



## Building Resilience in the Sahel through Cereal Banks



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## **Acknowledgements**

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## Executive Summary

A cereal bank is a community-based institution in which a group of persons or the entire community is involved in the management of operations and the acquisition, stocking, pricing and supply of grains. Cereal banks are traditionally used to store crops immediately after the harvest, so that farmers can sell them during the dry season when market prices are higher. Cereal banks allow communities to not have to sell their stocks at a low price during the harvest to meet their cash needs. Cereal banks also allow farmers to not have to buy cereals from vendors at higher prices during the lean season. This study will review the impact of cereal banks over the last 20 years through a literature review and analysis of data collected during interviews and surveys conducted in Chad, Niger and Mali. Overall, the study aims to assist donors and decision makers by investigating and determining the feasibility of cereal banks. A total of 215 cereal banks were assessed.

In the three countries (Chad, Mali and Niger) where USAID Multi-year Assistance Programs (MYAP) are currently being implemented, 1,118 cereal banks have been identified. Overall, 39% of these cereal banks have been supported through USAID Food for Peace (FFP) Title II resources. Local and international NGOs are the principal sponsors of cereal banks (73%) in the Sahel. Other major sponsors (27%) include the United Nations World Food Program (UNWFP), UN Food and Agricultural Organization (FAO) and local governments. The assessed cereal banks have succeeded in providing better grain marketing services to consumers, but the sustainability of these marketing services is uncertain. It should be noted that although “interest group” cereal banks in Chad were better operated than village/community owned cereal banks, they mainly benefited “interest groups” that represented only a few individuals out of the entire population in the village. Overall a third of the cereal banks assessed were not operating efficiently as the cereal banks were losing money. One direct impact of cereal bank mismanagement is the decapitalization of grain stocks over time. 41% of cereal banks have seen their grain stocks decrease since the startup of activities.

The lack of adequate warehouses for storing grains, limited operating capital, and the lack of sufficient training for cereal bank managers are also major constraints, which cereal banks face in the Sahel. However, all communities surveyed in this study were unanimous about the usefulness of cereal banks in the context of building food security and resilience. This resilience can be summarized as: improved accessibility and availability of food; accessibility of food at lower cost; access to credit to persons in need; and a reduction in household migration.

Cereal Bank success stories exist in all three of the countries studied, which should be capitalized upon by replicating the successful methods of creation and management found in these instances. For example, many donors are promoting female-managed cereal banks given the promising achievements observed in the Sahel in that regard. Also more and more, sponsoring agencies are encouraging the creation of cereal banks with a limited number of members, which are easier to manage. This is the case in Chad, where Africare is creating 10-25 person interest group cereal banks, in which farmer’s associations have their own communal lands.

Great efforts have been made by the food security community to render cereal banks sustainable in the Sahel. The current situation of cereal banks in the Sahel should not be compared to that of the year 1990. However, there is an urgent need to develop strategies, tools and policies to help cereal bank institutions to better serve vulnerable households.

## I. Introduction

Since 1973, the Sahel region has been confronted by a series of droughts with disastrous consequences on the population's livelihoods. Sahelian governments have planned and implemented food security strategies to mitigate the negative impacts of these recurrent droughts. At the heart of these strategies, lays the reform of cereal markets and the creation and supply of national cereal reserves. At the community level, nongovernmental organizations (NGO) have promoted cereal banks in order to guarantee people's access to cereal at affordable prices, particularly during the lean season. The Sahel has a long experience of cereal bank operations and management. Unfortunately, there have not been enough studies conducted to assess their performance. Despite the limited information about their performance and impact, many governments in the Sahel, with the support of donors have adopted cereal banks into their national food security strategies.

A cereal bank is a community-based institution in which a group of persons or the entire community is involved in the management of operations and the acquisition, stocking, pricing and supply of grains. Cereal banks are traditionally used to store crops immediately after the harvest, so that farmers could sell them during the dry season when market prices are higher. Cereal banks are run by villages through a management committee elected by the villagers themselves.

The creation of cereal banks responds to a problem experienced by many farmers in the Sahel; the seasonality of rainfall from June – October. The majority of the harvests in the Sahel take place from October – December when food availability is good and prices are affordable. However, according to locals this food self-sufficiency varies from three to six months after the harvest. During the lean season, which generally falls between July and October, vulnerable farmers rely on markets for their food supply, which is when cereal prices reach their highest.

Cereal banks allow communities not to have to sell their stock at a low price during the harvest to meet their cash needs. Farmers will also not be forced to buy cereals from vendors at higher prices during the lean season. As such, the main objectives of cereal banks are: (1) to provide better marketing services for farmers and consumers at the village level; (2) to provide more favorable prices for farmers who sell and consumers who buy grain; (3) to improve availability of grain in villages; (4) to improve terms for borrowing grain during the hungry season; (5) to reduce over-selling (farmers selling too much); (6) to reduce post-harvest losses; (7) to strengthen village-level organizational capacity; and (8) to create village-level emergency food stocks.

