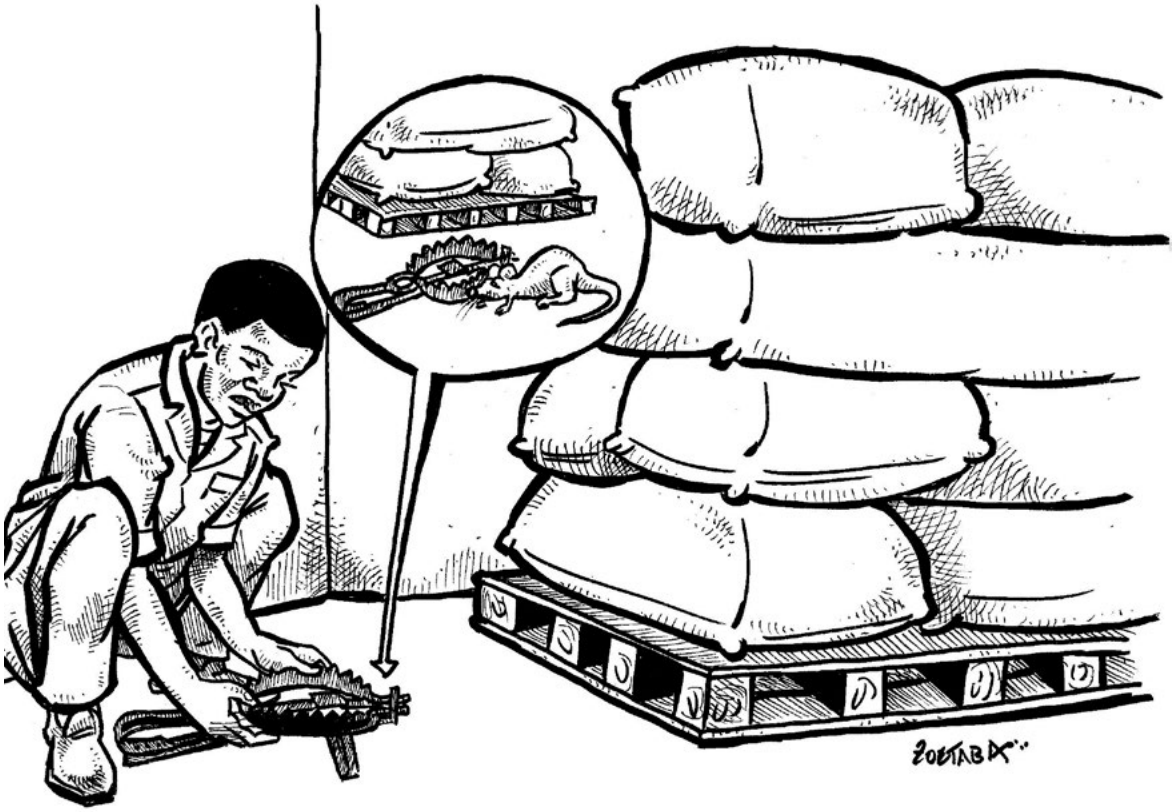

Appendix
Chapter **5B**

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CHAPTER 6

Information management by FOs operating local food reserves

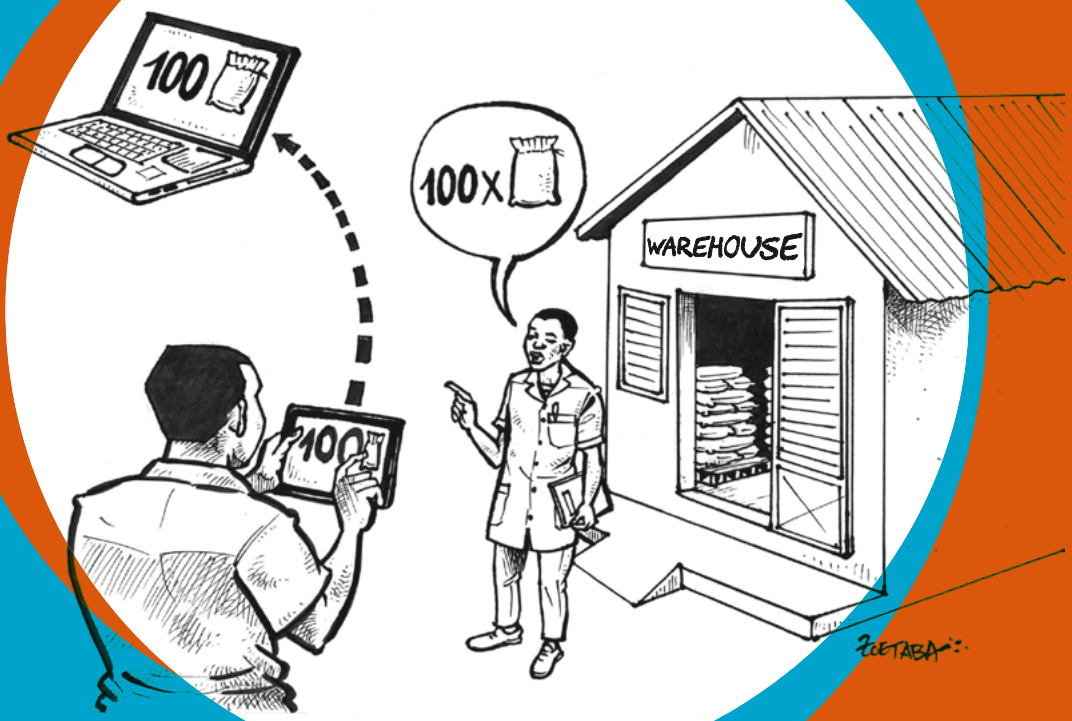


Table of Contents

A – Introduction

Information systems, understood as a combination of tools for collecting and processing information, are important for farmers' organisations (FOs) operating local food reserves. They allow FOs to:

1. Make decisions about the organisation's operation. It might be decisions to buy, store and sell grain in order to increase margins and thus the organisation's sustainability; or more strategic investment decisions, such as spending on repairs at storehouses in poor condition, using additional human resources to support groups seen to be in difficulty, or launching a literacy campaign for the less well-trained members of the management committee (MC);
2. Adapt to changes in the broader context in which the FO operates. The threat of a market downturn, cases of credit default and security issues are risks associated with storage activities. The knowledge provided by information systems allows FOs to anticipate problems before they get worse;
3. Coordinate more effectively with institutional stakeholders, which will enhance the organisation's viability. This may include the FOs' provision of cereals to national and regional reserves and initiatives by humanitarian stakeholders to prevent or mitigate food crises. In both cases, it is essential to have relevant, reliable information.

SEE CHAPTER 4C

SEE CHAPTER 8

Information management is a cyclical process of six principle stages designed to support the organisation's learning activities.

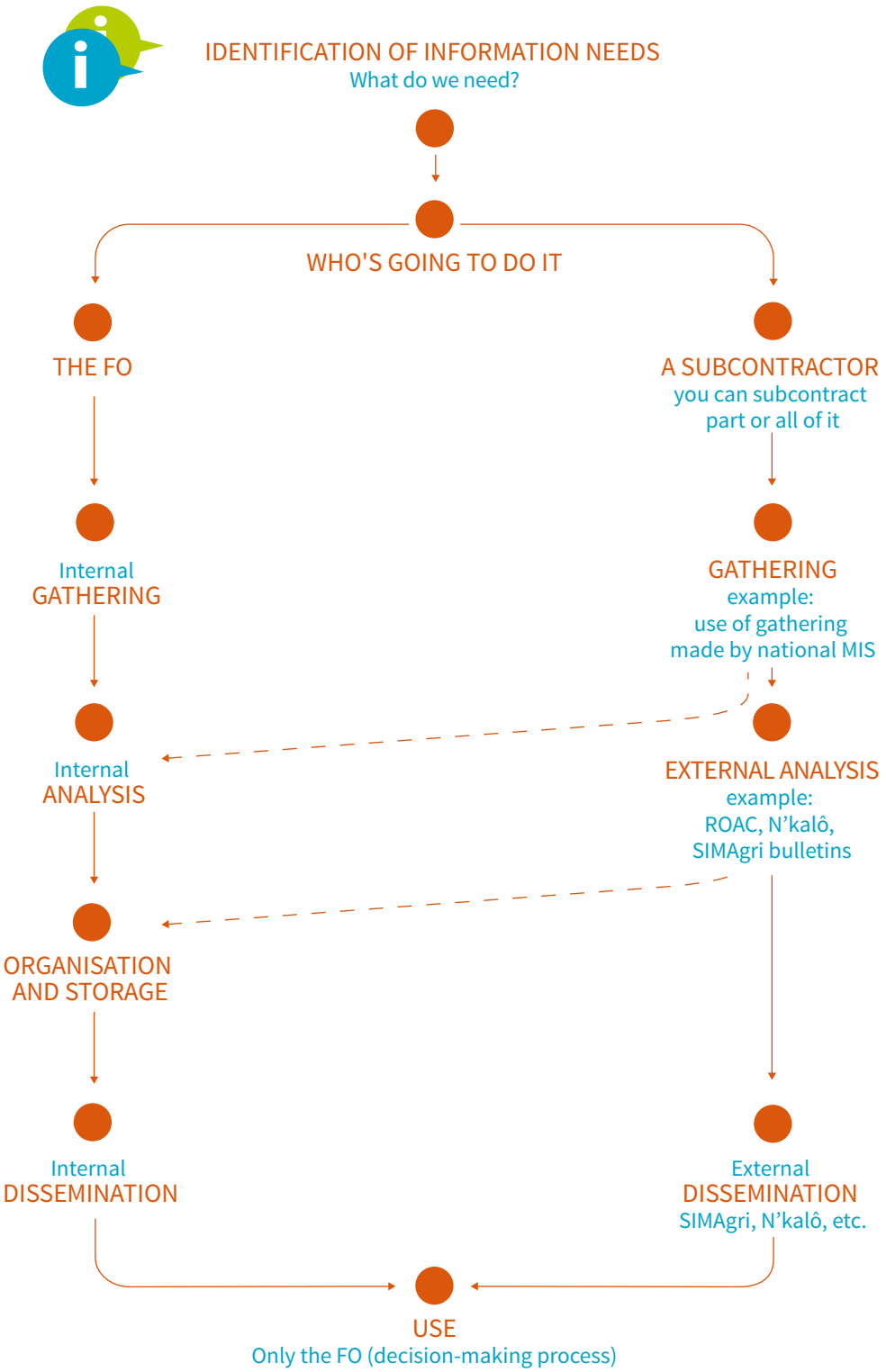


DIAGRAM 1
Information management cycle involving FOs operating local food reserves

This chapter is structured according to one main criterion: the internal or external nature of information management. Thus, sections B to G detail the different steps of the process of information management when they are carried out by the FO itself. Section H outlines the external information systems that FOs use; these are mainly market information systems (MIS).

B – Identification of an FO's information requirements

The identification of information requirements represents a key step in the implementation (and subsequent improvement) of an information system within an FO. It covers the three main types of data necessary for the proper functioning of FOs operating local food reserves: commercial information, internal activity-monitoring information and context information.

Data types	Objectives	Data examples
Commercial information	> Decision making for purchases and sales > Decision making about product characteristics	> Product prices on the markets > Available offering > Information about tender calls
Internal monitoring information	> Medium- and long-term activities planning and local food reserves network management	> Public selling prices > Availability of stored food > State of infrastructures > Management committees' capabilities > Literacy levels
Context information	> Assistance in calculating purchase prices and analysing the results of a crop season	> Meteorological data > Market days > Security situation

B.1 Commercial information

Commercial information is useful for all types of FOs operating local food reserves. This information is crucial for decision making about purchases and sales. Group marketing FOs need up-to-date information on market prices in order to determine the prices at which to buy and sell their products, generating sufficient margins while remaining competitive compared to other actors. Group supply FOs must also know the prices of products and the available offer at the time they supply their stores. This is also the case for livestock farming organisations, whose market information needs to cover both livestock feed and human food products.

In order to know the market situation, FOs have different sources of information at their disposal, such as bulletins published by national MISs or information shared on different platforms by private organisations such as the West African Grain Network (WAGN) (see below, Section 8 of this chapter). FOs that need more specific commercial information about content, frequency, etc. can develop their own MIS.

WHAT REASONS MIGHT PROMPT AN FO TO DEVELOP ITS OWN MIS?

In general, an FO operating local food reserves decides to develop its own MIS in order to have its own data, which it perceives as more reliable and more accurate. This also allows it to have access to information at a lower cost, thanks to the involvement of its members in the collection system.

The information provided by members on their stocks allows the FO to quickly get an accurate picture of the available stocks as soon as there is a market opportunity. In addition, internally-sourced price information is analysed and cross-referenced with information from other sources (traders, government, institutions, etc.) to determine the selling price (case of Union des sociétés coopératives pour la commercialisation des produits agricoles de la Boucle du Mouhoun - USCCPA-BM - in Burkina Faso). This system allows group marketing FOs to better organise sales, negotiate prices and almost instantly seize a market opportunity.

WHAT TYPES OF MIS ARE USED BY FOs?

The MISs managed by FOs are usually observatories on price trends. The diagram below shows the typical involvement of the different levels of a federation in the operation of a MIS.

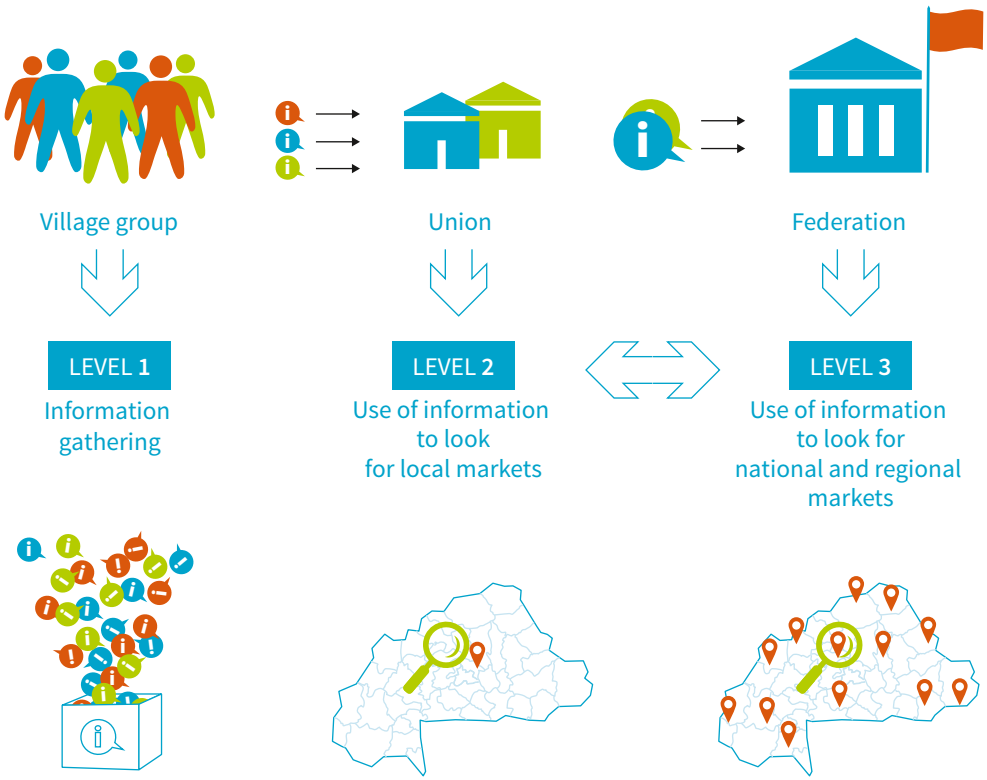


DIAGRAM 2
FOs' internal MIS: the roles of the different levels

Generally speaking, both public and private MISs offer reliable information, however, often the frequency of updating and the level of detail of this information is not sufficient for FOs. The FOs, in particular group marketing FOs, therefore need to complement what they receive from external MISs by developing their own commercial information systems.

B.2 Internal monitoring information

FOs often face planning and management issues with their network of local food reserves. They also face difficulties related to coordination with other lines of defence (national reserves, regional reserve, international food aid). For instance, the arrival of subsidised food aid in the locality of a local food reserve can lead to problems of poor sales threatening its sustainability. Faced with these kinds of difficulties, the FO needs to have reliable, frequently-updated and inexpensive information. This allows it to make sound decisions related to investments or solving problems or conflicts, hence the importance of internal monitoring information.

Internal monitoring information is a common need for all types of FOs operating local food reserves. This involves public selling prices and the availability of stored food, but also the state of infrastructure, stock levels, the capabilities of management committees, literacy levels, etc. It is essential, therefore, to enable the FO to make decisions that will improve the quality of infrastructure management, for instance. Having this information allows the union or federation to be better informed of what is happening in each storehouse, to improve the decision-making process in order to respond to problems encountered and to better plan activities in the medium and long term.

The information identified as necessary by some FOs operating local food reserves is related to:

- the characteristics of the storehouses: geolocation, building condition, equipment, etc.;
- the characteristics of MCs: composition, literacy level of the members, level of use of management tools by the members, etc.;
- the state of stored products: types of products, quantity, price, etc.;
- financial situation: money available, money spent, etc.;
- level of implementation of activities: type of activities, type of beneficiaries, number of beneficiaries, etc.

The information management process must take into account the specific needs and situation of women with regard to the use of local food reserves. In this respect, the minimum information to be collected is: the proportion of women among the members of MCs, their level of literacy, their responsibilities in the MC and data relating to food products specifically produced by women.

B.3 Context information

When we speak about context information, we are referring to wide-ranging information such as weather data or more localised information such as market days or the security situation in a given location. In many cases, it is information that is difficult to structure and changes rapidly, which makes it difficult to incorporate into a periodical survey.

This information is useful for all FOs using storage, as it can shed light on the outcome of the agricultural season or allow purchase prices to be calculated. It is especially important for the livestock farming organisations which provide information to travelling pastoralists during the transhumance.

BOX 1
Use of context information: STAMP experiment by Tassaght (Mali)

The STAMP Project (***Sustainable Technology Adaptation for Mali's Pastoralists***) aims to improve the resilience of pastoral livestock farmers affected by climate events through the access to and use of geo-satellite data. It covers the regions of Gao, Ménaka, Kidal, Timbuktu and Mopti in Mali and was implemented from 2015 to 2018. This project is the result of a public-private partnership involving the SNV (lead partner), Orange Mali, Action contre la Faim (ACF-E), the local non-governmental organisation (NGO) Tassaght, Hoefsloot Spatial Solutions (HSS) for satellite data and the Malian Ministries of Communication and Digital Economy on one hand, and Livestock and Fisheries on the other.

The collected data concerns biomass, water resources, cereal prices, feed and livestock prices, the stocks available in the feed bank (FB), and the sufficiency of the pasture for the herds. The collection of information is based on a combination of satellite data and field observations. In the field, collectors are trained and supported by Tassaght.

Access to the information service, named GARBAL, is provided through a call centre (managed by Orange Mali), where there are call centre agents trained in the subjects and able to answer in French and national languages. The call centre can process voice calls as well as USSD requests[1]. The rates for using the GARBAL service are CFAF 75 (US$ 0.12) per USSD request and CFAF 25 (US$ 0.04US) per call minute.

The GARBAL information service allows livestock farmers to plan the movements of their herds with better knowledge of the availability of water and forage resources. This provides enormous benefits to livestock farmers: before deciding to move, they can check which is the best itinerary to follow and thus save money, time and their livestock. However, the service encounters some difficulties, including insecurity, the low coverage of the mobile telephone network and the vast areas covered.

In addition to the information service about pastoral resources, a system to facilitate transactions between FBs, input suppliers and livestock farmers is also planned.

1 Unstructured Supplementary Service Data. This is a real-time connection mode between the telephone operator and the user that allows data to be sent and received.

C – Information collection

Once FOs have identified the information they need, they have to organise the data collection.

C.1 Commercial information collection

Data about market situations is intended for different levels of managers of the FOs. It allows FOs' managers to set the price for purchasing from farmers and the price for selling to buyers.

The collection of market information is less expensive and less complicated than internal monitoring information. In fact, collection and transmission are carried out by members. Moreover, only a few variables (price, availability) are collected in about ten locations, rather than large numbers of variables from hundreds of locations, as is the case in internal monitoring surveys.

BOX 2
The USCCPA-BM Market Information System (Burkina Faso)

Sometime before the harvest, in October-November, the USCCPA/BM farmers meet to agree and set a purchase price for members' products (maize, sorghum). The price determination takes into account several factors:

> The analysis of the market situation by USCCPA/BM, carried out by combining information from farm leaders in different Union collection zones, contact with potential traders and the study of grain surveys in the country and in neighbouring countries.