According to researchers, the droughts of the early 1980s brought a lot of NGOs and a lot of food aid to the region, and the concept of cereal banks interested all food aid partners including governments and villagers. In 1991, 3,300 cereal banks had been identified in the Sahel with about half of them in Burkina Faso. In 2008, more than 4,000 cereal banks were identified in Niger. WFP supported half of these cereal banks by providing the initial cereal stocks during the first year of operations<sup>1</sup>. In Mali, the government set up the "Supply of State Intervention (SIE)" in 2005/2006. The purpose of the SIE was to reinforce cereal stocks closer to rural populations. These "proximity" stocks, known as community cereal banks, were established in all 702 municipalities of Mali. (Rashid et al.2010). Cereal banks in Mali are widely recognized as essential safety nets. In Mauritania, cereal banks were re-introduced in 2005-2007 under the "Intervention Prolongee de Secours et de Redressement (IPSR)" developed by WFP in collaboration with Mauritanian authorities. This intervention allocated a total of 32,131 tons of cereals to reconstitute

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<sup>1</sup> <http://www.irinnews.org/Report/80953/NIGER-Are-cereal-banks-best-option-to-fight-hunger>

cereal stocks in the central and southern parts of Mauritania. Now the government of Mauritania is promoting the legalization/formalization of existing cereal banks into agricultural cooperatives.

There is an important conceptual debate about the true nature of grain banks: are they economic or social instruments?<sup>2</sup> The failure of cereal banks in the Sahel brought a heated debate leading some people to question the relevance of cereal banks as a food security strategy. The lack of sustainability of cereal banks has been a long time criticism by its detractors. On the other hand, Sanfo (2011) argues that cereal banks are social instruments (safety nets) that have been commonly evaluated on the basis of their economic performance. He states that this is a major contradiction since no safety net is expected to generate profit or be self-sustainable over time. The main goal of grain banks is to ensure consumer access to affordable cereals all around the year for multiple years, which means that grain banks are expected to sell below market price.

The IFPRI policy report on cereal banks (October 2010-March 2011) reported that “there seems to be little understanding about the precise role of grain banking institutions, and even less evidence about their impact on vulnerable consumers. Community-based grain banks are nowadays commonly perceived as “same old, same old”, and thus easily dismissed by donors and policymakers. Although their performance remains indeed unclear and controversial, we argue that upgrading longstanding and widespread institutions, like grain banks, are significantly more effective and less costly than building brand new institutions.”<sup>3</sup>

**This study reviews the impact of cereal banks over the last two decades through a literature review and analysis of data collected during interviews and surveys conducted in Chad, Niger and Mali. Some key areas or questions that are discussed in the paper include: are cereal banks sustainable activities in the Sahel? Can cereal banks be a development tool as well as a safety net and resilience building measure? Are the sellers of grain in the Sahel speculators?**

Overall, the study aims to assist donors and decision makers by investigating and determining the feasibility of cereal banks.

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<sup>2</sup> Jean Martin Bauer, WFP Market Specialist

<sup>3</sup> IFPRI - West African Grain Banks in a New Era of Food Crisis – Policy Report October 2010 – March 2011

## II. Methodology

To quantitatively review the impact and constraints of cereal banks, FFP Dakar staff randomly selected 219 villages benefiting from USAID-funded MYAP programs in Chad, Mali and Niger (Table 1). A total of 215 cereal banks found in these villages (i.e., 125 in Niger, 56 in Mali and 34 in Chad) were assessed through the use of questionnaires and interviews. The questionnaires were designed and field tested in Niger with inputs from the MYAP implementing partners.

The questionnaire respondents were the management committee members of selected cereal banks. Also some key actors from NGOs and government food security specialists were interviewed. Data collection was done by the PL 480 program field agents in Chad, Mali and Niger. The data recorded either by the NGO partners in the field or by FFP Dakar staff was analyzed using SPSS+ and the descriptive statistical analysis (frequency, mean and t-test) method.

Table 1: Selected Sample

Country			Number of villages	Number of cereal banks (CB)
Chad	Region	Atti	8	9
		Abeche	22	25
	Total	30	34	
Mali	Region	Gao	10	9
		Mopti	18	18
		Tumbuktu	30	29
	Total	58	56	
Niger	Region	Agadeze	21	21
		Diffa	20	20
		Dosso	23	23
		Tahoua	25	23
		Tilaberi	8	8
		Zender	30	30
	Total	127	125	
TOTAL			215	215

The methodology used for collecting the survey data was cost effective, but the following weaknesses may have compromised the quality of the data collection:

- The low education level of some of the data collection agents in the field;
- Lack of transparency and access to important inventory data (e.g., stocks, cash in bank, etc.) in some cereal banks;
- The initial supply of grain was provided by NGOs, so the members of the management committees did not know the buying price and the other costs associated with the supply.

### III. Results and Discussion

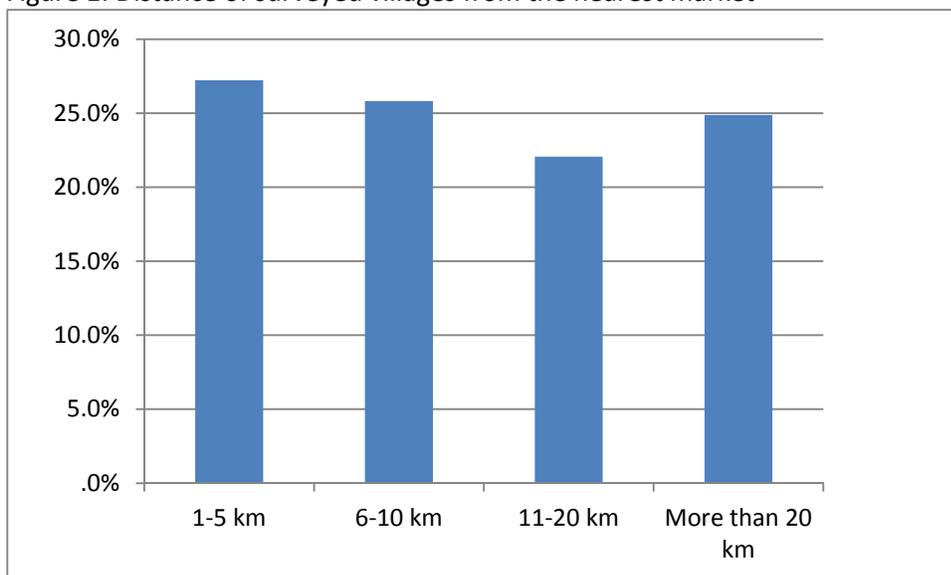
The survey shows that there is some homogeneity among the surveyed villages in the Sahel. The average population per village is 1,579 persons (or an average of 259 households per village) of which 53% are women (Table 2). The average population of a village in Mali (2,148 persons) appears to be much larger when compared with the average village size in Chad (1,492 persons) and Niger (1,375 persons). This is probably due to the fact that most of the cereal banks in Mali have been created at the commune level by the government to maximize the number of beneficiaries per village. The average family size is six, but there are significant variations with Niger having the largest average (nine persons per family).

Table 2: Demographic characteristics of surveyed villages

Country	Region	Total Population of the village	Total number of Women	Number of Households
Chad	Atti	1235	708	228
	Abeche	1586	841	335
	Average	1492	806	307
Mali	Gao	1835	922	346
	Mopti	1851	964	242
	Tumbuktu	2533	1340	415
	Average	2148	1121	346
Niger	Agadeze	1212	767	207
	Diffa	736	387	147
	Dosso	2177	1175	238
	Tahoua	1960	875	292
	Tilaberi	1110	612	224
	Zender	886	471	160
	Average	1375	718	210
AVERAGE		1579	832	259

The majority of these villages are isolated or in remote areas. On average, these villages are located 19 km from the main road and 17 km from the closest market (Figure 1). There are significant variations within country or between countries with regards to village proximity to main roads or markets. For example, villages in the Agadeze region of Niger are on average, located 56 km from markets, whereas markets in Dosso and Zender are located seven or eight kilometers away, implying that households may spend at least 1-2 working days traveling to buy cereals in markets. Most of these villages are found in the remote regions of Agadeze (75% of villages) and Diffa (45%) in Niger, and Timbuktu (30%) in Mali.

Figure 1: Distance of surveyed villages from the nearest market



More than 60% of villages in FFP supported villages are located in areas that are difficult or very difficult to access with some of them separated from the rest of the country for an average of three months during the rainy season. About 66% of the villages experience food deficits on a yearly basis and 36% of the villages do not have any cereal markets close enough to supply them with food (Figure 2). Villages mostly affected by such market related food access difficulties are usually found in the remote regions of Gao in Mali, and Agadeze and Diffa in Niger.

The households in these villages are made up primarily of agro-pastoralists. Their livelihoods are based on rain-fed crop production complemented by small livestock sales and remittances.

Though the quality of education is questionable, particularly in Chad, 80% of the villages in the survey have access to schools (Table 3). Less than half (43%) of the villages have health centers, 27% have markets and only 7% have microfinance institutions. These statistics do not adequately illustrate the unequal distribution of this infrastructure according to countries and regions, as shown in Table 2.