> The analysis of the results of USCCPA/BM's "family surveys", including:

→ "preliminary surveys" carried out in April-May to evaluate: (i) the existing stocks held by families, (ii) the expected volumes of production (estimated surface area planted, expected harvest yield), (iii) the volumes necessary for home consumption (evaluating the number of mouths to feed and family needs) and (iv) grain surpluses to sell (via the Union and outside);

→ "verification surveys" done close to harvest time and leading to the signing of a definitive individual commitment contract between each farmer and the Union. This contract applies to a given volume which will be sold at the price set by the Union. The contracts are legalised by the authorities; they provide for penalties in the case of non-compliance unless special circumstances apply; a "calamity" clause in the event of an exceptional disaster is also included.

> The analysis, with the members, of production costs and storage costs

Elected representatives and members come together to vote on the purchase price for members. A system of voting by secret ballot has been established, with a voting commission including elected representatives and employees, and another commission authorised to eliminate unrealistic votes which do not take into account the aforementioned analytical factors.

Source: *Discussion with Soumabéré Dioma* - Inter-réseaux, 2008

C.2 Collection of FOs' internal monitoring information

There exist several systems of data collection. In the case of internal monitoring information, surveys are the most common system, with variations depending on context, capabilities and the needs of FOs[2].

PAPER-BASED SURVEYS

A small organisation with no previous data on its network of local food reserves must begin with annual paper surveys as a minimum. This is the most common and easiest method to implement.

The data collected from paper surveys must be transferred into a digital system such as Microsoft Excel®, allowing it to be easily used. This means that the information on the forms must be manually entered into a computer.

DIGITAL SURVEYS

Up until recently, in order to understand the situation of their members, federations generally had to rely on paper and in-person surveys, because the questionnaires to be filled in were detailed and complex. The frequent collection of this data often turned out to be expensive (notably travelling expenses) because the storehouses are generally far from main roads.

Now digital tools exist that allow the survey forms to be filled in directly on smartphones or tablets. Smartphones or tablets replace paper, but this doesn't mean that surveys are always done from a distance. A digital survey can also be done face-to-face. Commonly, the FO carries out a face-to-face digital survey each year and updates it by telephone two or three times per year.

Digital surveys have several advantages:

- speed and efficiency: by using digital collection tools, the time required to carry out surveys and to process the data can be reduced. The time saved improves the ability to respond to problems encountered on the ground;
- reduced costs: while the adoption of digital tools entails initi al expenditures, they can also generate savings, notably by eliminating the step of digitisation, that is data transfer from paper to digital format (Excel for instance). The larger the sample size to be surveyed, the more significant the savings. For example, the use of digital survey tools by the federation of cereal banks in the Guéra region of Chad reduced the cost of surveys by 60% and the length of completion by two thirds (from three months to one month);
- quality of data: digital collection methods also allow the integration of data quality control tools, thus avoiding certain data entry errors. For example, one can integrate input criteria/conditions to verify that the entered value is between previously established maximum and minimum limits, or that a phone number is properly formatted, or predefine the (known) modalities for certain variables, such as preparing lists of village names in order to avoid data entry errors;
- frequency and exhaustiveness: the reduction in time and costs permits an increase in the number of villages visited and the number of people interviewed;
- visibility: depending on the choice of software, the data can be automatically represented in visual form. Certain software is also able to display information on a map and to perform geographical analysis of the collected information.

The box below presents the Viim Baore federation's experience of transitioning to the use of digital tools

2 What is shown here in terms of surveys relative to internal monitoring can also apply to surveys relating to commercialised data..

BOX 3
Internal information monitoring system of Viim Baore (Burkina Faso)

Viim Baore decided to introduce digital tools to lighten the load of its data collection and processing measures and to improve the decision-making process. An essential prerequisite was that the investment not be too high, in order for the use of digital tools to be sustainable. Additionally, the cooperative implemented this change while respecting its organisation and aiming to enhance existing processes and resources.

The system introduced is based on the use of smartphones and free software (KoBo Toolbox). Two types of surveys are carried out: an annual survey after the harvest and monthly surveys.

Annual on-site surveys: to conduct these surveys, the organisation simply replaced paper with smartphones, using the information collection software KoBo Collect. The surveys were carried out in person which made it possible to enter geographic coordinates, take photographs of the 'food security granaries (FSG)', or local food security reserves, and to update the telephone numbers of the members of the management committee. With GPS coordinates, information can be displayed on a map. The software saves completed questionnaires even without a 3G connection. As soon as the facilitator (survey administrator) reaches an area with 3G coverage, the telephone connects and the questionnaires are automatically uploaded to the platform.

Monthly remote monitoring surveys: carried out during the lean season, these are shorter surveys with the objective being to monitor availability, varieties stored and prices of products present in the FSGs and in the markets. The questionnaires can be completed in a couple of minutes, during a phone interview between the survey administrator and the contact person for each FSG.

During this data collection step, the FOs must ensure the involvement of women and the identification of their specific needs. Particular attention must be given to additional gender inequalities which can be created by the shift to digital tools. Indeed, gender inequalities increase when new practices are introduced without considering women. For example, in low- or middle-income countries, the proportion of women owning a mobile phone is 10% lower than that of men. A gender gap is also observed in terms of spending related to mobile phones. Women who own mobile phones spend on average 17% less than men on phone services[3].

The transition to digital tools for the monitoring of local food reserves represents an opportunity to reduce gender gaps in terms of access to information. In fact, this transition offers stakeholders an opportunity to integrate issues women face into the information system. In addition, as survey costs decrease, there is no longer an impediment (economic, at least) to widening the scope of the surveys to include topics of specific interest to women.

3 Source: https://www.gsma.com/mobilefordevelopment/resources/mobile-gender-gap-report-2019/

D – Analysis and interpretation of information

For a long time, data processing was done manually; but, with the advancement of new information technologies, this process is increasingly automated. The most important aspects of this step are, first, the verification of data, which determines the reliability of the information used to make decisions and, second, the analysis process that makes it possible to turn raw data into useful information.

D.1 Data verification

Data verification must be done at different points during the process of information management.

VERIFICATION AT THE TIME OF INFORMATION COLLECTION

When the FO is involved in the collection process, the survey administrators already work to verify the information given by the respondents. However, the survey administrators are themselves a source of errors when entering the data. With new digital tools, this type of error can be reduced thanks to features which allow monitoring of the input process. Nonetheless, there can always be errors and there is no system which is completely reliable. The FO must therefore include a verification step for completed questionnaires

VERIFICATION OF DATA DURING PROCESSING AND ANALYSIS

Once the data is in digital format (Excel spreadsheets, databases, etc.) and before it can be used, it must be double-checked. In addition, if the surveys are done on paper, errors made during the digitisation of the survey forms must be corrected, because transcription of paper forms into computer files is very repetitive work and can lead to errors. Also at this stage, it is also important to check the consistency of the data entered. To do so, there are data reconciliation techniques/operations, which rely primarily on the experience of the people in charge of database management.

If the FO uses external data, this must be cross-checked with other sources in order to ensure its reliability.

VERIFICATION BEFORE DISTRIBUTION

The information distributed is notably that related to markets. Before any distribution of this type of information, a verification must be completed. The supervisors of FOs' market information systems (MIS) are responsible for sampling the data (price, sale and purchase offers) sent by the survey administrators. They collaborate with a delegated director, who relies on their verification for the provisional validation of the data.

Group supply organisations must verify the information before using it internally or sharing it with humanitarian stakeholders. This also concerns livestock farming organisations, before the distribution of information to transhumant pastoralists.

D.2 Data analysis and visualisation

OBJECTIVES AND UTILITY OF DATA ANALYSIS

Data analysis consists of ordering, structuring and giving meaning to the mass of data collected. However, this process is not simply a mechanical application of a series of steps, it also includes an element of interpretation (or inference) of the data obtained. For instance:

- price data analysis allows the detection of trend changes during the year, such as a market downturn. It also makes it possible to identify price differences within a territory, giving indications of where it is profitable to sell and where it is appropriate to buy;
- the analysis of management information can reveal where there are storehouses that need to be fixed, which facilitators have more workload or which management committees have less capacity, which groups keep accounts, etc.;
- information analysis regarding livestock feed banks (LFBs) can highlight the locations of LFBs that still have stocks and thus guide the routes of the transhumant farmers.

DATA VISUALISATION TOOLS

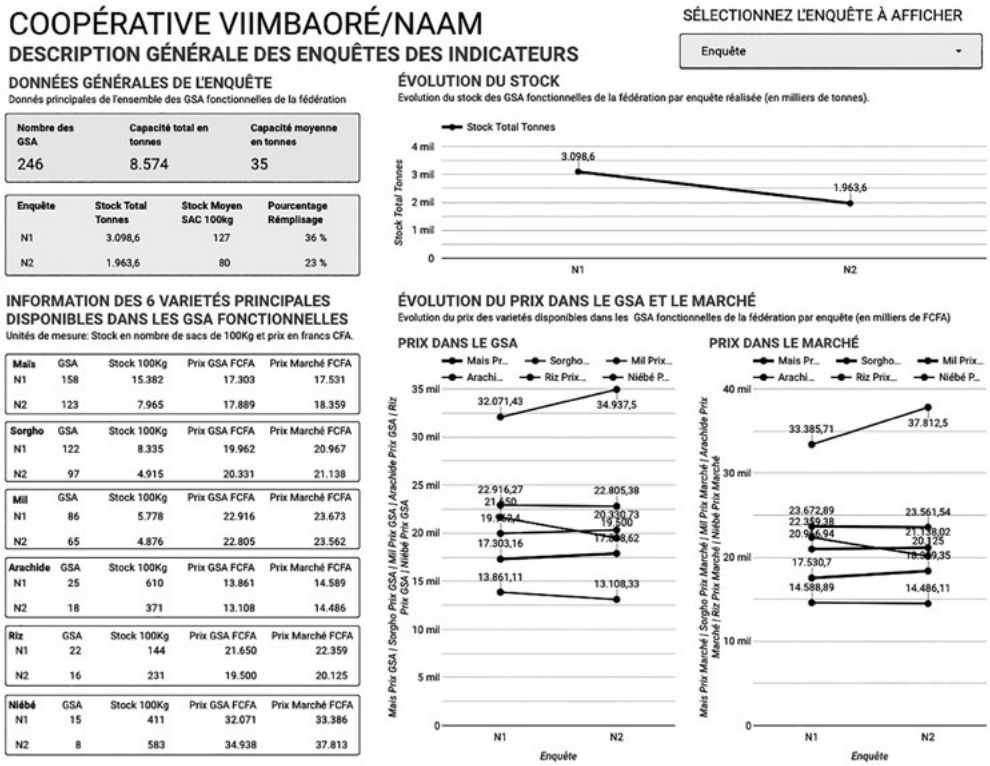
- **Business intelligence dashboards**

Business intelligence dashboards connect different data sources, updated periodically and populated with a set of tables and graphs. These dashboards are interactive, allowing users to define for themselves the types of graphs or tables that meet their needs. They are a very useful support to show trends in indicators and to track an organisation's processes in a very intuitive way.

While these dashboards are useful for data analysis, they are also a very effective tool for presenting data and creating interactive reports. Among the best and more well-known options, we can find Power BI ® and Google Data Studio ®.

BOX 4
Business Intelligence dashboard for information analysis of Viim Baore (Burkina Faso)

For information analysis, a Google Data Studio BI dashboard has been set up. During periodic meetings held with the Société Nationale de Gestion du Stock de Sécurité Alimentaire (SONAGESS), the BI dashboard was used to present the results of the surveys conducted.



COOPÉRATIVE VIIMBAORÉ/NAAM

DESCRIPTION GÉNÉRALE DES ENQUÊTES DES INDICATEURS

SÉLECTIONNEZ L'ENQUÊTE À AFFICHER

Enquête

DONNÉES GÉNÉRALES DE L'ENQUÊTE

Donnés principales de l'ensemble des GSA fonctionnelles de la fédération

Nombre des GSA	Capacité total en tonnes	Capacité moyenne en tonnes
246	8.574	35

Enquête	Stock Total Tonnes	Stock Moyen SAC 100kg	Pourcentage Rémplisage
N1	3.098,6	127	36 %
N2	1.963,6	80	23 %

ÉVOLUTION DU STOCK

Evolution du stock des GSA fonctionnelles de la fédération par enquête réalisée (en milliers de tonnes).

INFORMATION DES 6 VARIETÉS PRINCIPALES DISPONIBLES DANS LES GSA FONCTIONNELLES

Unités de mesure: Stock en nombre de sacs de 100Kg et prix en francs CFA.

Maïs	GSA	Stock 100Kg	Prix GSA FCFA	Prix Marché FCFA
N1	158	15.382	17.303	17.531
N2	123	7.965	17.889	18.359

Sorgho	GSA	Stock 100Kg	Prix GSA FCFA	Prix Marché FCFA
N1	122	8.335	19.962	20.967
N2	97	4.915	20.331	21.138

Mil	GSA	Stock 100Kg	Prix GSA FCFA	Prix Marché FCFA
N1	86	5.778	22.916	23.673
N2	65	4.876	22.805	23.562

Arachide	GSA	Stock 100Kg	Prix GSA FCFA	Prix Marché FCFA
N1	25	610	13.861	14.589
N2	18	371	13.108	14.486

Riz	GSA	Stock 100Kg	Prix GSA FCFA	Prix Marché FCFA
N1	22	144	21.650	22.359
N2	16	231	19.500	20.125

Niébé	GSA	Stock 100Kg	Prix GSA FCFA	Prix Marché FCFA
N1	15	411	32.071	33.386
N2	8	583	34.938	37.813

ÉVOLUTION DU PRIX DANS LE GSA ET LE MARCHÉ

Evolution du prix des variétés disponibles dans les GSA fonctionnelles de la fédération par enquête (en milliers de FCFA)

PRIX DANS LE GSA

PRIX DANS LE MARCHÉ

– Geographical information system (GIS)

A GIS is a specific software program that can be used to create interactive requests, to integrate, analyse and represent information associated with a territory, by linking databases with maps. By visualising the data on a map, the GIS provides an intuitive representation of the results, which facilitates the resolution of complex planning and management problems.

There are specific software programs to perform this type of analysis, such as ARCGIS or QGIS. However, some simpler platforms, such as Google Maps, can help to perform a simple analysis. KoBo Toolbox can be used to view survey data directly on a map, provided that GPS data was collected during the survey.

BOX 5
Map of the Federation of Cereal Banks of Guéra (Chad)

The information presented in this map was obtained by conducting digital surveys. Each point on the map represents a storehouse. Clicking on these points displays a picture of the warehouse, its storage capacity and its location. Other more complete information can be displayed. The website also stores data on the quality of construction, the composition of the management committee, the activities carried out, the quantity of stock available and any other element deemed necessary by the organisation responsible for stock management.

Digital tools also make it possible to create filters and interact with the data published in the map, which facilitates data analysis and use.

6

E – Organisation and storage of information

E.1 Where to store information?

Information is a sensitive asset, and its storage must be secure, while taking into account the applicable rules in each country.

The ways in which information is stored vary depending on the medium used. In the case of paper surveys, the survey sheets must be stored and secured in the FO's office. They must be retained for as long as the organisation needs them, but no longer.

If the collected data is in digital format, a variety of situations can arise:

- information is collected with the help of a digital tool (mobile phone software that does not save data on its own server) and the following steps of the cycle are processed on the FO's computers. In this case, once used, data can be saved on external hard drives, kept at the FO's head office;
- information is collected with a digital tool (example: KoBo Toolbox). To use the services provided by the tool, the data must be saved on the tool's associated server. It is also necessary to ensure that this tool is compliant with the country's data protection regulations, that it doesn't use data without the FO's authorisation and that it allows the deletion of data if necessary. A good practice consists of downloading all information on external hard drives, stored at the FO's head office;
- information is collected by a company that provides the service. In this case, information will be on a private company's server. It is necessary, therefore, to be vigilant about the same points as in the previous case. Backup copies of the data can be requested from the company and saved at the organisation's office.

E.2 Ensuring the protection of personal data

In the case where an FO sets up an information system, it must comply with the law on data protection in its country. This vigilance also concerns the tools chosen to conduct digital surveys.

Some of the collected data can be sensitive for the organisation or contain private personal information. For this reason, the information must be processed with caution and must always maintain confidentiality. Access to sensitive data must be properly controlled.

Insofar as some of the information collected by FOs is of interest to national and regional food security actors, a minimum commitment must be established between FOs and the other actors to ensure the protection of personal data.

F – Access to and distribution of information

F.1 Commercial information

FOs which produce their own commercial information usually do so for their own use. In general, this information is not distributed outside the organisation.

Regarding information produced outside FOs, information related specifically to markets is produced and disseminated by either public MISs, private MISs oriented toward free distribution (in the case of the WAGN MIS) or private MISs making information available by subscription (in the case of SIMAgri).

F.2 Management information

Group supply organisations collect a variety of information on their local food reserves network. A small portion of this information is distributed externally, with the majority being used internally to improve management and decision-making processes. Some information such as variation of stocks during the lean season can be shared (without being spread widely) with other local, national or regional organisations.

In some areas, rural populations who buy from local food reserve storehouses have expressed the wish to have access to information about price and food availability in FOs' storehouses in nearby villages. This would improve their access to food. The response to this request is being implemented as part of a project in Niger.

Organisations responsible for food security (market information systems, early warning systems, national reserves, government departments, etc.) are also potential users of management information collected by FOs operating local food reserves. Access to this information would allow them to improve their action plans while reducing the risk of negative impact on FOs. This sharing of information between FOs and humanitarian actors should be carried out during the agricultural lean season (between June and September); a monthly update is desirable.

F.3 Context information

This type of information is distributed mainly by pastoral FOs that manage livestock feed banks (LFBs). Compared to group supply systems, FOs managing LFBs must take into account the fact that pastoralists move and are therefore not necessarily in the same place as the feed reserves. Besides information relating to these reserves, transhumant pastoralists also need qualitative information on pastures and water availability, the state of practicable roads, presence or risk of conflict, etc.

The key period for the distribution of this information is the period of transhumance and the pastoral lean season, i.e. between February and June.

BOX 6
Distribution of information to pastoralists: the experience of CRUS (Burkina Faso)

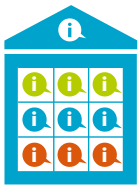
In Burkina Faso, the CRUS (Conseil Régional des Unions du Sahel), which is a member of the RBM (Billital Maroobe network), is tasked with conducting a project to monitor local feed reserves. The purpose of this pilot project is to provide information about feed availability to pastoralists travelling in the zones of intervention. It consists of three steps:

Information collection

> Production of information on the availability of stocks by managers

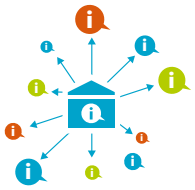
> Daily transmission by the storehouse manager of a message on the project platform to update available stocks

> Every ten days: phone call by an RBM national teams contact person for the transmission of qualitative information to the pastoralists (state of practicable roads, water and pasture availability, etc.)



Building databases

> Reception, verification and processing by RBM national teams (2 or 3 people) of data transmitted by the stocks manager



Sharing and distribution of information

> Access to data by pastoralists via a paid call, under an agreement with a telephone operator (Orange)

> Answering calls from call centre operators who provide information to pastoralists according to their specific needs

The system is not yet economically viable and the costs are being covered by an external donor. One possibility to ensure the long-term viability of the system would be to charge for access to the service: pastoralists wanting to access it would take out a subscription, and part of the revenue generated by the calls would be transferred to the FO by the telephone company.

If the service is high quality and the information enables pastoralists to keep their herd in good condition, the pastoralists will be willing to pay for it.