Figure 2: Distribution (%) of villages by level of food security

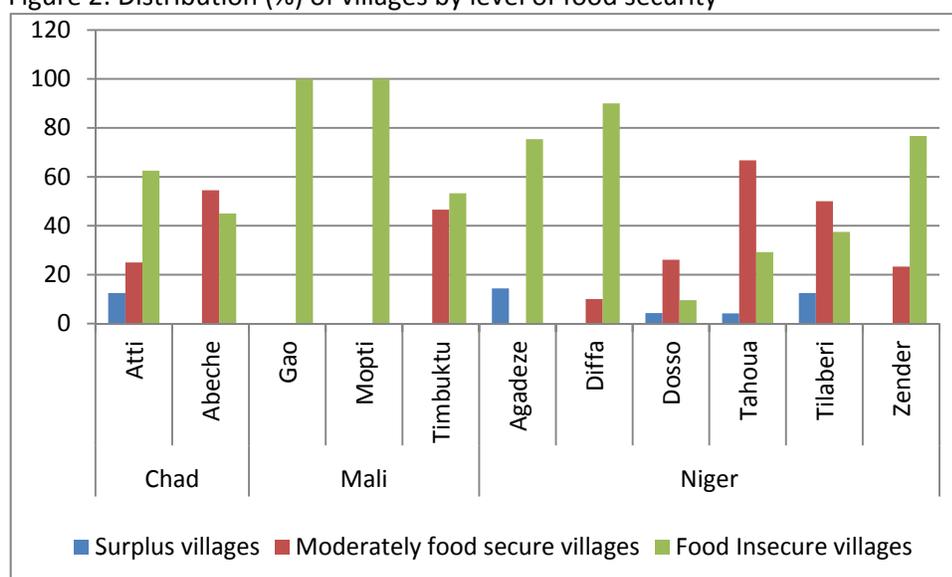


Table 3: Percentage of villages having selected facilities

Country	Region	School	Health Center	Market	Microfinance
Chad	Atti	100	13	13	13
	Abeche	91	27	46	23
Mali	Gao	70	40	10	0
	Mopti	79	33	50	17
	Timbuktu	67	37	17	13
Niger	Agadeze	90	52	10	0
	Diffa	95	50	55	10
	Dosso	100	70	30	0
	Tahoua	96	52	8	0
	Tilaberi	87	25	0	0
	Zender	95	51	27	2
TOTAL		88	43	27	7

### A. Assessment of Cereal Banks

Village-based cereal banks can be defined, at least according to their original inventors, as cereal stocks owned and managed by communities in order to ensure availability and easy access to affordable staple food for vulnerable consumers throughout the year. However, since its introduction, the intervention has gone through so many changes based on sponsors' objectives, selection of membership or

participating beneficiaries, type of operations, management structures and, sometimes the prevailing local conditions.

In the three countries (Chad, Mali and Niger), where MYAPs are currently being implemented, 1,118 cereal banks have been identified: 879 (79%) cereal banks are located in Niger; 178 (16%) in Chad; and 61 (5%) in Mali (Table 4). Overall, 39% of cereal banks have been supported through FFP Title II resources. Over 29% and 99% of cereal banks in Niger and Chad, respectively, but only 7% in Mali is supported with Title II resources.

Table 4: Number of villages with MYAP supported cereal banks by country and implementing partner

Country	NGOs	Total Cereal Banks	Total supported Cereal Banks with Title II resources	Percent
Niger	Africare	337	79	23.44
	CPI	436	150	34.40
	CRS	106	29	27.36
	<b>S/Total</b>	<b>879</b>	<b>258</b>	<b>29.35</b>
Chad	Africare	178	176	98.88
	<b>S/Total</b>	<b>178</b>	<b>176</b>	<b>98.88</b>
Mali	Africare	24	4	16.67
	CRS	37	0	0.00
	<b>S/Total</b>	<b>61</b>	<b>4</b>	<b>6.56</b>
<b>Total</b>		<b>1118</b>	<b>438</b>	<b>39.18</b>

Source: Title II PVOs in Chad, Mali, Niger,

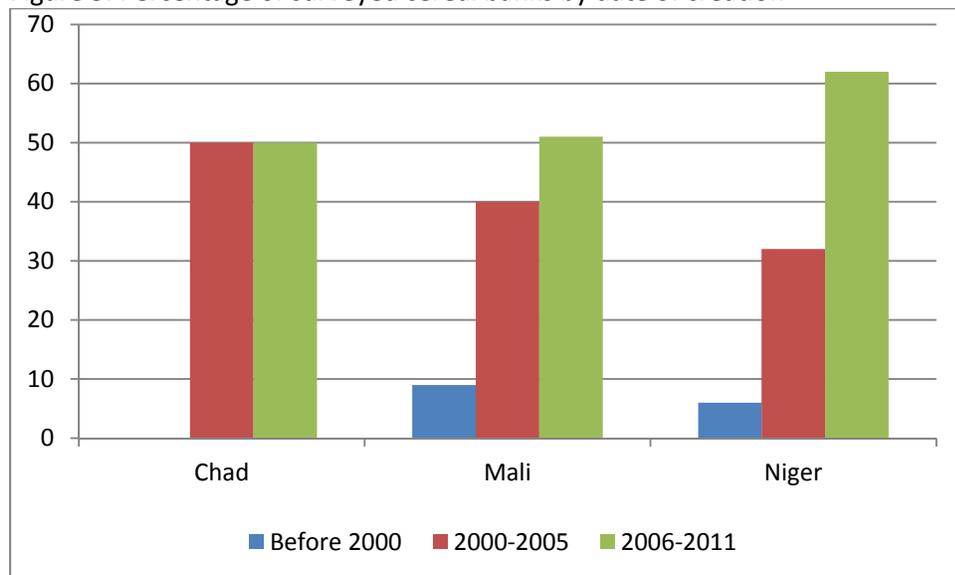
### Common Types of Cereal Banks

As shown in Figure 3, with the exception of Chad, the creation of cereal banks in the Sahel started prior to the year 2000. The number of cereal banks significantly increased in all countries surveyed during the period from 2000 – 2006. This was partly due to the accelerated promotion of the intervention, particularly in Niger during the 2004 – 2005 drought in the Sahel. 81% of the surveyed cereal banks belonged to communities or villages while 19% were owned by farmer associations. Chad had the largest number of farmer association owned cereal banks (76%) due to problems encountered with community managed cereal banks in Chad.

The NGO Africare promotes cereal banks owned by village-based “interest groups,” which are groups composed of a small number of individuals (e.g. >10 persons) that often share specific relationships such as family membership, business interest, ethnic, social or economic status, etc. Most of the stocks in “interest group” owned cereal banks are grown on communal lands collectively cultivated by the group. The majority of the surveyed cereal banks (93%) stated that they purchase cereals such as millet, sorghum or rice during the harvest when prices tend to be lowest (October – December) and sell them during the hungry or lean season (June – October) when cereals become scarce and prices tend to be at their highest. Only a few (4%) of the cereal banks buy and sell grain without storing. These types of

cereal banks are particularly common in the northern parts of Niger (Agadeze region) and Chad (Batha region) where most clients are highly mobile semi-nomadic pastoralists.

Figure 3: Percentage of surveyed cereal banks by date of creation



### Major Sponsors of Cereal Banks

Local and international NGOs are the principal sponsors of cereal banks (73%) in the Sahel. Other major sponsors (27%) include WFP, FAO and local governments. For example, 36% of cereal banks surveyed in Mali were sponsored by the Government of Mali (GOM) through its communal cereal bank project. This project created 702 cereal banks at the commune level throughout the country. The cereal banks are a part of the GOM’s food security strategy and are supervised by the National Food Security Commission. In Niger several government projects also support the creation of cereal banks.

Among the cereal banks surveyed, 16% had been rehabilitated. The reasons listed for the rehabilitation of these cereal banks were: mismanagement of cereal bank resources (36%); successive droughts (23%); no reimbursement of cereal loans contracted (14%); and other factors (27%). Cereal bank mismanagement can be defined as the implementation of inadequate policies and practices. The most relevant ones are: overextension, poor lending, lack of internal controls and poor planning in the areas of business and management.

### Management of Cereal Banks

The organizational structure and management of cereal banks depends on the sponsoring agencies. Certain cereal banks function with three levels of management structures: a general assembly, an oversight committee, and a management committee. Other cereal banks operate with only a management committee. The cereal bank management guidelines are mostly provided to the beneficiary communities through trainings implemented directly by the sponsoring agents (e.g. NGOs) or by collaborating partners (e.g. WFP). The majority of the cereal banks in the survey had a management committee as well as an oversight committee. The average number of members in the management committees was reported as being six of which two were generally women. Due to their

superior managerial skills, all the sponsors encourage the participation of women in the cereal bank management committees. However, due to cultural or social bias, in reality very few women participate in the cereal bank management committees. Despite the limited participation of women, one can categorize cereal banks into three groups based on the number of women in the management committees (Table 5):

- Male management: (3 or less women in the management committee )
- Mixed management: (4-5 women in the management committee)
- Female management: (5 or more women in the management committee)