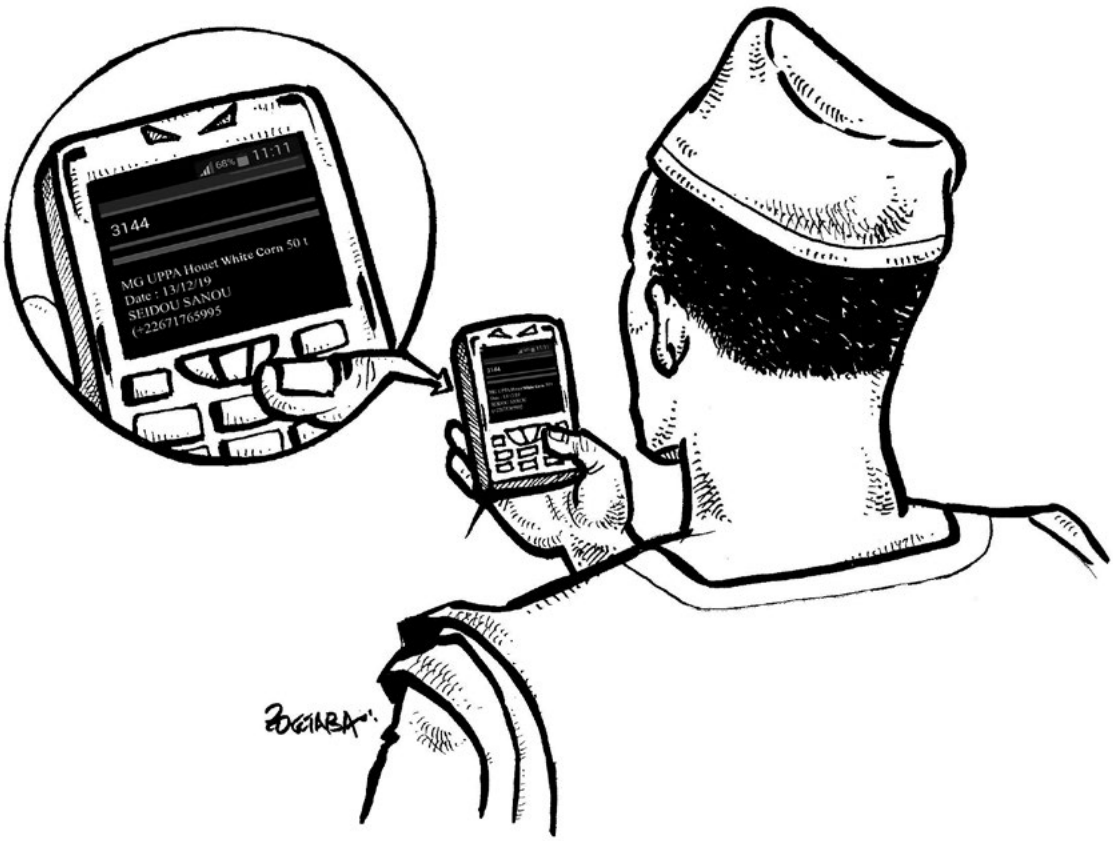
The pilot project consists of a system of information collection and sharing. However, the degree to which organisations use the information to improve feed bank management requires further development.

There are many mixed initiatives in which local food reserves contain food for both humans and livestock. Digital monitoring tools must therefore be sufficiently flexible to enable the collection of information that might interest farmers, transhumant pastoralists and agropastoralists.

F.4 Ensuring women's access to information

To improve women's access to information, the first step is to conduct surveys on women's activities. By analysing the results of these surveys, the FO can more precisely predict the specific needs of women and define the actions to take to meet them.

Organisations should be able to guarantee women's access to the information and resources they need to successfully carry out their activities. The promotion of women's local leadership strengthens families and communities by enabling women to engage in complementary activities that diversify incomes.



G – External (i.e. non-FO) market information systems

The commercial information that FOs need can be collected by external systems, such as public MISs. MISs can be classified according to the status (public or private) of their sponsor or according to the temporality of their data processing (real-time processing, retrospective analysis or prospective analysis).

Market information is intended for farmers, buyers, technical support staff, policy makers and food crisis prevention and management stakeholders. Its aim is to support decision making by regularly providing complete, high-quality information.

G.1 Types of MIS according to the system's sponsor

PUBLIC SYSTEMS

Developed by public authorities, these systems usually provide free information for their users. Their operation is financed by the state's budget, supplemented by the support (financial contributions, technical assistance, equipment, etc.) of technical and financial partners. There are both benefits and a few drawbacks to their use, as summarized below.

BENEFITS	DRAWBACKS
National geographical coverage in general	Some of the information produced may be unusable (outdated, insufficiently updated) for decision making
Availability of human resources, notably government staff, for central processing	Insufficient services available to stakeholders: generally limited to prices
Availability of public media (radio, television, print press, etc.) for the distribution of information, without fees or at very low costs	

The public information systems are federated around the West African Market Information System Network (RESIMAO ▶). Together, they provide information on 400 products on urban and rural agricultural markets.

▶ WWW.RESIMAO.NET

BOX 7
Niger's livestock MIS

The livestock market information system (livestock MIS) has existed since 1984. It collects, processes, and distributes information on the primary products and variables monitored in livestock markets, including in remote areas: prices of livestock, cereals, and bush straw bales.

The livestock MIS is composed of a central team of 11 managers, 9 regional inspectors and 85 survey administrators, of whom 78 are responsible for monitoring domestic markets and 7 for cross-border markets. With the inclusion of the 15 livestock markets at the initiative of the *Projet Régional d'Appui au Pastoralisme* (PRAPS), the number rises to 100 survey administrators. The system is run only by civil servants. Expenses are fully covered by the State (salaries, allowances, inspectors' supervision mission expenses, and survey administrator bonuses).

It develops a wide range of information products: i) radio bulletins broadcast every Wednesday on the Voix du Sahel radio station in French, Haousa, and Djerma, ii) weekly news flash, iii) monthly bulletin, iv) semi-annual report on the analysis of the livestock marketing campaign, v) analysis bulletin on the livestock marketing campaign, vi) specific bulletins (avian influenza, hides and skins), vii) the livestock MIS directory and viii) weather information.

HTTPS://SIMBNIGER.CILSNS.INT/

PRIVATE SYSTEMS

Many private MISs have been created in recent decades by non-governmental organisations (NGOs) and entrepreneurs, such as Manobi, Esoko or SIMAgri. The viability of these MISs is based on business models relying in particular on user subscriptions. In reality, sponsors struggle to find appropriate self-financing mechanisms. This is due to various factors, including: i) the lack of willingness to pay for certain services (prices for instance) that can be obtained through informal channels; ii) insufficient interest from some small producers with low marketable surpluses; iii) weak organisation of some FOs that don't sufficiently inform their members on the importance of information on agricultural markets

BOX 8
SIMAgri
(Burkina Faso)

HTTPS:
WWW.SIMAGRI.NET

In Burkina Faso, SIMAgri – developed by Afrique Verte – has been in operation since July 2013. Partnerships contracts have been signed with Burkina Faso interprofessions (shea and rice sectors) and within the framework of projects. SIMAgri now has 69 survey administrators who collect data on 69 markets, 11 supervisors and one platform administrator, all employees of Afrique Verte Burkina. The agricultural products that SIMAgri monitors are cereals, products from the livestock-meat industry, oil seeds and nuts, legumes and protein crops, non-wood products, tubers, and roots. The prices of certain production inputs are also monitored (fertilisers and seeds). Various types of information are provided, depending on the product: prices (retail and wholesale prices, and prices paid to the producers), product volumes (for sale, sold, stored, imported, and exported), points of sale, buyers' and sellers' contacts, and the geolocation of storehouses. The main distribution channels are: i) text messages via a short number (3144) obtained from the Autorité de Régulation des Communications Electroniques et des Postes (ARCEP), ii) the SIMAgri website. Complementary services are offered, such as training sessions (inventory management, use of the platform, analysis of prices on agricultural markets, etc.).

G.2 Types of MISs according to the temporality of analyses

REAL-TIME INFORMATION SYSTEMS

These second-generation MISs (2G MISs) have in common the combined use of the internet and mobile phones to collect and distribute information. They are often designated by the term 'MIS Web to SMS'. They are designed to distribute prices, offers to buy and sell, the availability and the location of stocks. Their main characteristic is the dissemination of information in real-time to actors. This is intended to facilitate quick decision making to take advantage of market opportunities. They are developed by NGOs or private companies. In both cases, subsidies are necessary to ensure the long-term viability of the systems. These are supplemented by their own revenues, generated by contracts for the use of the MISs by users or projects, training sessions in the use of the MIS and advertising.

INFORMATION SYSTEMS PERFORMING RETROSPECTIVE ANALYSES

This category of MIS generally consists of periodic bulletins that analyse information over a specific period by comparing it with the development observed over an earlier period: for instance, the average price over the past five years, for the previous crop year or for the previous month. This retrospective analysis, which is credible because it is fact-driven, can be used to characterise the current situation as either a drop, a stagnation or an increase in prices. This is important information because it helps predict market behaviour in the short term, thus providing valuable insights for decision making.

INFORMATION SYSTEMS PERFORMING PROSPECTIVE ANALYSIS

This type of MIS is represented in the Economic Community of West African States (ECOWAS) by N'kalô, the brand name of a technical and economic information and advisory service for private-sector actors in agricultural sectors in West Africa. Created in 2010, N'kalô covers around 15 African countries: Côte d'Ivoire, Burkina Faso, Mali, Benin, Togo, Niger, Nigeria, Ghana, Guinea-Bissau, Guinea Conakry, Chad, Senegal and Gambia. N'Kalô conducts prospective and retrospective analyses on the market prices of the following speculations: cashew, shea, sesame, gum arabic, cocoa, rubber and peanuts. To this end, it has a network of around 20 national and international analysts across different countries. The analysts each produce their own country bulletin and send some information out via text message. The analyst at headquarters merges all the country bulletins into a single N'kalô bulletin for each of the products monitored. It also provides content to cereal actors (maize, millet, sorghum, rice) through its collaboration with WAGN. These bulletins are distributed via email (paid subscription). Information is also distributed through other channels such as the 321 service (data is accessible by telephone in audio format and in several languages).

H – Key points

➔ All FOs should include in their action plans the implementation of an information management system, whether they are systems based on paper forms or digital tools. Sometimes, an information system can also be as simple as a WhatsApp group.

➔ The implementation of an information management system should first serve the effective functioning of the FO and then improve coordination between local, national and regional food security structures.

➔ Information management systems must adapt to FOs' needs and capacities to ensure they meet their objectives. However, there is no perfect information management system that can meet all the needs of all FOs.

➔ Organisations should conduct an internal analysis in order to identify priority areas in which the implementation of an information management system would be particularly useful. This analysis should allow them to determine which type of information system is the most suitable for the FO.

➔ Information management systems do not work from the first minute. It takes time for tools to be adapted to the realities of organisations and, in turn, for teams to learn how to use them. It is not a one-time investment but rather a continued one during a more or less long period. For this reason, the investment must be the minimum necessary to obtain an information management system that meets all the organisation's objectives.

➔ Regarding market and context information, FOs must decide whether they will obtain these by their own means, outsource this function or combine the two methods.

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Appendix
Chapter **6**

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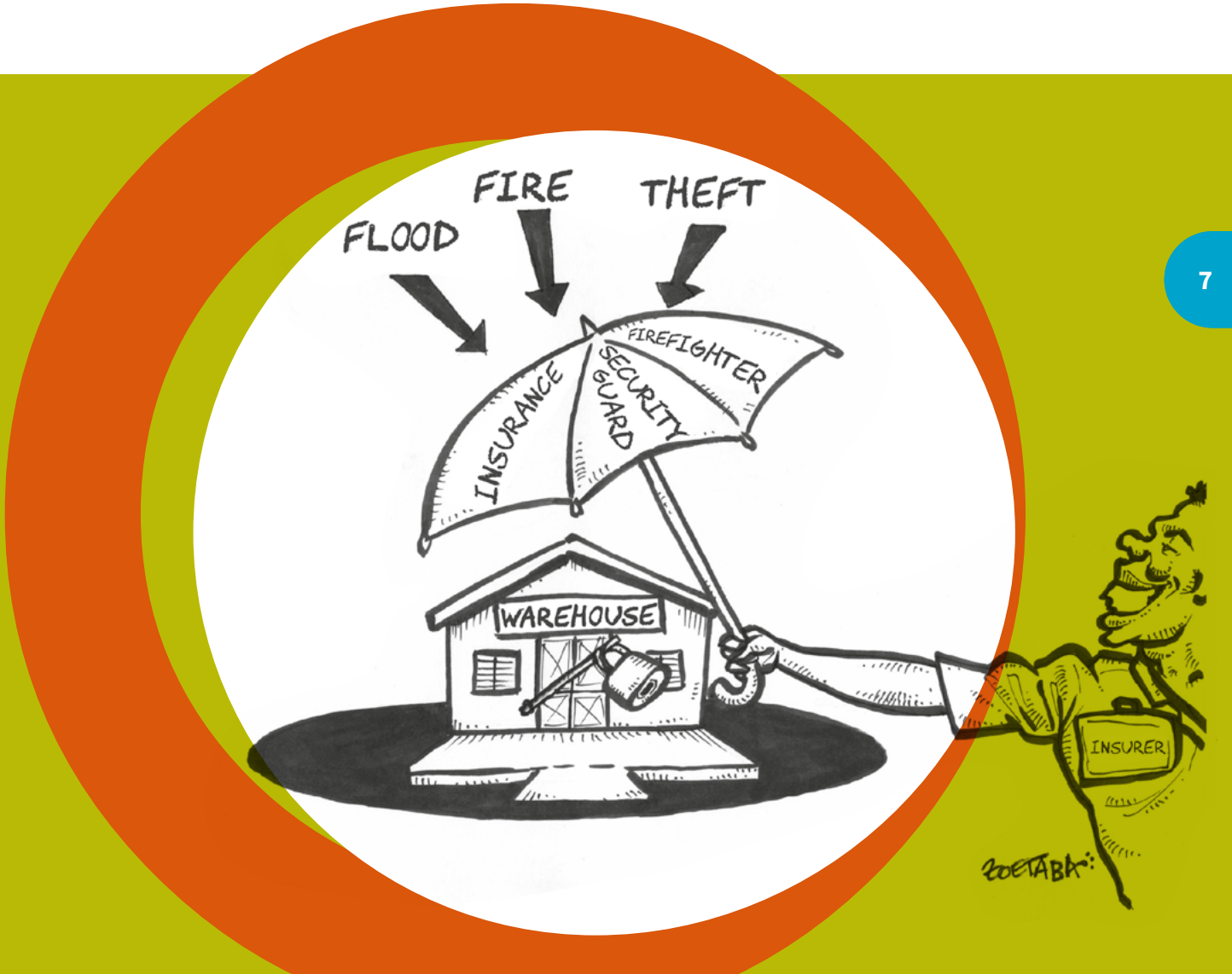
CHAPTER 7

Risk **management**



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A – Introduction

A risk is a situation that could result in economic losses or damage local food reserves. It might be a price reversal on the market, for example, or a fire in a storehouse containing 5,000 tonnes of commodities. One of the crucial questions that arises in such cases is: "Who is going to reimburse the farmers' organisation (FO), or its members, if the stock is not insured or if there is no mechanism to offset the losses?". These situations jeopardise the FO's survival.

This chapter focuses on the risks attaching to the storage and marketing of stored products (and in particular cereals and stockfeed). The risks attaching to production are not examined here, with the exception of climate risk. This is because climate risk can cause substantial harvest losses that, in themselves, have negative repercussions on the FO's revenue.

Since only a handful of organisations work on risk management, there are very few best practices recorded as yet. Accordingly, this chapter is based essentially on pilot schemes.

The most serious risks commonly affecting local food reserves are price risk; climate risk; risks to the food reserves from fire, theft, terrorist attacks and floods; transport-related risks; and risks to the proper conservation of commodities posed by predators, aflatoxins, etc.[•].

THESE RISKS ARE DEALT WITH IN CHAPTER 5

Because these risks affect organisations, not just individuals, the purpose here is to see how organisations can address these situations. In this case, we talk about pooling risk in mutualised systems such as insurance or provident funds, which allow members to collectively manage the risks they face.

B – Price risk

Price risk is the likelihood that a FO involved in storing local food reserves will buy grain at harvest time at a higher price than the lean-season selling price. When this happens, we talk about a market downturn*. and huge losses can be incurred.

* SEE GLOSSARY

B.1 What are the frequency and causes of price risk

It is hard to determine the frequency of market downturns because it always involves comparing prices at different times and possibly on different markets. In the Sahel countries, it is commonly believed that this type of risk can happen once every four years.

The diagram below[1] shows what happens during a market downturn.

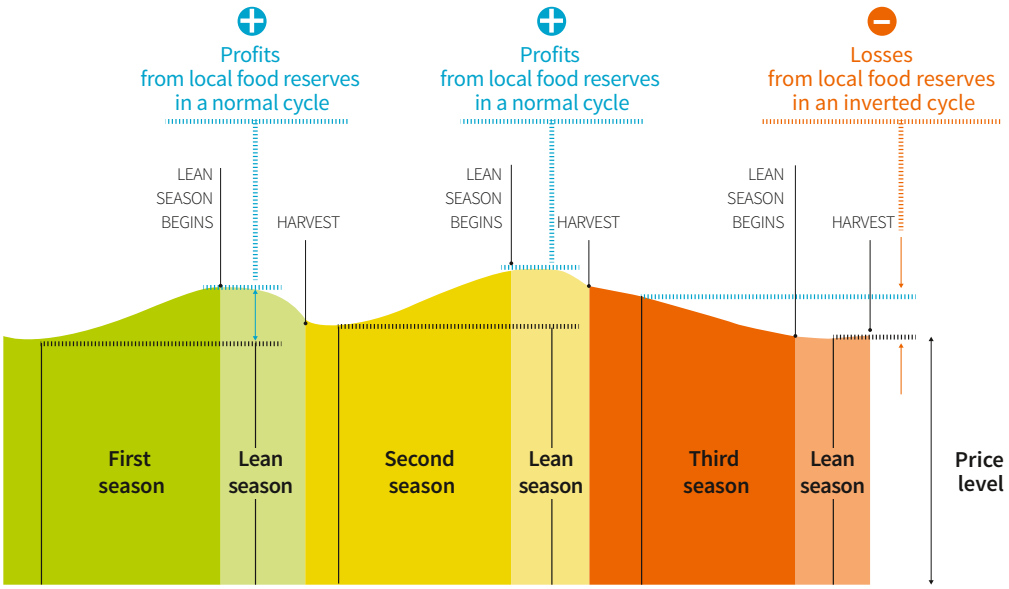

DIAGRAM 1 Diagram representing a market downturn

Source: Oxfam 2013.

Market downturns can result from atypical market operation, typically with end-of-season surpluses (and hence relatively low prices) or a drop in prices on international markets. This can result from situations such as:

- two good harvests in a row;
- higher than usual harvest prices early in the season because of forecasts of a poor harvest;
- plentiful reserves from the previous season, held by the private sector;
- government food security intervention is probably the commonest cause of price cycle inversions. To guarantee food security for the population (and in particular for vulnerable or underprivileged sectors of the population), the authorities try to curb lean-season price rises by organising sales at reduced prices or free food distributions•.

• SEE CHAPTER 8

1 This figure is explained in greater detail in the training module on managing price risk.

Market downturns can also be the result of commercial policy measures such as import subsidies or export bans, which have an impact on prices in each country. The bans that some countries imposed on cereal exports during the 2008 crisis created market imbalances. Measures such as these run contrary to the principle of the free movement of goods within the Economic Community of West African States (ECOWAS). Sometimes FOs are confronted with export rules that do not apply in the same way to all of the structures concerned (see Box 1 below).

BOX 1
Differing practices with regard to export licences: Togo in 2012

In 2012, ANSAT (Togo's national food security agency), supplied nearly 32,000 tonnes of maize to food-deficit countries in the sub-region, such as Niger, Burkina Faso, Mali and Liberia. At CFAF 226.02 per kilo, the total value of the maize came to CFAF 6.9 billion. That same year, ANSAT refused to allow the exportation of 3,000 tonnes by CPC (a cereal growers' umbrella organisation in Togo) and 1,500 tonnes by UROPC (the regional union of cereal growers' associations in the Savanes region) at a price of CFAF 170 per kilo, even though the local market offered only CFAF 160 per kilo, and despite the surplus of 81,495 tonnes of maize recorded for the 2011/2012 crop season and the availability of the export documents. Today, the problem has been solved because ANSAT gives the CPC guidance and support for negotiating export deals.

B.2 What are the best practices in price-risk management?

What are the best practices in price-risk management?

There are a number of mechanisms to manage price risk:

- setting a cautious purchase price is the most effective mechanism and all FOs would do well to adopt it;
- the buffer fund is a mechanism that has demonstrated its effectiveness for cotton (particularly in Burkina Faso) and, in theory, is a viable option for cereals;
- year-long sales are a proven option for reducing risk… but also profits;
- diversifying production: when a market downturn affects only cereal production, for example, the FO can manage to maintain its financial position if it has also been purchasing, storing and selling other products (such as cowpea or sesame);
- if, in spite of everything, the FO sustains losses because of a market downturn, it is essential to start negotiating with the banks and microfinance institutions to revise the loan repayment conditions. In some cases (such as when repayments need to be spread over several seasons), government backing may be necessary to facilitate the negotiation;
- contractual arrangements between the FO and a buyer (public institution or private operator) are another means of limiting price risk since, in principle, it assures the FO of selling at above-market prices.

The remainder of this section provides a more detailed description of the first three of these mechanisms..

SETTING A CAUTIOUS PURCHASE PRICE*

* SEE GLOSSARY

Before resorting to more complex procedures such as the buffer fund, each FO should be sure to set a cautious purchase price: the problems caused by market downturns are more acute when the FOs have paid an overly-high purchase price for their supplies. Setting a cautious purchase price will avoid two unfavourable situations:

- an overly high purchase price, which may result in the FO making losses;
- an overly low purchase price, which will not encourage farmers to sell to the FO; the farmers will then turn to other buyers ("side-selling").

BOX 2
Setting a cautious price: the USCCPA/BM (Burkina Faso)

Under its routine terms of purchase (ordinary collection), the USCCPA/BM (a union of cooperative societies selling agricultural products from the Boucle du Mouhoun region) pays in three instalments: an advance (the harvest price), a second instalment (the selling price) and potentially a bonus if there are additional profits.