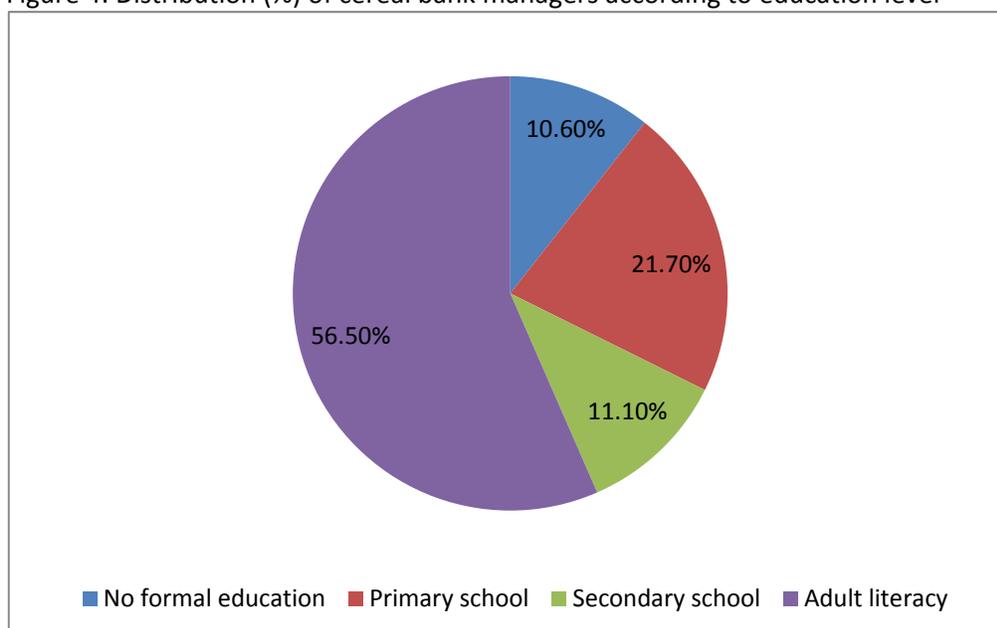
The data presented in Table 5 illustrates that 55% of the cereal banks in the survey (212 cereal banks) have male-dominant management committees; 32.1% are mixed; and only 13% are managed by women.

Table 5: Distribution of cereal banks according to management classes

			Management Class			Total
			Male management	Mixed Management	Female management	
Country	Chad	Count	16	15	3	34
		%	47.1%	44.1%	8.8%	100.0%
	Mali	Count	35	11	10	56
		%	62.5%	19.6%	17.9%	100.0%
	Niger	Count	65	42	15	122
		%	53.3%	34.4%	12.3%	100.0%
Total		Count	116	68	28	212
		%	54.7%	32.1%	13.2%	100.0%

96% of the cereal banks in the survey have a nominated manager and 90% of them have an oversight committee that guides the cereal bank management (cereal sell date, selling price, sales method – cash, credit, etc.). The levels of education and training received by managers are among the critical factors determining the performance of the cereal banks. Inadequate training for managers was identified as a major constraint by the cereal bank beneficiaries interviewed. For instance, only a quarter of the managers had received any formal training in cereal bank management (Figure 4). The situation is even worse in Chad and Mali where almost half the cereal bank managers have not received adequate or any training.

Figure 4: Distribution (%) of cereal bank managers according to education level



### Sources of Cereal Bank Funding

Most surveyed cereal banks received their initial grain supply from their sponsors. The revenue generated from this first supply was also intended to serve as capital for future operations. According to Table 6, 71% (143 out 207) of the grain supply of cereal banks in 2010/2011 was from purchased grains, and 12% from donors; in general, these statistics reference new cereal banks or rehabilitated ones. About 14% of the surveyed cereal banks were supplied from the cereal production of communal lands and by purchasing grains. This supply method is more frequent in Chad, due to the high number of interest group cereal banks.

Table 6: Sources of cereal banks stocks

Country		Sources of cereal bank's stocks					Total
		Buying	Beneficiaries	Donor	Buying/ Donor	Buying/ Beneficiaries	
Chad	Nb CB	8	6	1	0	18	33
	Percent	25.0	18.8	3.1	.0	53.1	100.0
Mali	Nb CB	44	2	0	5	1	52
	Percent	84.6	3.8	.0	9.6	1.9	100.0
Niger	NB CB	91	2	23	2	0	118
	Percent	77.1	1.7	19.5	1.7	.0	100.0
Total	NB	143	10	24	7	18	207
	Percent	70.8	5.0	11.9	3.5	8.9	100.0