Harvest price: For maize and sorghum, the harvest price (an advance) is set in October and applied from 1 November onwards. It is based on: a) the mean price of the new and previous harvests on the collection markets, plus 5% if the crop year is deemed to be good by both the technical departments and the union's managers. This approach is designed to prevent the harvest price from overtaking the market price when the selling price is set; b) the mean prices paid to farmers on the various markets in the region when collection begins; and c) the upcoming trends over the next few weeks. In practice, this is the price paid to members delivering products to the FO from November onwards, less any advance payments received and any other expenses (interest billed by the USCCPA/BM, file processing fees, annual membership fee, etc.).

Selling price: The selling price is generally set in the first half of the month of January (between the 3rd and the 15th of January), after consulting the chairpersons and main managers of the simplified cooperative societies (SCOOPS) and analysing the price outlook on the markets over the coming months. The selling price should be calculated to minimise the risks of a sales shortfall.

Profits or bonuses: At the end of the sales campaign, if the organisation has recorded positive results, the profits are divided up among the USCCPA/BM, the member cooperatives and the cooperative members who have delivered produce (those who chose the ordinary collection mechanism). The principle is 60% for the cooperative members, 20% for the SCOOPS and 20% for the USCCPA/BM. The share allocated to the farmers (cooperative members) is divided up among them pro rata with the quantities delivered by each.

In the event of unforeseeable circumstances, the USCCPA/BM board of administrators reserves the right to revise the harvest price downwards, or the selling price, if the current market prices risk compromising the organisation's future. The new prices apply from the date the decision was made.

SEE GLOSSARY

THE BUFFER FUND* OR STABILISATION FUND*

If setting a cautious purchase price is not sufficient, the local food reserve managers can use another mechanism: the buffer fund or stabilisation fund. The principle is to save money during the good years, then use that sum to offset the losses incurred during market downturn years.

The stabilisation fund enables the FO to limit its losses in cases where it has paid a price to producers which is too high in view of price trends during the rest of the marketing year (market downturn situation). It thus constitutes a mechanism for covering the PO against price risk while guaranteeing producers a remunerative purchase price.

For cereals, the mechanism currently exists only in a very simplified form. Within the USCCPA/BM, for example, a very small sum - CFAF 2 per kilo - is levied on each sale. This has allowed the organisation to build up a security fund, which, at end-2018, amounted to €22,000 (over CFAF 14 million).

Another possibility for consideration would be a variable (rather than fixed) deduction that adjusts in step with price changes. A system of this type exists for cotton in several West African countries (see Box 3), so we are talking about a hypothetical application to the cereal sector.

BOX 3
the UNPCB's cotton buffer fund (Burkina Faso)

The buffer fund set up by the UNPCB national cotton growers' union in Burkina Faso works with a floor price, a reference price and a ceiling price. These three prices form the "buffer tunnel" (see diagram 2).

The floor price, in this case, bears no relation to the FOs' traditional demand that the government guarantees a minimum purchasing price for grain. It refers instead to the concept of a cautious price mentioned earlier. Each cooperative sets its own floor price, calculated not to jeopardise its financial equilibrium.

When the UNPCB sets a floor price for cotton, the cooperative starts by proposing a reference price. The latter can be calculated on the last three years and projections for the next harvest, but a number of other methods are also possible. The floor price corresponds to 95% of the calculated reference price. The ceiling price is set at 101% of the reference price.

Once these different prices have been established, there are three possible scenarios when the cooperative sells the cotton

Scenario	Responses
Selling price higher than the floor price	The cooperative pays the difference in price to the member. The buffer fund does not take anything; it is not topped up.
Selling price higher than the ceiling price	Part of the surplus goes towards topping up the buffer fund; the remainder is used to top up the amount paid to the members and the cooperative.
Selling price lower than the floor price (less than 95% of the reference price)	The buffer fund uses previous savings to make up the deficit. It should be borne in mind that the cooperative has a deficit because it has already paid the producers the floor price (95% of the reference price), but it sold the commodities for a lower price.

DIAGRAM 2
How the cotton buffer fund operates in Burkina Faso[2]

Source: the authors, based on Bengaly (2018).

Can the floor price factor in the production costs?

For many years, the FOs have been asking for a floor price that covers the production costs. However, floor prices cannot factor in production costs without jeopardising FOs' finances. The floor price has to reflect the trend in market prices: if the latter are falling, the floor price may be lower than the production costs. This happens when there is a glut on the market.

What conditions would have to be met in order to manage a cereal buffer fund?

Three conditions must be met before stakeholders can consider setting up a buffer fund for local cereal reserves:

- the producers' unions (and not just the union federations) need to have an efficient accounting system and functional information systems (to manage membership data and inventory monitoring data) in each group. Disparate levels of development among unions belonging to the same federation are often an impediment to creating pooled tools, including buffer funds.
- a starter fund must be set up to cover the losses of the early years. For the cotton sector in Burkina Faso, donors and the government contributed €18 million (nearly CFAF 12 billion) to set up the starter fund. Today, for cereals, that has proven to be unrealistic.

2 This figure is explained in greater detail in the training module on managing price risk.

– a centralised sales system capable of managing the data on the quantities sold by each member and redistributing the profits. If the umbrella organisation does not have this information, it cannot manage the buffer fund.

How can the federations decide which system to install?

They can design a simple system, such as the USCCPA/BM's system, with a fixed deduction, or a more complex one, such as the UNPCB's system. It will depend, in part, on the unions' and groups' accounting skills.

AN ALTERNATIVE TO BUFFER FUNDS: YEAR-ROUND SALES

Year-round sales make it possible to lower the risk of a market downturn by selling commodities gradually rather than all at once during the lean season.

A 2013 Oxfam study estimated the economic performance a FO would have achieved if it had sold its stock gradually throughout the year[3]. It then compared this estimate with the FO's actual sales results from the beginning of the lean season. The result shows that gradual sales generate slightly lower margins, but present a lower risk level.

FOs generally have two methods for selling at any time of the year and thereby avoiding an excessive price risk:

– looking for good prices shortly after harvest: sometimes, at the beginning of harvest time, certain cereals sell for quite high prices. Accordingly, some FOs think it is better to sell straight away to lower the price risk, along with the risks of theft, parasite infestation or fire. In that case, the FO consults trustworthy traders, looking for the best prices and comparing them with the prices offered by institutional buyers;

– selling to the agrifood industry: these sales are generally covered by contractual relations between the FO and the manufacturer, who define the quantities and the price levels in advance (see box below).

3 This study is based on an analysis of millet and maize prices on 12 markets situated in Mali and in Niger during the period 1995-2011.

BOX 4
Examples of year-round sales by FOs

In Benin, the FUPRO (a federation of farmers' unions) uses a price indexation mechanism to share the risks of price fluctuations on the market between the FO and the buyer. This mechanism prevents farmers supplying another customer when the prices are higher than that initially negotiated; it also curbs the risk of the manufacturer turning to other sellers when the prices are low.

The mechanism is based on a minimum of trust between the two parties and is only activated by certain precise conditions. FUPRO and the buyer have set a trigger rate of a 15% variation in the negotiated price. For example, if the negotiated contract price is CFAF 100 per kilo, the mechanism will be triggered when the market price either rises above CFAF 115 or falls below CFAF 85. Moreover, FUPRO and the buyer have agreed on an indexation rate of 50% for both parties. In practice, if the market price is higher than that specified in the contract, the trigger rate and the indexation rate apply as follows:

> Agreed price in the contract: CFAF 100/kg

> Market price at the time of delivery: CFAF 125/kg

> Price difference: CFAF 25/kg

> Trigger rate: CFAF 115/kg

> Difference to which indexation is applied: CFAF 25/kg

> Indexation rate: 50%, applied to the CFAF 25 = CFAF 12.5

> The price actually paid to the farmer is CFAF 112.5 (instead of CFAF 125).

In a situation where market prices are high, the indexation mechanism works to the buyer's advantage. In a situation where market prices are low, the mechanism works to the seller's (i.e. the FO) advantage.

> In Togo, the CPC has negotiated with the Premium Food company to establish a price indexation system similar to the FUPRO's system.

> In Mali, Faso Jigi is trying to limit price risk by selling to different customers at different times of year. Accordingly, it sells to:

- → institutional buyers, one or two months after harvest;
- → retail consumers in the town of Ségou (pop. 150,000), which can represent 50-60 tonnes in all;
- → the partners working with Faso Jigi, mainly NGOs, which started with small quantities but now represent 150 tonnes per crop year;
- → traders who, in the lean season, when grain is scarce, contact Faso Jigi.

B.3 Choosing between a buffer fund and year-round sales

All FOs involved in storing local food reserves, should, without exception, start by setting a cautious purchase price. After that, they can, if so desired, develop a complementary method for managing price risk. They will be able to choose between several methods for managing price risk, each with its own advantages and drawbacks.

Price risk management method	⊖	⊕	Critical issue for the FO
Buffer fund	More risky system.	More profitable system, which evens out the results of good years and bad years.	Appropriate if the FO opts for a speculative strategy (lean-season sales), but the system is harder to manage.
Year-round sales	Less profitable system.	Less risky system, though not entirely risk-free.	FO must be vigilant about the level of profits distributed, in order to encourage member loyalty. Members seek to not only minimise the risk of sales slumps but also attain a sufficient level of individual profit for themselves.

Whatever the strategy adopted, it always implies either a form of saving (because part of the profits are set aside as reserves) or a form of forgoing profits in exchange for lower risk. It is important that members of the FO understand that these compromises are necessary in order to have a more resilient organisation. The FO's economic and social viability depends on its members' loyalty, among other things: members must work with the FO not only when prices are favourable but also when they are not.

C – Climate risk

In West Africa, production losses are often the result of weather conditions, pests or diseases. Climatic conditions such as droughts and floods are among the most frequent causes of the losses sustained at production level. If production drops as a result of bad weather conditions (drought, flood, patchy rainfall or a late start to the rainy season), the FO sees its financial results decline and may even record a loss because, even if the quantity of cereals sold tails off, the fixed costs remain the same (administrative staff, security staff, facility maintenance, etc.). As a result, FOs involved in storing local food reserves may incur financial losses because their turnover has diminished (smaller crop yields mean lower cereal sales) or because their members are unable to repay their loans. Missed loan repayments jeopardise a FO's financial viability and its credibility.

The climate risk to crop yields is not generally taken into account by the FOs and yet there are various tools available to guard against this risk, at least partially.

C.1 Individual insurance for farmers: benefits and drawbacks

FEW FARMERS TAKE OUT TRADITIONAL INSURANCE ("INDEMNITY INSURANCE")

Insurance is the most frequently-used tool for addressing climate risk, but exists only for individual policy holders. For FOs, farmers' individual insurance can guarantee loan repayment, especially when it is linked to a bank loan. In that case, the bank invoices the insurance premium that covers the risk of the farmer defaulting on the loan repayment.

Currently, very few farmers take out insurance contracts to protect themselves from climate risk. This situation can be attributed to a number of causes:

- risks such as drought or flooding affect several farmers at once (this is what is known as "covariant risk"), so when losses occur, they affect a large number of policy-holders at the same time. This strains insurers' financial equilibrium, unless they set very high insurance premiums (but in that case they will have even fewer clients);
- it is more difficult for insurers to manage large numbers of small contracts scattered over extensive geographical areas (because of high logistics costs);
- the farmers most likely to incur losses are also those most inclined to take out insurance (a phenomenon known as "adverse selection"). This mechanism increases the likelihood of deficits for insurers.
- lastly, it is possible that the losses were not caused by the drought (or some other climate damage), but by the farmer's failure to take adequate care. It some cases, it may even be that the losses declared did not actually happen (this is known as a "moral hazard"). The existence of this type of behaviour implies high loss-assessment costs for insurers, in particular in the conditions found in West Africa (long distances to travel, poor roads, scattered farms, etc.).

On the whole, for all of the reasons mentioned above, farmers' individual insurance to protect themselves from climate risk is very seldom cost-effective. In rich countries, this type of insurance only works when it is heavily subsidised by the government.

SEE GLOSSARY

SLOW DEVELOPMENT OF INDEX INSURANCE*

Given the constraints weighing on indemnity insurance, index insurance has been promoted in low-income countries. Index insurance is based on the measurement of weather variables (precipitation, temperature) that are highly correlated to crop yields and hence the losses that farmers can incur in the event of a climate shock. These variables are measured in ground-based weather stations or through remote sensing devices (satellites or drones).

The main advantage of index insurance is that the loss assessment costs are markedly lower than in "indemnity insurance" systems. However, there are a number of issues with index insurance that have curbed its development:

- in many cases, the damage measured by the index (which corresponds to the sum the insurance company intends to pay out) does not match the policy-holder's actual losses. This discrepancy might be to the policy-holder's advantage or disadvantage. Known as "basis risk", this is the main problem posed by index insurance;
- index insurance is complex by nature and it is difficult to explain to farmers how it works;
- index insurance covers only specific weather perils (almost always drought, but seldom flooding), so leaves farmers potentially exposed to other risks (other weather risks and other hazards such as, for example, insects, pests and diseases).

BOX 5
Some experiences of index insurance in West Africa

A survey of index insurance in West Africa shows that there are numerous pilot tests but few full-scale operational schemes. The two countries with the most highly-developed agricultural insurance, both "indemnity" and "index", are Senegal and Nigeria.

In Senegal, *Compagnie nationale d'assurance Agricole du Sénégal* (CNAAS) offers both traditional indemnity insurance and index insurance (based on an area yield index and a weather index). The government pays a subsidy equal to 50% of the amount of the insurance premium. In 2013, a working party on index insurance, the *Comité pour le Développement et la Promotion de l'Assurance Indicielle* (CDPAI), was set up in collaboration with the WFP. More recently, CNAAS formed a team of international partners and national technical institutes, which are working with CNAAS to build in-house capacity to design the indices.

In Nigeria, the agricultural insurance market was for many years dominated by a public company, the Nigerian Agricultural Insurance Corporation (NAIC). A few years ago, the market became more competitive when licences were granted to four private insurance companies, which have developed index insurance products. During the 2017 agricultural campaign, these four insurance companies covered 15,000 farmers. In 2018, NAIC announced its intention to issue licences for weather index-based insurance to another 15 companies, with a view to enabling millions of farming households to take out insurance cover over the next two to three years.

The other index-insurance trials under way in the region are either just emerging or on a minor scale:

> In Côte d'Ivoire, the *Global Index Insurance Facility (*GIIF) signed a two-year financing agreement with two local insurance companies, Atlantique Assurances Côte d'Ivoire (AACI) and AXA Côte d'Ivoire (AXA-CI), in August 2018. Between them, these two companies are expected to insure around 200,000 farmers by end-2020.

> In Ghana, the majority of in dex insurance is underwritten by the Ghana *Agricultural Insurance Pool* (GAIP), which was set up in 2011. The top three products offered by this

company are i) weather index insurance, ii) multi-risk insurance for poultry and iii) multi-risk harvest insurance. The first is intended for smallholders and the other two for commercial farmers. In 2016, 5,785 farmers had taken out one of these contracts. In three regions in the country's north, another insurance company, *WorldCover*, offers drought index insurance.

> In Benin, Burkina Faso and Mali, there have been small pilot schemes run by *Planet Guarantee*, but none of them have been scaled up.

C.2 Is meso-level insurance*, an avenue to explore?

One of the solutions put forward to address the issue of "basis risk" - i.e. the difficulty of individually identifying the farmers who actually incurred losses and will therefore receive benefits - is to delegate the task of identifying them to another organisation (a FO or the State).

If we take a sample of several thousand farmers and calculate the benefit solely on the index, inevitably some of the farmers will receive a benefit that is lower (or higher) than the losses actually incurred. However, on the scale of a geographic area (country, region, department, etc.), the index is a useful baseline for indicating the average extent of the losses.

For macro-insurance, the geographical unit considered is the country. African Risk Capacity (ARC), an African Union institution created in 2012, operates as follows: in the event of a climate shock (drought, flood, cyclone, etc.), a country that has paid an insurance premium to ARC receives a benefit, calculated using the same method as for index insurance. The public-sector institutions in the country concerned then divide up the benefit among the different areas and households in the countries affected by the climate shock in question. A number of West African countries are members of ARC[4]. It is also possible to consider a smaller geographic unit, such as the area covered by a FO engaged in storing local food reserves. This is known as meso-level insurance. In this case, the policy-holder is not the individual farmer but a "risk aggregator", such as a FO, a rural bank or a microfinance institution. It is this organisation that pays the insurance premium and which, in the event of a claim, distributes the benefits among its members[5]. It would be worthwhile testing meso-level insurance as an alternative to individual insurance, since the FO (or the microfinance institution - MFI) is well-placed to identify the producers who have incurred losses and assess the extent of these losses. A trial scheme of this sort should guarantee, in particular, that all of the producers - whether men or women, young or old - receive, in all fairness, the benefits due to them for the damages sustained.

4 In 2015, because of the drought, ARC paid out the sum of USD 26 million (over CFAF 15.5 billion) to Mauritania, Niger and Senegal. These three countries had paid a total of USD 8 million in insurance premiums to ARC.

5 When the risk aggregator is a financial institution, it receives the indemnities paid out by the insurance company; these are then used to offset missed repayments on the part of the farmers to whom it had granted a loan.

Table 1 : Summary of the types of climate risk insurance

Types of insurance	Who is insured?	How is the benefit calculated?	⊖	⊕
Indemnity insurance (i.e. traditional insurance)	The individual farmer	Calculated on the basis of the loss declared	> A large number of policy-holders are affected at the same time ("covariant risk"). > Difficult for insurers to manage scattered small contracts > The farmers who take out insurance cover are the ones most likely to incur losses (the "adverse selection" effect) > The losses are not caused by the weather event but by the farmer's lack of due care ("moral hazard")	
Index insurance	The individual farmer	Calculated (at individual level) on the basis of the weather variable (precipitations, temperatures) that directly affects the yields. The weather variable is measured (by a ground-based weather station, satellite or drone)	> Difference between the damage measured by the index and the actual loss incurred by the insured ("basis risk") > Difficulty of explaining to farmers how their insurance cover works > Does not cover all weather risks, nor the other types of hazards (such as insects, pests and diseases)	> The loss assessment costs are distinctly lower than in the "indemnity insurance" systems.
Meso-level insurance	The "risk aggregator": FO, rural bank or microfinance institution	Calculated for the area covered by the risk aggregator, depending on the weather variable that affected the yields. The risk aggregator identifies the farmers who have incurred losses and will receive benefits.		> The FO (or the MFI) is well-placed to identify the farmers who have incurred losses and the extent of their losses

D – Storage-related risks: theft, fire, flood and high winds[6]

To cover the various perils to which stored commodities are exposed, FOs have two options: take out insurance cover so that they receive compensation if the insured risk materialises and causes damage; take preventive action to reduce, as far as possible, the likelihood of the risk in question materialising. These two types of measures complement each other.

D.1 In which cases should farmers take out insurance to cover storage-related risks?

For FOs in the West African Economic and Monetary Union (WAEMU) area involved in warrantage, the business harmonisation law introduced by the *Organisation pour l'harmonisation en Afrique du droit des affaires* (OHADA) obliges them to insure the goods left as security: "the pledge document must contain, on pain of nullity, in addition to the particulars stipulated by Article 96, the name of the insurer that is insuring the pledged stocks against the risk of theft, fire and total or partial damage, along with the name of the establishment holding the stock pledge form".

These risks are not frequent, but if they happen, they could compromise the organisation's viability.

SEE ALSO CHAPTER **3B** WHICH DEALS WITH WARRANTAGE

For small organisations or isolated groups, it is not feasible to take out insurance cover for theft or fire, either because the cost is too high or because the insurers do not offer this type of cover.

D.2 What risk-prevention action should be taken

The action to be taken depends on the type of risk considered.

THEFT

With regard to the risks of theft, there is an important distinction between thefts of money and thefts of stored commodities.

For the risk of thefts of money, the only solution is for the FO to have a bank account and avoid keeping large sums in cash on the premises. Marketing FOs generally have bank accounts, but this is not always the case for small groups situated in food-deficit areas (only 19% of the Mooriben groups had a deposit account in 2015).

In the most remote rural areas, bank branches are at a considerable distance and there are few transport services. When a group is based a long way from a bank agency, there is generally a shop nearby where people can deposit or withdraw money with a mobile phone. If so, the FO can buy a mobile phone and use it to manage its bank account remotely. During the periods when the management committees (MC) are handling large sums of money (in particular when the stored produce is being sold), the recommended practice is to keep 10% in cash for conducting transactions and deposit the remainder in the bank account, using the mobile phone.

Regarding thefts of the commodities in storage (cereals, livestock feed, etc.), there are several types of theft:

6 As mentioned above, the means of averting the risks of a deterioration in the quality of stored produce (infestation by parasites, attacks by pests, etc.) are dealt with in Chapter 5b.

– in-kind loans made by the MC to certain members, but which are neither recorded nor repaid. Thefts of this type are not insurable. They are the result of poor management on the part of the MC. To prevent situations like this from occurring, FOs must set up a sound accounting system and make transparency and accountability to their members established practice•;

FOR MORE ON THIS SUBJECT SEE CHAPTER **2B**

– burglary. This type of theft is insurable, providing the FO had taken steps to secure the stock, such as locking doors and employing security staff, etc.;

– terrorist attacks. Terrorists, like a large section of the population, often know which storehouses are full at any particular time. Locating storehouses inside villages, rather than on the outskirts, helps reduce this type of risk, though without eliminating it altogether. This type of theft is not generally covered by insurance companies.

FIRES

Fires in storehouses are very often caused by faulty or poorly maintained electrical installations. To avoid them, it is important to perform regular maintenance on electrical installations and respect the recommended distances between the bags of grain and the walls•. It is also essential to have a fire extinguisher in the storehouse.

SEE THE DETAILED INSTRUCTIONS IN CHAPTER **5B**

Heat buildup in cereals can, in theory, create the right conditions for a fire to break out. This sort of accident is infrequent in storehouses that use bags, but can occur in large bulk silos. This is why it is important for storehouses to be well ventilated•.

SEE CHAPTER **5A**

If these preventive measures are taken, the fire risk is insurable.

FLOODS AND HIGH WINDS

Factoring these risks into storehouse design before it is built will avoid most of the flood risks. Storehouses that are raised above ground level are less subject to flood damage, but also more expensive to build and can only be built by large organisations. It is also important to choose building sites carefully and avoid areas subject to flooding.

Apart from floods, the most frequent cause of water damage is infiltration and damp. This risk mainly concerns small storehouses built of adobe bricks. They are more rainproof if they are built with higher-quality bricks•. In heavy flooding, though, there are few solutions for storehouses in adobe brick.

SEE CHAPTER **5A**

High winds can also damage the roofs of storehouses. The building's technical specifications should be such as to enable it to withstand the prevailing winds in the region•.

SEE CHAPTER **5A**

E – Transport-related risks

Transport is a key activity for local food reserve systems during both the supply stage and the marketing stage. During the marketing stage, the FOs often have to manage transport over relatively long distances, so the transport-related risks are high.

Four main types of transport risk can arise in transit: unforeseen supplementary costs as a result of highway extortion and harassment; the risk of the grain being contaminated for want of serviceable tarpaulins, or because the lorries are detained by bad weather or highway extortion and harassment; the risk of damage to the bags as a result of the poor state of the lorries; and, finally, thefts in transit.

The main initiatives to be taken to reduce or eliminate the various risks of contamination in transit concern the vehicles and the organisation of the transport.

As far as the vehicles are concerned, the main risk-mitigation measures are as follows:

- Make sure the vehicles chosen to transport the goods are in good condition: i) check the condition of the main mechanical parts; ii) carry out vehicle disinfection operations to eliminate the various pathogens that could contaminate the goods carried;
- Take the necessary steps to secure the goods and protect their quality; more specifically, it is essential to have tarpaulins in very good condition that have been disinfected and which cover the entire load. This will protect the goods carried from potential aflatoxin contamination.

As far as the organisation of the transport is concerned, the main risk-mitigation measures are as follows:

- Draw up contracts defining each stakeholder's obligations and hence their responsibilities in the event of incidents. For the FOs involved in local storage to become fully professional, they need to draw up contracts with their different partners, including the hauliers. In this area, the FOs umbrella organisations have a guidance and support role to play for their member grassroots FOs;
- Make the appropriate handling arrangements. More specifically: i) use suitable, hardwearing packaging for the transport, and ii) pack the bags carefully and in an orderly manner in the lorry (loading);
- Avoid or minimise highway extortion and harassment by giving the haulier all of the documents necessary for transporting the products, and labelling and marking the bags;
- If the products are intended for export, check that the haulier has Carte Brune insurance (www.cartebrune.org), which is mandatory for motorised land vehicles to travel within the ECOWAS area. This insurance covers civil liability, but not damage to the goods.

BOX 6
Transport legislation in OHADA member states

HTTP://WWW.OHADA.COM/ACTES-UNIFORMES/**891**/**912**/LETTRE-DE-VOITURE.HTML

OHADA regulates transport through the Uniform Act on Road Haulage Contracts, adopted on 22 March 2003.

The most important document is the consignment note: OHADA rules that, until proved otherwise, the consignment note attests the terms and conditions of road haulage and the haulier's handling of the goods. The consignment note is drawn up in one original and at least two copies. The original is given to the sender, one copy is kept by the haulier and another copy accompanies the goods to the destination. The precise content of the consignment note within the OHADA area is available .

F – Key points

➔ FOs involved in storing local food reserves contend with a variety of risks: price risk (and in particular the "market downturn" phenomenon), the climate hazards that are resulting in a decrease in the volumes produced by members, the risks of damage to or theft of the stored commodities, and the risks associated with transport. For each of these risks, it is essential that the FOs apply the preventive measures available to them. They can also take out insurance cover, if they can afford it. In some cases, such as warrantage, it is compulsory to insure the stock.

➔ Price risk can generate the most serious losses for the FOs involved in storing local food reserves. There is no fail-safe way of overcoming price risk. The FOs can try to attenuate the risk by setting a cautious purchase price, by saving money at the end of surplus crop years or by staggering sales from harvest time through to the lean season.

➔ Climate risk generates losses for FOs because of the non-repayment of loans for agricultural inputs and the fall in the FOs' revenues. Individual index insurance contracts are not a totally satisfactory means of hedging this risk and are not therefore very widely adopted in West Africa. "Meso-level" index insurance (on the scale of a FO) is a possible solution that would be worth testing as a learning experience.

➔ The risks of theft, fire and flooding can be substantially reduced when the FOs adopt suitable preventive measures (appropriate building specifications and security staff, for example). When a FO is involved in warrantage operations, it is compulsory (at least in OHADA Member States) to insure the stock against these risks.

➔ Transport represents major risks, which FOs can mitigate by taking various steps such as checking vehicle roadworthiness, drawing up a contract with the haulier and making sure the commodities are properly loaded in the vehicles.

G – Further reading

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Appendix
Chapter **7**

https://bit.ly/387L2AK

CHAPTER 8

Coordination between farmers' organisations operating local food reserves and **food crisis prevention and management stakeholders**

Table of Contents

A – Introduction

West African countries in general and those in the Sahel in particular are frequently hit by food crises. To prevent these crises or at least alleviate their impact, the national and regional authorities have brought in various measures such as free food distributions, sales of cereals or stockfeed at reduced prices, and cash transfers, etc.

Many stakeholders are involved in these food crisis prevention and mitigation initiatives, including national government bodies, local authorities, national and international non-governmental organisations (NGOs) and United Nations agencies. Coordinating all of these stakeholders on the ground is not always easy, and this dampens the effectiveness of the action taken. The Food Crisis Prevention and Management Charter (PREGEC Charter), which was drawn up in 1990 and revised in 2011 and 2017, recognises the need for some form of coordination among the humanitarian stakeholders (governments, international organisations and civil society organisations (CSO)).

Coordination issues also arise between humanitarian stakeholders (those involved in containing crises, including food crises) and the farmers' organisations (FOs) operating local reserves of grain or stockfeed. Often these FOs have little or no say in drawing up and implementing food crisis prevention and management initiatives. Yet they have a crucial role to play in local food security through the reserves they manage and their deep knowledge of the populations' needs.

Under the circumstances, it is essential to improve coordination between the FOs operating local food reserves and food crisis prevention and management stakeholders. Better coordination would make it possible to:

- limit the risks of poor sales for the FOs, since the support initiatives (such as subsidised sales and free food distributions) undertaken to manage food crises interfere with the FOs' marketing strategies. This interference generally causes the organisations' sales to slump and jeopardises their long-term viability. Stakeholders in humanitarian schemes (both government and non-governmental) should, therefore, negotiate agreements with the FOs to either minimise the detrimental effects on the latter or provide compensation, while at the same time ensuring that the aid does indeed reach the target populations;
- make aid distribution more targeted and more effective: the FOs involved in storing local food reserves (group supply FOs, livestock feed banks – LFBs – and marketing FOs) can help make food assistance and social protection more effective by leveraging their proximity to the households and their ability to reach the beneficiaries;
- share responsibility for food security: local food reserves help guarantee the populations' food security in both emergencies and situations of chronic vulnerability. However, the FOs involved in storing food reserves cannot, single-handedly, achieve the objective of food security. Food security cannot be secured solely by contributions from the local food reserve members, since many of them are in poverty themselves. Accordingly, the government continues to play a vital role in guaranteeing food security.

B – With which stakeholders should FOs enter into contractual arrangements to improve food crisis prevention and management?

Four categories of humanitarian stakeholders can enter into contracts with FOs operating local food reserve:

- public-sector stakeholders: there are two main possibilities in the region (though the situation can vary from one country to another). In the Sahel countries, there are schemes specifically tasked with preventing and managing food crises. The coastal countries, on the other hand, have schemes geared towards addressing various circumstantial crises, and which are generally coordinated by the Ministry of the Interior or emergency preparedness structures;
- local authorities, which, in certain countries such as Mali, play a (more or less effective) role in preventing and managing food crises through local contingency plans;
- civil society organisations (national and international non-governmental organisations - NGOs), which support or directly implement food crisis prevention or mitigation initiatives;
- technical and financial partners (bilateral and multilateral donors, United Nations organisations, etc.): generally, they play a support role for initiatives run by the two above-mentioned categories of stakeholder. In Burkina Faso, for example, the World Bank supports the «Burkin-Naong-Sa Ya» social safety net project run by public-sector stakeholders. In Niger, the European Union works through ECHO[1] to support partner NGOs (Oxfam, Save the Children, ACF, Concern and SOS Sahel International) belonging to the Alliance SA food security alliance for unconditional cash transfer initiatives aimed at reducing households' seasonal vulnerability.

1 The Directorate-General for European Civil Protection and Humanitarian Aid Operations (ECHO) is the European Commission's department for overseas humanitarian aid and civil protection.

C – How should the coordination between local food reserve organisations and the other food security stakeholders be organised?

C.1 Coordinate action to avoid a slump in sales

To avoid the risks of a sales slump undermining the sustainability of FOs operating local food reserves, humanitarian stakeholders can:

- buy back the FOs' remaining reserves and distribute them as food assistance. The example presented in Box 1 below shows how this works in practice;
- apply subsidies to offset the difference between the cost price (for the FO) of the stored commodities (cereals, stockfeed, etc.) and the price charged when they are sold at reduced prices;
- help replenish the stock if the FO has sustained substantial losses because humanitarian stakeholders' operations have prompted a slump in sales.

BOX 1
Examples of coordination between the FOs operating local food reserves and the other food security stakeholders

Viim Baore (Burkina Faso): To maintain a culture of responsible, sustainable management, the Viim Baore network's food security granaries (FSG) do not carry out free distributions. To avoid the problem of food aid operations causing sales slumps, Viim Baore concluded agreements between 2017 and 2019 under which the World Food Programme (WFP) was able to buy back the remaining food reserves in the local storehouses in Djibo, Arbinda (in the Soum province, Sahel region) and Barga (in the Yatenga province, Nord region). The FSG then organised the aid distribution under the supervision of a WFP officer. The vouchers distributed to the population during the operation could be exchanged for cereals in the local food reserves of the regions involved. The WFP then paid Viim Baore the cash value of all of the vouchers exchanged. Although this experience with the WFP was, on the whole, successful, the local food reserves had trouble clearing the reserves that had not been distributed for free, and this resulted in financial losses.

CRUS (Burkina Faso): In 2014 and 2018, the CRUS (*Conseil régional des unions du Sahel*), a FO operating in Djibo (in the north of Burkina Faso), concluded agreements with the government to distribute livestock feed at subsidised prices under the same conditions as the livestock feed traders. The government makes up the difference between the price at which the FOs bought the livestock feed and the subsidised sales price. The advantage of this arrangement is that the FOs can distribute the livestock feed in conflict zones where the government cannot operate.

C.2 Work through the FOs to more effectively target and reach vulnerable populations

The FOs involved in storing grain or feed can be of very real assistance in more effectively targeting welfare operations to address chronic food insecurity. Because these FOs know exactly which members of the communities are vulnerable, humanitarian aid and welfare providers can draw on their capacity to accurately identify the aid beneficiaries. For example, the association "Aidons l'Afrique Ensemble" (AAAE) covers 21 communities in the north of Burkina Faso. The organisation carried out an exhaustive census of people chronically vulnerable to food insecurity, based on various criteria such as social situation (elderly people with no support, elderly paralysed people with no support, destitute people, mothers of twins, orphans who have lost their father and/or mother, women who are the head of their household, etc.) and physical conditions or disabilities (blind, speech and hearing-impaired, leprous, mentally ill, epileptic or with a motor disability). Two thousand people were registered in the 21 villages. Thanks to a targeting capacity without its equivalent in the existing government mechanisms, these people can now receive direct support.

BOX 2
The simplified assessment: a targeting method used by the APESS

APESS (an association working to promote livestock raising in the Sahel and in the Savane region) grounds its strategy for targeting family farms on an analysis using the "simplified assessment" method. The simplified assessment analysis calculates the extent to which the household manages to cover its food requirements. Various indicators are taken into account, including the number of household members, the gross value of agricultural production, milk production and total livestock production (including livestock off-take), the production costs of farming and stock raising, the basic family consumption, etc.

The number of months (and days) of household consumption covered by the net value of production is calculated from this data. This number indicates the rate of coverage of food needs.

The analysis of the simplified assessments carried out by APESS spotlights three main situations:

> when the annual coverage rate is less than 12 months, the household farm is considered to be in deficit;

> for a coverage rate of 12-13 months, the household farm is in a balanced situation, but can neither invest nor save;

> when the coverage rate is over 13 months, the household farm is in a surplus situation, so able to invest.

Over and above accurately selecting (targeting) the recipients of food (or stockfeed) distributions, aid organisations need to more effectively reach groups identified as vulnerable. Humanitarian stakeholders could rely on the FOs and their extensive distribution networks (some FOs have a network of 400 storehouses that can cover some 30,000 km2). Box 3 below, which presents the position held by AREN (an association working to boost livestock farming in Niger), shows how FOs, with the government's backing, could do more to reach those in need than the government schemes.

BOX 3
Involve the FOs in distributing stockfeed and cereals in pastoral areas: the example of AREN in Niger

During the lean season each year, the Nigerien government sells thousands of tonnes of stockfeed at reduced prices in the Diffa region. However, because the government works through the communes, which are generally not equipped to take the reserves to the pastoral areas, many pastoralists can only rarely take advantage of the scheme. Moreover, the pastoral and agricultural lean seasons do not start at the same time. To ensure that all categories of herders have access to stockfeed and cereals when they need it, the Nigerien livestock farmer organisations responsible for managing the livestock feed banks have asked to be involved in choosing the location of the public reserves, and in operations to sell the reserves.

C.3 Better coordinate social safety nets and local food reserves

Public welfare schemes are currently less developed than the emergency food assistance provided by humanitarian organisations. Most are part of pilot projects backed by the World Bank. These programmes essentially distribute money (in the form of "cash transfers") or vouchers (known as "quasi-cash transfers"), which vulnerable households can use to buy food. So far, there has been very little collaboration between the public bodies in charge of these cash transfers (and in particular the social safety nets' national units) and the FOs operating local food reserves. And yet, it would be quite possible to step up this collaboration.

Firstly, the agreements with the welfare schemes should allow for part of the government's in-kind transfers to be allocated to the local food reserves. This is because the biggest advantage of having local food reserves in food-deficit areas, according to FOs' members, is that those in need have a food reserve close to home and readily accessible during the lean season. If welfare transfers are made only in cash or voucher form but the FOs' storehouses are empty, those in need will have to travel long distances to reach the nearest market. Once the storehouses have been replenished by the welfare schemes (and this is the most important point), it will have to be established whether vulnerable households' access to the food reserves is facilitated by cash transfers or vouchers. Cash transfers are preferable if the beneficiaries can receive the transfer on their phone without any difficulties. If the mobile phone networks are unreliable or too costly to use, it is better to distribute vouchers to the vulnerable households.

BOX 4
Mooriben's "emergency reserves" (Niger)

In Niger, FUGPN-Mooriben (*Fédération des unions de groupements paysans du Niger*) has for some years been using "emergency reserves" for welfare purposes. These reserves help address the crises that strike specific households (as a result of a death or illness) or an entire group of households (as a result of flooding, for example). In the event of a widespread food crisis (caused by a drought, for example), these reserves are the first lifeline, before the local and national authorities and then the international community step in. They are made up of members' contributions in kind (5 kg per crop season) and/ or reserves set aside from members' harvest surpluses. Although the succession of crises prevented an optimal constitution of reserves, an impact study carried out in 2015 in the regions of Tillabéry and Dosso showed that 26% of Mooriben's members received aid from these emergency reserves

Advantages and drawbacks of Mooriben's emergency reserves

AVANTAGES	DRAWBACKS
Ease the lean season	Use members' contributions to replenish the reserves
Increase the availability of cereals	
Curb migration	
Increase incomes	
Increase seed production	
Reduce price speculation	

For a group supply FO such as Mooriben, the third technical rotation in a storage season is the most difficult one, due to mounting social pressure to keep prices low as the lean season approaches. In the face of this difficulty, Mooriben entered negotiations with the Nigerien government to obtain support for cut-price commodity sales during the lean season as a form of welfare support. The authorities granted Mooriben permission to buy cereals from the national food security reserves at a reduced price and then sell them on its members at a social price. To date, however, this agreement in principle has never been put into practice.

SEE CHAPTER **4A**

D – What agreements can be leveraged to improve coordination?

D.1 What the Food Crisis Prevention and Management Charter says

All of the West African countries have signed the PREGEC Charter. The Charter states that "*No country can be totally shielded from cyclical food crises, no matter what preventive measures are taken*". It maintains that "*food assistance and crisis adjustment or mitigation strategies (which draw on local food reserves, off-season crops, income-generating activities, asset creation, etc.) are important tools for increasing the availability of foodstuffs and easing access to food, as well as for meeting the food and nutritional requirements of vulnerable, crisis-stricken populations*".

The PREGEC Charter underpins consultation and coordination among food crisis prevention and management systems. It rests on two principles:

- the principle of responsibility: governments and regional organisations have a responsibility to make prompt decisions on the necessary measures and ensure that they are effectively implemented;
- the principle of participation: It is essential that all government and non-governmental stakeholders, and in particular civil society organisations (CSOs), are involved in the dialogue, consultation and decision-making process. Given that FOs operating local food reserves fall into the category of CSOs, this principle applies to them, too.

To achieve good coordination, Pillar 3 of the Charter also needs to be taken into account: in other words, the consensual choice of instruments for preventing and managing food and nutritional crises. More specifically, this implies discussing the choice of either cash or in-kind aid.

The second review of the PREGEC Charter[2] (carried out in September 2019) notes that good progress has been made on harmonising early-warning information gathering, even if, for want of a common monitoring system, it does not yet include local food reserves. However, there is still little coordination of the initiatives among humanitarian stakeholders.

D. 2 What the national legislations say

It would be a major change for the better if the government purchased the food reserves remaining in the storehouses, then distributed them for free or sold them at reduced prices, as in the example of Viim Baore (see Box 2). In that case, the government would have to suspend the obligation to issue calls for tenders for this type of purchase, in order to speed up the procedures, which are often overly drawn out. A law providing for this type of suspension has existed in Burkina Faso since 2016 (and allows a negotiated purchase in an emergency).