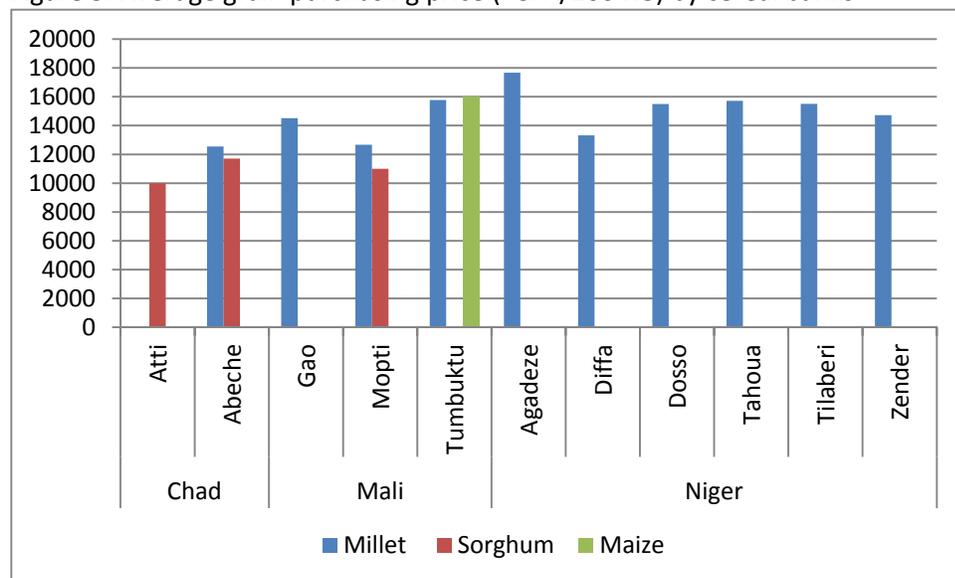
Millet is the main cereal purchased and sold by cereal banks (70%); sorghum (in Chad) and rice and maize are sold as well. Contrary to what people think of cereal banks, in terms of providing more favorable prices for farmers who sell and consumers who buy grain, and reduction in grain over-selling (farmers selling too much), the survey results show that only a few cereal banks (18%) were supplied in 2010/2011 from villagers who presumably got higher prices. In the majority of cereal banks, grains were purchased in grain surplus villages (35%) and markets (27%) at market prices. For 15% of cereal banks, grain purchases were done either in the villages or in the markets. The hypothesis that cereal banks could reduce grain overselling by farmers or providing more favorable selling prices doesn't hold today in the survey villages because the cereal banks buy grain at market prices.

### Average Cereal Bank Grain Purchase and Sale Prices

Figure 5 illustrates how well the cereal markets in the region are integrated according to the production regions (agriculture) and the consumption areas (pastoralist zones). After the 2010/2011 harvest, the average price of a sack of 100 kg of millet cost between 12,000 FCFA and 13,000 FCFA (120-130 FCFA/Kg) in Abéché (Chad), Mopti (Mali) and Diffa (Niger), which are cereal production zones. In Agadeze, Tahou, Tilaberi (Niger) and Timbuktu (Mali), which are pastoralist areas, the cereal banks bought millet at a cost of on average between 14,500 FCFA and 18,000 FCFA (145-180 FCFA/Kg). The price difference between these zones can be explained by the transportation cost and other associated costs. For instance the average transportation cost of a sack of 100 Kg of millet was 1,850 FCFA in Agadeze, 1,730 FCFA in Timbuktu, and 1,158 FCFA in Gao.

These prices vary also according to the cereal purchasing period and the regions. In Chad, the cereal bank's stocking of cereals took place in October and December when millet prices were 120-150 FCFA/Kg. In Niger, the stocking of cereal banks started in October 2010 and continued up until June 2011, depending on the cereal bank's cash flow. During this time, the prices fluctuated between 150 and 200 FCFA/Kg for millet.

Figure 5: Average grain purchasing price (FCFA/100 KG) by cereal banks



According to Table 7, cereal banks purchased millet in net consumption villages (food deficit villages) in 2010/2011 at 152 FCFA/Kg on average while the average market price was 161 FCFA/Kg. In net surplus villages (food surplus villages), the average price was 146 FCFA/Kg. However, after adding the transportation costs, the millet parity price in net consumption villages was the same as in net surplus villages. In recent years, grain producer prices have been increasing in the Sahel. A combination of factors can explain these rising grain prices, notably the large institutional (WFP and NGO) procurement of grains and the governmental purchases of food for their national reserves.

Table7: Cereal bank millet purchasing price (FCFA/Kg) by location

	Number of cereal bank	Average purchasing price (FCFA/Kg)
Net-consumption village	22	152.00
In the market	33	161.00
Net-surplus village	55	146.00
Net-consumption and net-surplus village	23	146.00
Net-consumption village and market	4	116.00
Total	137	149.00

### Grain Sales by Cereal Banks

#### Do cereal banks succeed in providing better services to their clients?

The answer is yes, but it depends upon the context in which these cereal banks are working. In most cases, cereal banks sell or lend grain to their clients below the prevailing market prices. Another big advantage of having a cereal bank in a village is that clients don't need to spend days traveling to get grains from distant markets. However, while cereal banks provide easy access to grains at low prices to clients, such convenient services appear to eventually compromise the sustainability of these cereal banks. Therefore, in order to improve their sustainability and cost-effectiveness, some cereal banks are currently modifying how they do business. One example is eliminating grain lending to prevent non-payment.