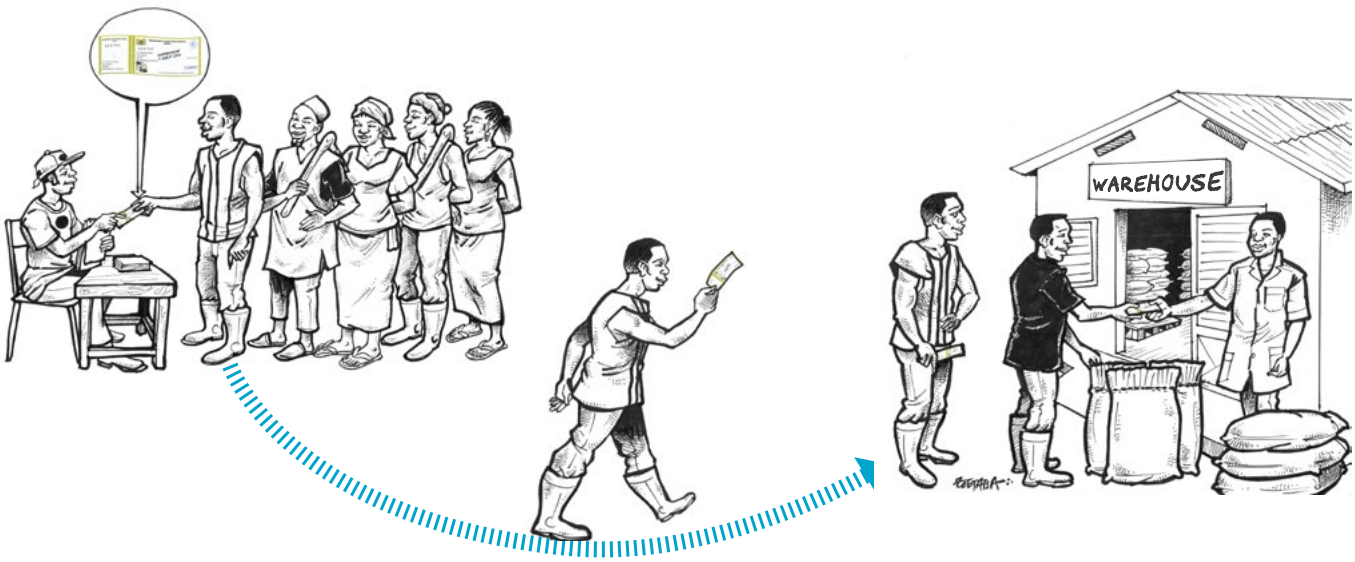
2 http://www.food-security.net/document/seconde-evaluation-externe-de-la-charte-pregec/

E – Prerequisites for coordination

Despite the abundance of laws on the need to coordinate action against food insecurity, few have been implemented as yet. A number of prior conditions need to be met before this situation can be set right:

- Carry out a joint needs assessment, in particular of the number of vulnerable people requiring aid. What type of aid is required, for whom and how much? Where are the people in need located? The assessment should involve the government schemes, the FOs, the NGOs and the international organisations;
- Pool information about the volumes available in the FOs. It is important to know the inventory level in each federation storehouse. Today, few federations have up-to-date information about their reserves. However, mobile phone-based data collection systems such as KoBoToolbox could overcome this problem•;
- Have an efficient method for targeting the populations affected. Collaboration between government humanitarian schemes, the international NGOs and the United Nations agencies on one hand, and the FOs on the other, enables more precise targeting of disaster-stricken communities. Targeting is particularly important in the case of transhumant pastoralists, for example, since they risk losing their herd (through disease or a shortage of forage and/or water). It takes a pastoral household that has lost its herd 10 to 40 years to build up its livestock again, assuming it has the means to do so. As a result, many livestock farmers give up this way of life after a crisis. It is far more important, then, and less costly, to prevent crises than to respond to them. Humanitarian schemes must take into account the herder populations' mobility when they design emergency aid targeting and distribution methods;
- Make it easier for the FOs to access government reserves. The organisations operating local food reserves, whether for emergency food assistance or welfare purposes, must have access to government reserves. They will then be able to distribute the reserves to either the people hit by a disaster or people in a state of chronic vulnerability. One possibility would be to stipulate a quota of the national cereal reserves that is to be set aside for local food reserves, which would then be able to draw on the government reserves if they can show that they respect their commitments to the "Charter on the operation of local food reserves". This implies the existence of a mechanism for monitoring compliance with these commitments, though there is no such mechanism to date.

SEE CHAPTER 6



BOX 5
How RBM targets transhumant pastoralists

The targeting system used by the Réseau Billital Maroobe (RBM) is broadly based on the "Household Economy Approach" (HEA). However, it has adapted the approach to the pastoral context and it conducts individual surveys rather than focus groups. This method, known as the Individual Household Economy Approach (IHEA), was tested in the course of the FISOREP project[3].

The IHEA approach yields information about: (i) the degree of household food insecurity in terms of access to food (HFIAS)[4]; (ii) the household food insecurity threshold in risk areas; (iii) the livestock mortality rate; (iv) the herd increase rate; (v) the herd off-take rate; (vi) the increase/decrease in income; (vii) the increase/decrease in expenditure, and (viii) the adjustment strategies developed by the households.

The IHEA helps identify different categories of livestock farmers and estimate the number of households in each category. The table below presents the typology obtained.

Household profiles	Criteria	Criteria	Mode of access	Types of support
Food security	≥ 3.5 TLU	Herd size + off-take rate = household viability threshold	> Sale at normal price	Stockfeed
Low food insecurity	< 3.5 TLU and > 3 TLU		> Sale at reduced price	Stockfeed
Moderate food insecurity	< 3 TLU and > 1.6 TLU		> Sale at reduced price > Sale at social price for cereals	Stockfeed + cereals
Severe food insecurity	≤ 1.6 TLU		> Free distribution of cereals and stockfeed	Stockfeed + cereals

TLU = Tropical Livestock unit

For instance, an IHEA survey will yield the following type of findings: "food-insecure households are those comprised of five members, owning three head of cattle and with income equivalent to CFAF XX" and "the number of households in this situation is estimated at YY". The survey does not, therefore, directly yield a list of beneficiaries eligible for support. To be able to compile such a list, the following steps need to be taken:

1. Collect the existing lists of livestock farmers (from campsites, lists of bore site users or lists of transhumant pastoralists registered with municipal authorities).
2. Draw up a primary exhaustive list.
3. Draw up a definitive exhaustive list by eliminating duplicates and absent farmers.
4. Hold meetings to select the vulnerable households.
5. Make an initial selection of vulnerable households.
6. Make a second selection, based on the available resources.

3 The FISOREP project (aimed at designing "social safety nets adapted to the realities of pastoral livestock farming") was conducted by RBM between 2016 and 2017 with RAAF/ECOWAS funding and technical and financial support from the FAO and AECID (the Spanish Agency for International Development Cooperation).

4 The Household Food Insecurity Access Scale (HFIAS) is an indicator of the level of food security. It is calculated on the basis of individual answers to questions about eating practices deemed to be correlated to food deprivation, such as eating foods that the respondent enjoys less than those habitually eaten.

F – Key points

➔ There are three main reasons why government, humanitarian stakeholders and FOs operating local food reserves need to coordinate their action:

- to prevent government interventions on the market from triggering price drops and slumps in sales of local food reserves;
- to improve the targeting, effectiveness and efficiency of food assistance for the sake of fairness;
- to reinforce state welfare initiatives through greater involvement of the FOs operating local food reserves.

➔ The FOs concerned are mainly group supply organisations and livestock feed banks. But group marketing organisations can also be adversely affected by falling prices.

➔ The main avenues for action in this case are as follows:

- the humanitarian stakeholders can more efficiently leverage the targeting and distribution capability of the FOs operating local food reserves, to make food assistance more effective;
- the government can support local food reserves by: i) buying up the food reserves remaining in the storehouses to avoid a slump in sales; ii) granting subsidies to cover the price difference between the market price and the price set for reduced-price sales, and iii) providing support for replenishing the reserves, to cover the losses should prices slump;
- the States can effectively apply the texts on coordinating food crisis prevention and management (PREGEC Charter, some national regulations, etc.).

G – Further reading

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Appendix
Chapter **8**

https://bit.ly/2NBylEY

Glossary

Account (accounting)	In accounting, an account is the smallest unit used to classify and enter flows through the company (purchases, sales, expenses, income, etc.). Each account is identified by a name and, usually, by a number. The list of accounts is recorded in an accounting system.
Account journal book	To keep accounts, an organisation must set up account books (purchase book, sales book, bank book, cash book, etc.). The account books must record such information as the date of the operation entered, the accounts in which the transaction is entered, the description of the accounting entry and the amounts entered.
Accountability	Obligation for the managers and directors of organisations to account for the decisions made, financial operations carried out and activities conducted within the framework of their missions.
Accounting balance	A list of all of an organisation's accounts (see definition above) for a given period (month, quarter, year). It is based on the general ledger accounts, in the order in which they appear in the accounting system.
Aflatoxins	Toxic substance in the mycotoxins family, produced by the moulds that grow on grains (in humid conditions). Aflatoxins are very dangerous for human and animal health.
Aggregator	Person who buys from farmers for subsequent resale to wholesalers and semi-wholesalers.
Agro-industrial by-products	By-products from processing cotton seeds, groundnuts, palm and palm nuts, wheat and rice brans, brewers' grains, molasses from sugarcane, etc.
Amortisation	Accounting term for spreading the cost of an investment (computer equipment, vehicles, machines, etc.) over its useful life. Amortisation makes it possible to determine the precise value of an enterprise's assets (in the balance sheet) at a given time.
Articles of association	Document containing full details of the association's identity (title, purpose and headquarters address), along with all of its operating rules.
Association	Organisation set up by legal entities or natural persons on a not-for-profit basis and operating in various domains (cultural, sporting, social, spiritual, religious, scientific, professional, etc.).
Balance sheet (accounting)	An accounting statement that describes, separately, the items forming an organisation's assets and liabilities. It presents an "economic snapshot" of the FO's asset base.
Banco (type of building)	Construction technique that uses local materials such as mud (soil mixed with water), to which chopped straw and sometimes other materials (wood chips, horsehair, cow dung, shea butter, etc.) are added to modify the characteristics (weather resistance, pest resistance, etc.). By extension, mud bricks are also called banco.
Bank book	Accounting document used to keep an ongoing record of all funds paid in or paid out by the organisation, for each bank account and in chronological order. The bank book is the fundamental document used for bank reconciliation, i.e. the operation of checking whether the balance on the bank statement matches the balance of the bank account in the books.

Baseline benchmark survey	Survey run by the OP each year to check the condition of all of its storehouses (level and quality of the stocks, degree of literacy of the storehouse managers, phone number, quality of the infrastructures, etc.).
Bonuses	Profits shared among a FO's members at the end of the marketing season.
Buffer fund (or stabilisation fund)	Mechanism established on the scale of a FO (union or federation) and consisting in saving money during the good years so as to be able to cover the losses sustained during years in which prices are low during the lean season (market downturn years).
Buffer tunnel	In a buffer fund, the buffer tunnel consists in a ceiling price (above which the FO pays into the fund) and a floor price (below which the buffer fund helps cover the losses incurred in a market downturn).
Capacity-building	Process in which individuals, organisations and societies acquire, develop and maintain the skills and abilities they need to set and attain their own development objectives.
Cash book	Document used to record all of the amounts paid in or out of the cashbox with which all FOs are equipped and which contains an amount of petty cash - defined by the organisation's managers - to cover expenditure on small items.
Cautious purchase price	The price the FO pays farmers after taking two factors into consideration: to limit the risk of losses for the FO (in the event that prices do not increase significantly between harvest time and the lean season), the FO should set a price for purchasing from the producers that is not too high; to encourage farmers to sell to the FO, the FO should set a purchase price that is not too low.
Cereal banks	Grassroots community organisation that buys, stores and resells food reserves to feed the inhabitants of a rural area.
Climate risk	For a FO operating local food reserves, the risk of sustaining financial losses as a result of weather conditions, either because of a drop in its turnover (less cereal sold because of a drop in production) or its members' inability to reimburse their credits.
Collateral	See "security"
Cooperative	People-centred enterprise, jointly owned and democratically run by its members to meet their socioeconomic aspirations and their common needs.
Cooperative society with a board of directors (COOP-CA)	Cooperative consisting of at least fifteen natural persons or legal entities.
Cross-border market	See "cross-border trade"
Cross-border trade	Sales or purchases that the FO or other stakeholders conclude with operators based in other countries.
Damage	Catastrophic event (e.g. flood or fire) that causes human and/or material losses. In insurance terminology, damages are the losses that prompt compensation
Decapitalisation	Decrease in the value of the resources owned by an individual, group or organisation. The word "decapitalisation" is often used to describe the process by which a livestock farmer is forced to reduce his/her herd, for example because of a shortage of forage.
Destocking (of cereals)	Refers to any removal of stored cereals from the storehouse, either to be sold for a profit, distributed for free, sold at a reduced price or used as a "loan" (to be repaid in kind after harvest).

Destocking (of the herd during a crisis)	During a pastoral crisis, destocking consists in facilitating the sale of weakened animals so that their owners can maintain their households' food security and protect part of their herd. Commercial destocking consists in providing support for dealers and exporters so that they can buy the animals before their condition deteriorates. Slaughter destocking consists in buying animals that have been weakened by drought and slaughtering them with a view to distributing fresh or dried meet to drought-stricken communities.
Drying areas	Clean, delimited areas equipped for drying products prior to storage. This operation is designed to achieve an optimal moisture content before foodstuffs are placed in storage.
Economic interest group	Group that enables its members to pool some of their operations in order to develop, enhance or boost the results of these operations, while retaining their individuality. An EIG does not, of itself, conduct operations aimed at making a profit for subsequent distribution to its members. Instead, its operations are aimed at helping its members make a profit directly themselves. EIGs are governed by the provisions of Articles 869 et seq. of the OHADA Uniform Act on Commercial Companies and Economic Interest Groups.
ECOWAS spaceregion	Geographical area formed by all of the Member States of the Economic Community of West African States (ECOWAS).
Effectiveness	Ability to obtain the desired or expected outcome, or meet the objective set. Effectiveness is not the same as efficiency (see below).
Efficiency	Ability to achieve a maximum of results with a minimum of resources. An action may be effective, but not efficient if it entails using disproportionate resources.
Feed bank (FB)	Grassroots community organisation that buys, stores and resells livestock feed.
Financial statement	Set of accounting and financial documents that provides a true and fair view of the organisation's assets, financial position, performance and cash position at the end of the year. Financial statements include: a balance sheet, an income statement, a cash flow statement and schedules.
Financial year	A given period of time (often 12 months) during which a company records all of its economic and commercial operations in its accounting system. At the close of the financial year, the business draws up its accounting statement (balance sheet, income statement, etc.).
Financing plan (or supply and use table)	Document presenting the year-on-year change in supplies (incoming funds) and uses (outgoing funds).
Fixed assets	All of the physical goods belonging to the organisation and which can be used for several years, such as plots of land, buildings, equipment (for storage, transport, office use, etc.)
Floor price	In a buffer fund, the floor price corresponds to 95% of the benchmark price (the latter being the price that the FO considers most likely, based on its methods of calculation). In this Handbook, the term "floor price" does not, therefore, refer to FOs' demand that the State guarantee farmers of a minimum price for the products they sell.
Fumigation	Method of treating stocks against harmful insects.

Gender approach	Recognises the power relations between men and women so that the different needs, interests and vulnerabilities of men and women can be factored into contextual analyses and the design of intervention strategies. These strategies aim to address the root causes of the gender-based discrimination expressed in certain social norms, cultural practices and legislation.
General Assembly	Supreme governing body consisting of all of the members of an organisation.
Georeferencing	Use of geographical coordinates (latitude, longitude) to locate a storehouse (or other object) on a map.
Geotechnical investigation	Examination of the soil's structure and physical properties (in particular its resistance and depth of stability). This information is used to calculate the depth at which the storehouse's foundations should be built.
Group	Voluntary organisation of people, with a social and economic purpose, endowed with a legal personality, and whose members have common interests.
Group marketing	The collective marketing of surpluses of cereals or other foodstuffs by the members of FOs'.
Group marketing organisations	Farmers' organisations operating stocks for group marketing purposes. These organisations group their members' output, store and standardise these foodstuffs, then sell them to institutional buyers or traders. This system of deferred group marketing reaps scale economies, places farmers in a stronger position for negotiating with buyers and lets them sell when prices are higher.
Group sale	See "group marketing"
Group supply organisations	Farmers organisations operating group supply stocks. Group supply systems usually operate along the following lines: just after harvest, when cereals are in abundant supply and inexpensive, the organisation in charge of the reserves buys cereals in bulk, which it stores for several months before reselling them in small quantities during the so-called "lean season". The main purpose of storing local food reserves is to ensure that households have a secure source of food.
Guarantee fund	Fund designed to offset any losses sustained in credit operations should the borrowers default. If the borrower fails to repay his/her credit, the fund standing guarantee for the borrower must assume the borrower's obligations, in whole or in part (depending on the provisions of the contract).
Highway extortion and harassment	Official charges (customs escort and the additional work for the customs) and unofficial charges (checkpoints, illicit taxes and delays during the journeys), which represent a surcharge on top of the transport costs. Source: Banque Africaine de Développement. (2016). Problématique de la facilitation du transport en Afrique de l'Ouest.
Income statement (or operating account)	The income statement (or operating account) sets out the income and expenditure and shows the net profit or net loss for the accounting period.
Institutional market	See "institutional purchasing"
Institutional purchasing	Operation by which an entity (government, NGO or international organisation) buys goods or services from a supplier under predefined conditions, generally through a tendering procedure.
Intangible assets	All of the "intellectual" capital belonging to the organisation and which can be used for several years: software, studies, etc.

Inventory	Determination, at a given time, of the quantity, quality and actual value of the stocks held by the FO.
Land tenure	Set of measures and tools that enable the holders of land rights to avail themselves of these rights and be protected from possible challenges to their rights.
Lean season (agricultural, unless otherwise specified)	Period between the end of the consumption of the previous year's harvest (when the reserves in the granaries have been exhausted) and the following harvest.
Ledger	Accounting record containing all of the accounts (cf. definition) that have been used by the organisation in its accounting. In general, it is generated directly by accounting software, for organisations equipped with this software.
Local grain storage	Set of collective or community initiatives undertaken to enable rural households to buy or sell basic foodstuffs, or buy livestock feed, on more favourable terms.
Local grant	Funding provided by members of the diaspora or by local residents to help finance a FO's investments or operations in a given locality.
Loyalty building	Action consisting in forging a lasting relationship with one's stakeholders (i.e. the member farmers, in the case of a FO).
Mapping	Action aimed at designing and producing maps, drawings and diagrams. For example, it can represent storehouses' geographical location in a given area. A map can also include non-geographical information, such as storage capacity, the quantity of available stock, or the composition of the management committee of the storehouses represented.
Market downturn (or price downturn)	Situation in which cereal prices during the lean season are lower than the prices at the previous harvest time.
Marketing plan	Step prior to actually selling the products, when storehouse managers: examine the outcomes and lessons to be learnt from the previous marketing year; estimate the quantity of cereals that the organisation can sell, or its members' supply requirements; calculate the quantities to be sold (or bought) and identify the locations and prices for selling and buying; draw up an estimated budget, showing all of the expenses to be incurred for the marketing year; look for financing to cover the estimated budget.
Marketplace collector	Trader acting as a middleman for wholesalers and visiting markets.
Meso-level insurance	System of insurance in which the policy-holder is not the individual producer but a "risk aggregator", such as a FO, a rural bank or a microfinance institution. The risk aggregator identifies the producers who have incurred losses and will receive payments.
Mobile stock (feed banks)	Stock removed from the feed banks to supply herds in watering areas or areas that are difficult to access.
Mycotoxin	Substance produced by the moulds that grow on grain (in humid conditions). Mycotoxins are dangerous for human and animal health. Aflatoxin belongs to the mycotoxins.
National food security reserves	Reserves of foodstuffs, placed under the responsibility of the States, or within systems co-managed by the States and their financial partners. They are intended to prevent and manage food crises.

Olfactory inspection	Assessment of the quality of a stock of foodstuffs, based on the smells emitted by the stored commodities.
Online surveys	Surveys conducted with digital tools (smartphones, tablets). They are replacing paper-based surveys and can be administered remotely or in person.
Outside marketing	In the context of farmers' organisations, outside marketing means selling to buyers who are not members of the organisation.
Own funds	Financial resources coming from the FO's members and operations (levies on group sales, income from sales of field crops, income from leasing storehouses and facilities, financial income earned on deposits with financial institutions, etc.).
Own resources and similar items	See "own funds"
Pastoral lean season	Critical period for livestock farmers, between the end of the hot, dry season and the beginning of the rainy season, when pasture, forage and watering holes are scarce.
Perishable product	Product that is likely to spoil (to go off or to go bad) and which is therefore difficult to keep.
Pests	Animals, parasitic or destructive organisms that attack cultivated plants or stored products.
Pooling	A number of FOs may make their services or facilities available for use by fellow FOs. In risk management, a number of FOs may come together to pool the expenses entailed in provident funds ("risk pools"). In other cases, FOs may pool certain functions (such as quality control, building maintenance, accounting management, preparation of financing applications, etc.) to lower the costs.
Predators	See "pests"
Price risk	Likelihood, for a FO operating local food reserves, that the organisation will buy cereals at harvest time at a higher price than the price at which it will be able to sell them during the lean season. Price risk can therefore be equated with the risk of a "market downturn".
Repayment in kind	Action of reimbursing a debt with something other than money. In the context of local food reserves, the term often refers to the situation in which the member of an organisation borrows cereals against a pledge to reimburse them after harvest, when he/she will return to the organisation the same quantity of cereals, possibly with a small additional amount.
Resilience	Capacity of an individual, organisation or society to withstand a shock or crisis and either continue functioning as before or adapt.
Risk management	Discipline that strives to identify, assess and prioritise the risks incurred in an organisation's operations in order to reduce and control the likelihood of the unwanted events occurring, and mitigate any impact these events may have.
Sampling	Procedure used to choose a sample (i.e. select part of a whole). It is the basic technique used for sampling surveys and evaluation processes.
Security	Security - or collateral - is a guarantee that the debtor gives to a creditor. If, when a debt falls due, the debtor cannot pay the creditor, the latter can either obtain the sale of the item placed as security or collateral in order to recover the sum due, or acquire ownership of the item. In the case of warrantage, or inventory credit, a farmer or a FO obtains a loan by placing a stock of agricultural products as security (or collateral).

Sell off (a product)	The action of selling a product at a low price, generally below the cost price.
Selling price (in group supply FOs and feed banks)	Price at which the foodstuffs are bought from farmers by the FO, as well as the price at wich the foodstuffs or livestock feed are sold to members of the FO.
Semi-wholesaler	Semi-wholesalers act as intermediaries between farmers, wholesalers and retailers. In rural areas, semi-wholesalers supply the wholesalers. In urban areas, they buy their supplies from the wholesalers and sell them on to retailers. Rural semi-wholesalers are also the FOs' partners. They seldom visit bulking markets themselves: instead, they send intermediary collectors who are in business for themselves.
Side-selling	Refers to a situation in which a farmer or cooperative breaches a contract and decides to sell their produce to someone else.
Simple community warrantage	Mechanism by which a FO that has its own working capital (without needing to use bank financing), holds the cereals deposited by its members as collateral until the next lean season. In exchange, the FO pays the depositors a sum of money corresponding to a portion of the value of the stock held.
Simplified cooperative society (SCOOPS)	Cooperative consisting of at least five natural persons or legal entities.
Social price	The selling price of foodstuffs, set at a lower rate than the market price. If the seller is a public institution, the difference between the market price and the social price is covered by a State subsidy. If the seller is a FO (group supply or livestock feed bank), the difference is covered by a reduction in the FO's profit margins.
Social safety nets	Non-contributory transfers of resources (the beneficiaries are not asked to make any financial contribution), aimed at providing assistance to poor or vulnerable populations. Social safety nets are widely used to combat hunger in West Africa. They take very diverse forms, varying with the type of resources transferred (food, money, inputs, minor livestock, nutritious food, etc.) and the consideration required in return (none, or work).
Solvency	Capacity to pay or reimburse a certain sum of money.
Solvent demand	Demand for a product (in this case, cereals or livestock feed) on the part of a customer base that can afford to buy it.
Stock replenishment operations	Operations carried out by the FO to either collect its members' output or buy in cereals or livestock feed from sellers outside the organisation to add to its stocks.
Stock rotation	Cycle of sales/purchases of the stored products. Rotation may be motivated by the need to maintain product quality (this is known as technical rotation) or by economic considerations.
Storage	The act of holding large quantities of merchandise in a storehouse (or warehouse). This term is equivalent to warehousing.
Storehouse	Infrastructure used to store agricultural products, livestock feed or agricultural inputs. A distinction should be made between the "storehouse" and the domestic storage facilities found within the household, such as the traditional or enhanced granary, and small metal silos.
Targeting	Process of identifying and selecting the beneficiaries of a support measure, based on clearly-defined criteria.

Term deposit	A form of savings account to which special conditions apply, mainly in relation to the interest earned and the duration of the investment.
Trade credit	Credit used to cover the expenses entailed in marketing, along with the costs incurred in the operations of buying in and replenishing stocks (including the FO's purchase of its members' output).
Umbrella organisation (FO)	Group of legally constituted farmers' organisations with common principles and objectives. A national umbrella organisation is made up of unions of groups and federations within one country. A subregional umbrella organisation is made up of organisations from a number of countries.
Warehouse receipt system	Financing backed by cereals stored in a storehouse under the control and responsibility of a professional manager (the third-party holder).
Warehouse receipt system	A financial mechanism whereby an individual farmer or a farmers' organisation (FO) can secure a loan against collateral in the form of a stock of semi-perishable agricultural products (millet, sorghum, rice, maize, sesame, gumbo, groundnuts, etc.) that will retain their value.
Warehousing	See Storage
Warrantage using the double lock principle	Stock is kept in a community storehouse closed with two locks. The keys to the first lock are held by the FO, the keys to the second by the financial institution.
Weather index insurance	Type of insurance based on the measurement of weather variables (precipitation, temperature) that are correlated to crop yields and hence the losses that farmers can incur in the event of a climate shock.
Welfare programmes	Programmes funded by subsidies and aimed at improving a population's living conditions (for example, guaranteeing access to education, improving populations' health, combating infant malnutrition, etc.). Most welfare programmes are developed and financed by the State and its partners (NGOs and international organisations).
Working capital	Sum of money at an organisation's disposal to finance its routine operation (build up and replenish its stocks, pay its employees' salaries and all of its running expenses).
Year-round sales	Gradual sales of the FO's stock throughout the year. This method limits the risk of losses in a market downturn. However, in a normal year, the profit margins it generates are lower than if the entire stock were sold during the lean season.

Acronyms

AAAE	Association Aidons l'Afrique ensemble
ADENA	Association pour le Développement de Namarel (Senegal)
AECID	Agencia Española de Cooperación Internacional para el Desarrollo
AIBP	Agro-industrial by-products
ANSAT	Agence Nationale de la Sécurité Alimentaire du Togo
APESS	Association pour la Promotion de l'Elevage au Sahel et en Savane
ARC	African Risk Capacity
AREN	Association pour la Redynamisation de l'Elevage au Niger
BAGRI	Banque agricole du Niger
BoD	Board of directors
BFFS	Belgian Fund for Food Security
BNDA	Banque Nationale de Développement Agricole (Mali)
BSE	Bovine spongiform encephalopathy
CNAAS	Compagnie nationale d'assurance agricole du Sénégal
Cofob	Grassroots land commission
Cofodep	Departmental land commission
COOP-CA	Cooperative society with a board of directors
COPSA-C	Coopérative de prestation de services agricoles (Burkina Faso)
CPC	Centrale des producteurs de céréales (Togo)
CRUS	Conseil Régional des Unions du Sahel

CSO	Civil society organisation
DFS	Decentralized financial system
ECHO	European Civil Protection and Humanitarian Aid Operations
ECOWAS	Economic Community of West African States
EIG	Economic interest group
FAO	Food and Agriculture Organization of the United Nations
FB	Feed banks
FEPA-B	Fédération des professionnels agricoles du Burkina
FI	Financial institution
FISOREP	"Filets sociaux adaptés aux réalités pastorales" (project)
FNGN	Fédération Nationale des Groupements Naam (Burkina Faso)
FO	Farmers' organisation
FSG	Food security granary
FUGPN-Mooriben	Fédération des Unions de Groupements Paysans du Niger
FUPRO	Fédération des unions de producteurs (Benin)
GA	General Assembly
GAIP	Ghana Agricultural Insurance Pool
GFS/MMD	Women's lean-season granaries in the Mata Masu Dubara scheme (Niger)
GGC	Ghana Grains Council
GIIF	Global Index Insurance Facility
GIS	Geographic information system
GRN	Goods Received Note (record of receipt of the goods)

HEA	Household Economy Approach (method)
HFIAS	Household Food Insecurity Access Scale
IFRS	International Financial Reporting Standards
IGA	Income-generating activity
IHEA	Individual Household Economy Analysis
Incl. tax	Inclusive of tax
LF	Livestock feed
MC	Management committee
MFI	Microfinance institution
MIS	Market information system
NAFCO	National Food Buffer Stock Company (Ghana)
NAIC	Nigerian Agricultural Insurance Corporation
NBV	Net book value
NGO	Non-governmental organisation
OC	Oversight committee
OHADA	Organisation pour l'Harmonisation en Afrique du Droit des Affaires
P4P	Purchase for Progress (World Food Programme)
PRAPS	Projet régional d'appui au pastoralisme
PREGEC	Charter for Food Crisis Prevention and Management
RAAF	Regional Agency for Agriculture and Food
RBM	Réseau Billital Maroobé
RCS	Register of Commerce and Securities (OHADA)

RFSR	Regional Food Security Reserve
SCOOPS	Simplified cooperative society
SONAGESS	Société nationale de gestion du stock de sécurité alimentaire (Burkina Faso)
STAMP	Sustainable Technology Adaptation for Mali's Pastoralists
SYSCOA	West African Accounting System
TD	Term deposit
TF	Tender file
TFP	Technical and financial partners
TLP	Trade liberalisation programme
TLU	Tropical livestock unit
UACS	Uniform Act on Cooperative Societies
UNPCB	Union nationale des sociétés coopératives de producteurs de coton du Burkina Faso
UROPC	Union régionale des organisations de producteurs de céréales
USCCPA/BM	Union des sociétés coopératives pour la commercialisation des produits agricoles de la Boucle du Mouhoun (Burkina Faso)
WAC	Weighted average cost (method)
WAEMU	West African Economic and Monetary Union
WAGN	West African Grain Network
WAMIS-NET	West African Market Information Systems Network
WFP	World Food Programme

CHAPTER 10

Profiles of the farmers' organisations (FOs) in the Handbook Editorial Group

The profiles contained in this section outline the history, structure and objectives of the FOs involved in producing the Handbook, along with their local grain storage operations.

The profiles are organised by alphabetical order of the names of the organisations, beginning with the national FOs, then the regional networks.

NATIONAL FARMERS' ORGANISATIONS

Association pour la Redynamisation de l'Elevage au Niger (AREN)

HEADQUARTERS ADDRESS:

☛ BP 12 758, Quartier Poudrière, rue PO26 CN3, Porte 533, Niamey, Niger

☎ (227) 20 73 66 22 🖷 (227) 20 73 76 21

✍ aren@areniger.ne

GEOGRAPHICAL AREA COVERED: the entire national territory.

HISTORY: Founded on 19 July 1990 by 11 livestock farmers to defend and promote the strategic interests of livestock farming and the farmers' citizenship.

STATUS: Recognised as both a development association (DA) and a non-governmental organisation (NGO). Order No. 20/DAPJ/MI dated 14 February 1991.

STRUCTURE: A general assembly; a steering committee (in charge of policy and advocacy issues); an executive secretariat (a member of the steering committee), in charge of technical and administrative management, and project and programme implementation. The steering committee and the executive secretariat are elected by the general assembly of all members of the grassroots groups. The regional representatives sitting on the steering committee are elected by the members from their regions. The four women's representatives are elected under the same conditions as the steering committee to which they belong. The departmental and communal coordination units are divisions of the executive secretariat within the country.

MEMBERSHIP: 2,532 grassroots groups with a total of 75,960 members, including 35,125 women.

OBJECTIVES: AREN's vision is that of "a world in which pastoralists enjoy the same respect as any other citizen, their contribution to the national economy is recognised and supported, and they can work in safety".

MISSION: Represent Nigerien livestock farmers and defend their rights in local, national and international debates, and enable them to contribute to development policy and action to promote the pastoral community's interests.

IMPORTANCE OF STORAGE IN THE ORGANISATION'S OPERATIONS: Total storage capacity of 4,700 tonnes. This includes the FO's storehouses and those of the member organisations.

MAIN AGRICULTURAL AND PASTORAL PRODUCTS STORED AND MARKETED: Wheat bran; cottonseed; cottonseed cakes; cereals; livestock inputs (small quantity).

Conseil Régional des Unions du Sahel (CRUS) – Burkina Faso

HEADQUARTERS ADDRESS:
☛ BP 293, Dori, Burkina Faso

☎ (226) 24 46 01 37, (226) 70 28 95 22

✍ crus.dori@gmail.com bolimam@yahoo.fr

GEOGRAPHICAL AREA COVERED: Sahel region of Burkina Faso (26 communes, including 22 rural communes).

HISTORY: The CRUS was founded in 1989 by agro-pastoral organisations (UGVO, Gorom / Oudalan, UGVA, Arbinda / Soum, Allah Beydou union, Dori / Seno and UGVY, Yagha). It was recognised in February 1993. The CRUS was set up following repeated droughts in the region. Its establishment was facilitated by the NGO ACORD and the former CRPA (now the regional department in charge of agriculture).

STATUS: Association of cooperatives

STRUCTURE: A members' general assembly; a 16-member board of directors (4 from each province); a 4-member oversight committee and a technical coordination unit (permanent or non-permanent employees).

MEMBERSHIP: 69 unions comprising 1,997 groups/cooperatives established within the territorial jurisdiction of the Burkinabe Sahel area (Seno, Soum, Yagha, Oudalan). Total membership of 38,667, including 16,258 women and 22,409 men; a total of 13,522 young people.

OBJECTIVES: Promote the region's potential in agriculture, forestry and livestock farming by developing alternative approaches that promote the Sahel people in their environment.

MISSION: Guide and support the structuring and operation of the Sahel's farmer organisations by building their institutional capacity and giving them greater power, with a view to guaranteeing food security in the region and an active role in the process of sustainably developing the Sahel.

IMPORTANCE OF STORAGE IN THE ORGANISATION'S OPERATIONS: The CRUS has 1 storehouse with a capacity of approx. 1,000 tonnes, 8 x 200-tonne storehouses in the administrative centres of the 4 provinces and 32 x 40-tonne storehouses in the communes. It stores 600 tonnes of stockfeed and 120 tonnes of cereals.

MAIN AGRICULTURAL AND PASTORAL PRODUCTS STORED AND MARKETED: Stockfeed (cakes), cereals (pearl millet and sorghum) and cowpea (Gorom and Koom Kallé).

FASO JIGI/PACCEM (Union des Professionnels Agricoles pour la Commercialisation des Céréales au Mali)

HEADQUARTERS ADDRESS:

☛ BP 351, Angoulême district, Ségou, Mali

☎ (223) 21 32 11 77 / 76 38 52 76 (223) 21 32 11 66

✍ fasojigipaccem@gmail.com

GEOGRAPHICAL AREA COVERED: Segou is Mali's administrative region IV.

HISTORY: In November 1997, after a 2-year pilot phase, Faso Jigi/PACCEM was founded as a group marketing system for agricultural products (smallholders pool their marketable surpluses to form a critical volume and be in a strong position to negotiate with cereal traders). The reasons for its establishment include delays in financing for the crop season (credit did not arrive on time), farmers' meagre negotiating power opposite traders and the lack of bonuses for farmers, which resulted in lower crop yields, a drop in cereal prices and lower income for farmers.

STATUS: Union of cooperative societies, registered under No. 0005/DRDSES dated 15/11/2010

STRUCTURE: Faso Jigi is made up of 140 grassroots cooperatives. There is an annual general assembly. The organisation has a 10-member board of directors and a five-member oversight committee. There is a five-member executive committee and a five-member marketing committee. There are also four steering committees with 20 members each for different industry segments: rice, rainfed cereals, green onions and cowpea.

MEMBERSHIP: 140 grassroots cooperatives with a total of 5,600 members.

OBJECTIVES: Faso Jigi's vision is to be an effective professional organisation that gets results by improving the services provided to its beneficiaries, both women and men.

MISSION: Enable its members, through their professional organisation, to play an active role in the cereal and shallot segments and obtain a fair price for their products and a stable income.

IMPORTANCE OF STORAGE IN THE ORGANISATION'S OPERATIONS: Faso Jigi / PACCEM's central storehouses (millet, sorghum, maize and rice) have a capacity of 5,400 tonnes. Grassroots FOs' storehouses have a capacity of 2,000 tonnes. There are also purpose-built storehouses for shallots (540 tonnes).

MAIN AGRICULTURAL AND PASTORAL PRODUCTS STORED AND MARKETED: cereals (rice, maize, millet, sorghum), cowpea and green onions.

Fédération des Professionnels Agricoles du Burkina (FEPA/B)

HEADQUARTERS ADDRESS:

☛ 01 BP 1914, Ouagadougou 01, Burkina Faso. Location: Avenue Mgr Dieudonné Yougbaré, Simporé building, secteur 29 of arrondissement 6, Ouagadougo

☎ (226) 25 40 73 59 (226) 68 54 31 73

✍ fepab@fepab.bf

GEOGRAPHICAL AREA COVERED: FEPA/B is a national organisation spanning the entire country . It covers 37 of the country's 45 provinces and 290 departments, i.e. 80% of the national territory.

HISTORY: FEPA/B is a farmers' organisation set up by Burkina Faso's smallholders in July 1997 after a lengthy development process. Following the State's withdrawal from actions to aid the farming community, farmers banded together to assume the functions formerly performed by the State, namely information and communication, training, the supply of inputs, testing, support for production and marketing, and advisory support.

STATUS: FEPA/B is a non-governmental, non-political cooperative. It was recognised under Order No. 2002-015/MATD/PKAD/HC/SG dated 31/01/2002 and registered under receipt No. 2002-011.

STRUCTURE: FEPA/B is structured around three segments: rainfed cereal (maize, sorghum, millet), legumes (cowpea/beans) and fruit and vegetables. Federation members are identified at village level (groups), departmental level (departmental unions of agricultural professionals - UDPA), provincial level (provincial unions of agricultural professionals - UPPA) and finally national level.

MEMBERSHIP: FEPA/B is made up of 2,452 men's groups, 2,678 women's groups and 1,003 mixed-gender groups. It has 241,261 members, including 125,200 women.

MISSION: Represent its members and defend their individual and collective interests in order to boost their market competitiveness through a culture of performance and tackle the challenges posed by the monetisation of the economy.

IMPORTANCE OF STORAGE IN THE ORGANISATION'S OPERATIONS: through its members, FEPA/B has roughly 70 storehouses with capacities ranging from 80 to 500 tonnes. Total storage capacity amounts to 107,572 tonnes. FEPA/B takes a group marketing approach for its members' products, so that they can negotiate remunerative prices. Storehouses with an 80-100 tonne capacity are mainly used for the warrantage (warehouse receipt system) operations undertaken by women and smallholders.

MAIN AGRICULTURAL AND PASTORAL PRODUCTS STORED AND MARKETED: maize, sorghum, millet, cowpea, soy bean, sesame.

Coopérative de Distribution des Intrants et de Commercialisation des Produits Agricoles (CoopDICPA), managed by FUPRO-Benin

HEADQUARTERS ADDRESS:

☛ AKPAKBE Faustine building, Goho, Abomey, Benin

☎ (229) 67 12 55 97

✍ coopdicpa@gmail.com

GEOGRAPHICAL AREA COVERED: national.

HISTORY: The organisation was founded on 15 November 2015. FUPRO, the federation of farmers' unions in Benin, established this organisation to provide economic services to its members, so that the economic functions and welfare functions could be kept quite separate. The aim was also to make greater use of the central FUPRO's internal resources and of the cooperative members' internal resources, and dispel the misconception that FUPRO is opposed to cooperatives.

STATUS: Cooperative

STRUCTURE: Three types of organisation underpin the cooperative: territorial organisations, sector-specific organisations and special-purpose organisations, namely the national association of women farmers (ANAF-Benin) and the national association of youth farmers (AJAM-Benin).

MEMBERSHIP: 13 of the 23 national umbrella organisations that make up FUPRO Benin are members of this cooperative. There are 1,873 individual members (the sum of the membership of each of the CoopDICPA's member organisations).

MISSION: Market all types of agricultural inputs authorised by the national legislation, on behalf of the members (direct or associate members); market agricultural equipment and tools on behalf of the members (direct or associate members) and market members' agricultural products (direct or associate members).

IMPORTANCE OF STORAGE IN THE ORGANISATION'S OPERATIONS: CoopDICPA conducts various types of storage operations: i) primary storage, to bulk the harvests in the villages; consolidated storage, to bulk products at a higher administrative level (commune or department); temporary or in-transit storage, to deliver produce to the corn-processing plant in the town of Bohicon, or for sorting and bagging prior to delivery to certain organisations such as the WFP, which requires specially-marked packaging.

MAIN AGRICULTURAL AND PASTORAL PRODUCTS STORED AND MARKETED: Maize, rice, soy bean and groundnuts.

Ghana Grains Council

HEADQUARTERS ADDRESS:

☛ PMB 212, Madina, Accra, Ghana. Location: House No. 666/14, Ninoi Kwame Street, Accra

☎ (233) 302 909 038

✍ info@ghanagrainscouncil.org

GEOGRAPHICAL AREA COVERED: the GGC is a national organisation spanning the entire country.

HISTORY: in 2010, the Agribusiness and Trade Promotion (ATP) program, an American NGO, facilitated the organisation's establishment with backing from USAID and the Government of Ghana.

STATUS: Cross-industry association.

STRUCTURE: The organisation is structured into a nine-member board of directors, four committees (executive committee, technical committee, finance committee and legal committee) and an executive secretariat, assisted by administrative and financial support staff.

MEMBERSHIP: The organisation is comprised of stakeholders in the cereal and legume value chain, along with other related stakeholders, whether associations or individuals. There are 48 members in all, including farmers' organisations, individual farmers, traders, grain treatment companies, millers, storehouse managers, grain brokers, financial institutions, insurance companies, banks and lawyers.

OBJECTIVES: Take action in the grain and legume industry to achieve greater productivity, quality and profit.

MISSION: Make the cereal and legume value chains more efficient by providing high value-added services, such as warehousing receipts, training and capacity-building sessions, market information, business networking, political advocacy to change public action in the agricultural industry.

IMPORTANCE OF STORAGE IN THE ORGANISATION'S OPERATIONS: Ghana Grains Council manages around 40 large storehouses in the country.

MAIN AGRICULTURAL AND PASTORAL PRODUCTS STORED AND MARKETED: cereals and legumes.

JUSSAF Integrated Ventures MPC LTD - Nigeria

HEADQUARTERS ADDRESS:

- No. 9/11 Shekarau Street, Chanchangi Lay out, opposite Refinery Qtrs, Ung. Boro - Sabon Tasha, Kaduna, Kaduna State, Nigeria

GEOGRAPHICAL AREA COVERED: The states of Kaduna, Plateau and Niger, and the Federal Capital Territory in the North West and North Central zones of Nigeria.

HISTORY: A group of friends jointly involved in processing and marketing agricultural products had the idea of setting up the organisation in 2014. JUSSAF was set up in 2015 as a cooperative society, providing support for other entities engaged in local agricultural production, processing, sales and transport.

STATUS: JUSSAF Integrated Ventures MPC Ltd is a cross-industry cooperative society with a recognised legal status in Nigeria (23 September 2014) and a recognised international status (15 April 2015).

STRUCTURE: The organisation has a four-member board of directors and a management committee made up of a chairman, a vice-chairman, a treasurer, a financial secretary, a secretary and seven members elected at the annual general assembly. The term of office is five years. The secretary oversees the employees and is responsible for taking meeting minutes. The financial statements are managed by an accountant. They must be prepared, audited and published by 30 January at the latest every year.

MEMBERSHIP: JUSSAF has 320 cooperatives and 250,000 members across the four states. The cooperatives are involved in cereal growing and processing, poultry farming, stockfeed, foodstuffs for human consumption and marketing.

OBJECTIVES: Eradicate extreme poverty and hunger, achieve food self-sufficiency and security, improve health and stimulate the production, storage, processing and marketing of agricultural products.

IMPORTANCE OF STORAGE IN THE ORGANISATION'S OPERATIONS: The storage capacity ranges from 5 to 350,000 tonnes.

MAIN AGRICULTURAL AND PASTORAL PRODUCTS STORED AND MARKETED: maize, rice, cowpea, soy bean, sorghum, eggs, broilers, poultry feed, poultry manure. There are plans to install a cold room in the future for poultry storage and sales.

Fédération des Unions des Groupements Paysans du Niger (FUGPN-MOORIBEN)

HEADQUARTERS ADDRESS:

☛ BP 553, Niamey, Niger

☎ (227) 20 72 40 79

✍ mooriben@yahoo.fr

GEOGRAPHICAL AREA COVERED: in Niger, the regions of Tillabéry and Dosso, and the rural area of the Niamey Urban Community. The scope of operation includes three agro-ecological zones: the river zone, the agricultural zone and the agro-pastoral zone.

HISTORY: The first groups were formed in 1988 following talks with the NAAM movements in Burkina Faso and the international NGO Six-S in the Tillabéry and Téra departments. This first generation of groups consisted of six unions, which joined forces to form the MOORIBEN organisation. Their success sparked a steady expansion of the movement, taking membership to 16 unions in 2002, 25 unions in 2006 and 30 unions in 2012.

STATUS: Federation of unions of farmers' groups. Recognised by Order No. 44/MAG/EL dated 14 April 1993, issued by the Ministry of Agriculture and Livestock Farming.

STRUCTURE: MOORIBEN is administered by three main bodies: the general assembly, the board of directors (BD) and the statutory auditor. The federation's governance includes the operation of the federation's BD, the ties between the BD and the management team, the ties between the BD and the Unions, and the federation's overall operation as an umbrella organisation. The management team is made up of employees (technicians and support staff). There are endogenous leaders in the Unions.

MEMBERSHIP: Farmers and agro-pastoralists make up the majority of the membership, but there are also fishermen and craftsmen. The MOORIBEN federation has 57,624 members, of whom 63% are women. Members are distributed among 1,532 groups located in 732 administrative villages.

OBJECTIVES: MOORIBEN wants to work with its members to make agriculture a family-based, professional activity that is sustainable, diversified and self-sufficient.

MISSION: Help to change its members' current farming practices to make agriculture a source of food, income and decent, secure employment.

IMPORTANCE OF STORAGE IN THE ORGANISATION'S OPERATIONS: Since 1996, MOORIBEN has made local grain storage a tool for overcoming food insecurity in the Sahel. MOORIBEN has also helped establish over 350 small and medium-sized storehouses at community and commune level, representing a total storage capacity of roughly 5,000 tonnes.

MAIN AGRICULTURAL AND PASTORAL PRODUCTS STORED AND MARKETED: cereals (mainly millet, sorghum and maize) and legumes (cowpea, sesame and groundnuts).

Tassaght - Mali

HEADQUARTERS ADDRESS:

☛ BP 32, Château district, Secteur III, Gao, Mali

☎ (223) 21 82 02 92 76 04 64 28 66 04 64 28 79 78 20 79

✍ agalwaly@yahoo.fr mohamedaglolo@yahoo.fr sidiaaima@gmail.com

💻 www.tassaght.org Local offices in Ménaka, Bamako and Sévaré

GEOGRAPHICAL AREA COVERED: Tassaght operates in Mali in the Gao, Ménaka, Tombouctou, Kidal, Mopti and Ségou regions.

HISTORY: Tassaght was founded in November 1985 by Malian volunteers. In the Tamasheq language, Tassaght means "link". The association was officially recognised in 1998 under Receipt No. 0524/MAT-DB-DNICT/DAG. In August 1988, after having diversified its activities with support from its many partners (communities, technical and financial partners), Tassaght was granted its framework agreement, No. 77, thereby becoming the first national NGO based in Gao. In 2008, this original agreement was superseded by framework agreement No. 0162/000077 dated 30 January 2008, for a grassroots development support unit (CADB) in Mali.

STATUS: Non-political, non-profit, humanitarian NGO.

STRUCTURE: A general assembly, an oversight committee and an executive committee. To carry out its activities, in addition to its permanent staff of around 10, Tassaght has employed an average of 70 qualified contract staff members per year over the last three years.

MEMBERSHIP: The general assembly is composed of 184 members (92 grassroots FOs).

OBJECTIVES: Provide assistance and advice to rural communities through all sorts of activities designed to secure their social, cultural and economic well-being, and support all of the local initiatives contributing to the collective endeavour by establishing sustainable resources.

MISSION: Reduce poverty, insecurity and all forms of hardship in the areas in which it operates, and enhance the partner communities' well-being through development initiatives while focusing on their involvement and empowerment.

IMPORTANCE OF STORAGE IN THE ORGANISATION'S OPERATIONS: 3,900 tonnes per year, depending on the supplies contributed by member FOs and FOs supported through projects led by the FO.

MAIN AGRICULTURAL AND PASTORAL PRODUCTS STORED AND MARKETED: stockfeed (cakes, cereal brans, etc.) and cereals (millet, rice, sorghum).

Union des Sociétés Coopératives pour la Commercialisation des Produits Agricoles de la Boucle du Mouhoun (USCCPA/BM) – Burkina Faso

HEADQUARTERS ADDRESS:

☛ BP 74, Dédougou, Burkina Faso

GEOGRAPHICAL AREA COVERED: Boucle du Mouhoun region (provinces of Balé, Banwa, Mouhoun, Kossi, Nayala and Sourou).

HISTORY: the organisation was founded in 1993 (eight chairpersons have been elected since then), after the farmers of Quebec (Canada) expressed a desire to share their experience in group marketing. The main reasons for setting up the organisation were substantial cereal surpluses in the region (Burkina's "breadbasket"), the highly atomised nature of agricultural production and a largely unstructured farming industry, which had resulted in a drastic fall in prices (between CFAF 2,500 and CFAF 3,500 per 100kg bag) in the region (in the years 1990-1992) and widespread hardship and poverty.

STATUS: Union of cooperatives recognised under the OHADA Uniform Act on 4 January 2019.

STRUCTURE: 15 simplified grassroots cooperative societies joined together to form the USCCPA/BM. The general assembly is composed of three representatives from each cooperative. There is a 12-member board of directors, a 5-member supervisory board and a 5-member conciliation and arbitration board. There are also four specialised committees (cereals, bissap, oilseeds, inputs and equipment), each with three members.

MEMBERSHIP: 15 simplified cooperatives (3,600 members, including 1,550 women).

OBJECTIVES: Build a democratic smallholder force capable of defending its members' interests, promoting and securing its members' food security, helping its members achieve autonomy and technical and financial empowerment to combat hunger, poverty and food insecurity through increased incomes.

MISSION: Market affiliated members' agricultural products through a group marketing system.

IMPORTANCE OF STORAGE IN THE ORGANISATION'S OPERATIONS: Collection and group marketing of cereal surpluses (members are paid in advance): 3,500 tonnes/year; supplies of inputs and support for agricultural equipment; advice on family farming for 500 farmers; warehousing (central storehouses with a capacity of over 5,000 tonnes).

MAIN AGRICULTURAL AND PASTORAL PRODUCTS STORED AND MARKETED: cereals (maize, millet, sorghum), cowpea, soy bean and organic roselle.

VIIM BAORE cooperative – Burkina Faso

HEADQUARTERS ADDRESS:

☛ 01 BP 335, Ouahigouya 01, Burkina Faso. Location: Avenue de Banfora, Sector 02, Rue 24, Ouahigouya

☎ (226) 24 55 43 85

GEOGRAPHICAL AREA COVERED: nine regions of Burkina Faso, 19 provinces, 474 villages.

HISTORY: Viim Baore was founded on 31 January 2015 (at the cooperative's constituent general assembly). It was officially recognised by Order No. 2015-001/MADTS/RNRD/GVR-OHG/SG dated 16 March 2015. The organisation was created from the cereal banks launched by the FNGN (the national federation of Naam groups) in 1983. The cooperative was created from the PR-GSA, a programme designed to consolidate the network of food security granaries. It was founded by the FNGN, various Naam unions and SOS Faim Belgique. The cooperative was set up to build the operational capacity of the network of food security reserves, along with its governance and its national representativeness.

STATUS: cooperative with a board of directors

STRUCTURE: A sovereign general assembly, a board of directors, an executive board and a supervisory board.

MEMBERSHIP: The cooperative has 37 members (35 member unions and 2 supporting members). It covers 474 villages. It has 474 management committees with 1,896 members, made up of 1,422 women and 474 men.

OBJECTIVE: Combat food insecurity by setting up food security granaries (FSGs) and building their capacity. Specific objectives: build capacity to supply rural populations with staple foods; boost farmers' resources (both women and men) by collecting their commercial production and selling it through a group marketing system; improve the most vulnerable households' food and nutrition security through income-generating activities and social protection initiatives. Cross-cutting objectives: ramp up communication, influence policy-making in Burkina Faso and the region, and conclude strategic and operational partnerships; ensure good governance, professionalise all of the services.

MISSION: Satisfy its members' economic, social and cultural aspirations and foster community building.

IMPORTANCE OF STORAGE IN THE ORGANISATION'S OPERATIONS: Storage (supply and sale in food-deficit areas) is the organisation's primary activity. It has a total storage capacity of 18,000 tonnes: 15 x 300-tonne storehouses (4,500 tonnes) and 450 small 30-tonne storehouses (13,500 tonnes).

MAIN AGRICULTURAL AND PASTORAL PRODUCTS STORED AND MARKETED: cereals, oilseeds, protein crops, wood and non-wood forest products and livestock feed.

REGIONAL FOs' NETWORKS

Association pour la Promotion de l'Elevage au Sahel et en Savane (APESS)

HEADQUARTERS AND EXECUTIVE SECRETARIAT ADDRESS:

04 BP 590, Ouagadougou 04, Burkina Faso
Location: Sector 6, Gounghin district, rue Kondeng Wondbo, door number 1455, Ouagadougou

☎ (226) 25 34 66 36

GEOGRAPHICAL AREA COVERED: APESS operates in 12 countries, nine of which are in the ECOWAS space. These countries are Benin, Burkina Faso, Mali, Niger, Togo, Nigeria, Senegal, Guinea-Bissau and Gambia.

HISTORY: APESS was founded in 1989 in Bobo Dioulasso, Burkina Faso. Today it is an international organisation of livestock farmers in West and Central Africa. It was created to address the climate crises, provide solutions to the shortage of forage and improve livestock farmers' means of subsistence.

STATUS: Association recognised under Act No. 064-2015/CNT dated 20 October 2015 (Burkina Faso).

STRUCTURE: APESS is structured into several different bodies and operational organisations, as follows: The individual members, from family farms, are organised at grassroots level into zones. A federation of zones is called a region. The members of a country's regional committees meet for a general assembly and establish one national coordination unit (CNC) per country. At regional level, the APESS general assembly is the association's supreme decision-making and guidance body. It meets every two years. The board of directors (CA), which includes the chairs of the CNCs, is the body that initiates and plans the activities, based on the guidelines issued by the general assembly. The executive secretariat, backed by the country units, is responsible for implementing the activities planned by the CA.

MEMBERSHIP: APESS has close to 7 million members.

OBJECTIVES: Promote and upgrade family livestock farming; improve social relations; cooperate within the family and with society's other stakeholders, and increase livestock farmers' influence.

MISSION: APESS works in the rural development field in general and more specifically in the sector of traditional livestock farming. Accordingly, it offers its services to stockbreeders and farmers, as well as to the managers and stakeholders of various rural development projects.

Réseau Billital Maroobé (RBM)

HEADQUARTERS ADDRESS:

☛ BP 10648, Niamey, Niger.

☎ (227) 20 74 11 99 (227) 20 74 11 93

✍ billital@intnet.ne blamahjalloh@gmail.com goroubanda@yahoo.fr

GEOGRAPHICAL AREA COVERED: the network spans nine countries: Benin, Burkina-Faso, Mali, Niger, Nigeria, Senegal, Togo, Chad and Mauritania.

HISTORY: Réseau Billital Maroobé is a network of African livestock farmers' and pastoralists' organisations. It was created in 2003 in Dori, Burkina Faso, to play an active role in regional debate on issues concerning livestock farming and pastoralism. Initially, three livestock farmers' organisations from Burkina Faso (Conseil régional des unions du Sahel – CRUS), Niger (Association pour la redynamisation de l'élevage au Niger - AREN) and Mali (Tassaght) joined forces to establish a common framework for consultation and policy dialogue. RBM's scope of operation gradually expanded to include another six countries, namely Benin, Mauritania, Nigeria, Senegal, Chad and Togo. In the process, a growing number of organisations in each country joined the RBM network.

STATUS: RBM is an open, non-profit, non-political association.

STRUCTURE: The network includes a board of directors committee, a permanent secretariat (for regional technical coordination), national branches and a women pastoralists' collective. The regional coordination performs quality control, monitoring and evaluation, and reporting consolidation, while the national branches implement the technical activities on the ground in the different countries.

MEMBERSHIP: Today the network comprises 75 professional organisations, with a total membership of 750,000.

OBJECTIVES: Build self-sufficient pastoral communities working in a secure, peaceful environment to safeguard their mobility in West and Central Africa.

MISSION: Defend its members' economic, political, social and cultural interests.

Réseau des Organisations Paysannes et de Producteurs d'Afrique de l'ouest (ROPPA)

HEADQUARTERS ADDRESS:

Rue Ousmane Ouédraogo, rond-point des martyrs, 09 BP 884 Ouagadougou 09 – Burkina Faso

(226) 25 37 60 07 (226) 25 36 08 25 (226) 25 37 60 43

secretariat@roppa-afrique.org roppa2000@yahoo.fr

www.roppa-afrique.org

GEOGRAPHICAL AREA COVERED: The 15 ECOWAS countries (Benin, Burkina Faso, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Senegal, Sierra Leone, Togo, Cape Verde, Nigeria).

HISTORY: ROPPA was founded in June 2000 in Cotonou after two years of dialogue among the founding members. In each country, there were factors preventing the rural community and family farms from growing and thriving. Accordingly, the founders were keen to build regional, collective capacity to help design, implement and monitor regional sector-specific policies on family farms and the rural sector.

STATUS: Non-profit development association, recognised by the Government of Burkina Faso.

STRUCTURE: ROPPA has a number of governance bodies: (i) the convention, which meets every four years to define the organisation's main strategic orientations; (ii) the board of directors (23 directors, meeting every six months), which implements the convention's decisions and policy directions; (iii) the executive board (11 board members), which more closely monitors implementation of the strategic orientations and decisions of the convention and the board of directors, and (iv) the executive secretariat (15 people), which carries out and implements the multi-year plan through the projects and programmes, and guides the board members in the performance of their duties.

MEMBERSHIP: ROPPA comprises 13 national platforms, along with FOs in Nigeria and Cape Verde that are in the process of setting up national platforms. The national platforms are national representative bodies for the many types of FOs in the countries.

OBJECTIVES: (i) Promote and defend the values of productive, sustainable smallholder agriculture to serve family farms and farmers; (ii) Inform and train FOs' members, drawing on the relevant field of experience of ROPPA members and other development stakeholders; (iii) Encourage and support dialogue and initiatives to structure FOs in each country with a view to their participation/involvement in defining and implementing development policies and programmes for the agricultural and rural sectors; (iv) Promote solidarity among ROPPA's member FOs; (v) Represent its members at regional and international level; (vi) Foster dialogue and cooperation between ROPPA and similar organisations in the region and worldwide.

MISSION: "Foster the development of family farms and smallholder agriculture, and shape policy on the deregulation of national economies and the globalisation of trade".

West African Grain Network (WAGN)

HEADQUARTERS ADDRESS:

☛ 21 BP 150, Quartier Novissi Nord-Est, Lomé, Togo

☎ (228) 22 61 22 72 / 91 54 76 85

✍ roacsiege@gmail.com

GEOGRAPHICAL AREA COVERED: Nine West African countries: Benin, Burkina Faso, Côte d'Ivoire , Ghana, Guinea, Mali, Niger, Senegal and Togo. Membership is open to the other ECOWAS member countries.

HISTORY: The process of setting up the West African Grain Network (WAGN) unfolded from 2008 to 2012, culminating in the network's establishment on 21 March 2013. WAGN was set up at the initiative of private-sector stakeholders in the cereal value chain, with technical and financial backing from USAID's ATP and E-ATP projects, and support from partners such as Farm Foundation, the CTA, AGRA and ECOWAS. The stakeholders lacked a well-structured regional organisation that could take charge of the specific issue of marketing cereals. This initiative is aimed at promoting intra-regional trade in cereals and making the cereal value chains more competitive, in order to create wealth and contribute to food security and economic growth in the sub-region.

STATUS: Non-profit association.

STRUCTURE: A general assembly, a board of directors with an executive board, three specialised committees (market access committee, policy and advocacy committee, institution building and fund collection committee) and an executive secretariat.

MEMBERSHIP: Nine cross-industry cereal-growers committees with 55 grassroots organisations.

OBJECTIVES: Structure the cereal trade in West Africa; ease farmers' and processors' access to national and subregional markets; influence policies and reforms at national and regional level to ensure that they advance the interests of the subregional cereal trade.

MISSION: Help create an environment propitious to free trade in cereals in West Africa and promote a structured cereal trade for optimum stakeholder benefit.

Detailed table of contents

Since 2012, West Africa has implemented a regional strategy of food security reserves underpinned by three complementary lines of defence: local food reserves managed by groups or cooperative organisations, national food security reserves managed by the States and, lastly, the Regional Food Security Reserve (RFSR). This last line of defence is implemented by ECOWAS through the Regional Agency for Agriculture and Food (RAAF).

Local food reserves play a key role in preventing and managing cyclical and economic crises, supplying the market and replenishing national and regional food security reserves. Given the risks and vulnerabilities they face, the farmers' organisations operating local food reserves are urged to more effectively play their role as the first line of defence against food and nutrition insecurity. With support from ECOWAS, these organisations and their regional networks initiated the production of regional reference guidelines that leverage best practices in the field, and the design and deployment of training courses for the managers of local food reserves.

The regional reference guidelines are set out in three complementary documents:

- This «Handbook of Local Food Reserves in West Africa», which is the benchmark guide to the institutional, technical and financial management of local food reserves, based on best practices developed by the farmers' organisations (FOs);
- The «Multi-stakeholder Support Framework for Local Grain Storage in West Africa», which outlines the support mechanisms used by the national and regional public authorities and the international partners;
- The «Charter on the Operation of Local Food Reserves». When the FOs operating local food reserves adopt and abide by the charter, it paves the way to two outcomes: contracts with the national and regional institutions in charge of managing local food reserves, and better coordination with food crisis prevention stakeholders.

All ECOWAS publications on local food reserves are available on the RAAF website: **www.araa.org**