Although sometimes influenced by sponsoring agencies, for the most part the methods (i.e. loan or cash) and the prices which cereal banks use to sell their stocks are determined by their governing bodies. Most of the cereal banks (>65%) in the survey sold their grains for cash, while some of them (<35%) sold the grains for cash or provided loans.

According to the survey most cereal banks sold their 2010 – 2011 grains stock between May and October. The average selling prices were 177 FCFA/Kg for millet, 125 FCFA/Kg for sorghum, 195 FCFA/Kg for maize and 407 FCFA/Kg for rice. As shown in Table 8, most of the cereal banks in the survey sold their grain below the market price. This indicates that most cereal banks were selling their stocks at subsidized prices while the few selling above the market prices were most likely profit oriented cereal banks. This profit oriented cereal banks were mainly found in Chad where most cereal banks were operated by "interest groups." For example on average in Chad, millet was sold at CFA 217/Kg by the

cereal banks in Abeche and in Atti region, at the same time that it was being sold at 215 FCFA/Kg on the local markets.

Table 8: Comparison of Cereal Banks grain sale and market prices

Country	# of CBs Selling Grains at Prices		Total
	Above or Equal to Market price	Below Market Price	
Chad	16	12	28
Mali	9	42	51
Niger	17	78	95
Total	42	132	174

Paradoxically, the findings have shown that 17% of cereal banks sold their 2010 – 2011 grains at prices lower than their original purchase price. The investigations have revealed that this sub-sample of cereal banks, bought their 2010 – 2011 grains at higher prices (180-250 FCFA/Kg of millet) during a time when the overall average purchasing price of millet was 150 FCFA/Kg. The average selling price of millet by the cereal banks was 177 FCFA/Kg during the lean season.

In Niger NGOs such as CECI supported cereal banks, to sell grains at sponsored prices in order to help households mitigate the impact of the 2010 food crisis. For PCDII and Mercy Corp’s sponsored cereal banks, the grain sales below purchase price could have been motivated by the risk of losing stocks due to pest infestation.

The visions of sponsor agencies control how cereal banks are setting grain selling prices. A United Nations Development Program (UNDP) cereal project manager<sup>4</sup> has said that “cereal banks are unique and should not be compared with traditional businesses. We are not trying to necessarily generate wealth. The cereal banks are for survival.”

Plan International reported that in spite of failures and weaknesses recorded in the management of cereal banks in the past, this activity remains relevant to the Nigerian context as it is a food security and famine disaster risk reduction tool<sup>5</sup>. Grain banks are also of interest for humanitarian organizations as they provide an appealing conduit to deliver resources to the poor in remote villages (Jean Martin Bauer).

**In conclusion, the assessed cereal banks have succeeded in providing better grain marketing services to consumers. However, the sustainability of these marketing services is uncertain because 80% of the surveyed cereal banks sold grains at prices below the market prices. The assumption behind this practice is that commercial grains traders are speculating at the cost of vulnerable customers.**

### **Are Commercial Grain Traders Speculators?**

To answer this question, gross margins were computed by comparing grain purchase prices to their selling prices in the markets. The magnitude of the gross margins elucidate whether the grains traders

<sup>4</sup>Laouali Sam, the Director of the anti-poverty UN Development Programme in Zinder that launched 220 cereal banks between 2004 and 2007; reported by IRIN – Niger: Are Cereal Banks Best the Option to Fight Hunger?

<sup>5</sup>Food Crises: the Role of Community-based Grain Banks in West Africa – Innovation Geniuses (practitioners), Plan Niger

are speculators or not. Based on the data availability, the gross margins were computed for millet, sorghum and maize. Rice was not included in the analysis due to insufficient data.

The average gross margin computed for millet was 48 FCFA/Kg or 8 FCFA/Kg<sup>6</sup>. The average gross margin was 47 FCFA/Kg in Niger and 43 FCFA/Kg in Mali, which indicates that the millet market in these two countries was highly competitive and well integrated. On the other hand, the gross margin for millet in Chad was 75 FCFA/Kg. The gross margin in Chad reflects the 2010/2011 agricultural season which was a drought year even though it was an excellent season in the Sahel in general. The gross margin for sorghum was 80 FCFA/Kg in Chad and 59 FCFA/Kg for maize in Mali.

These gross margins are reasonable margins given the risky character of the coarse grain business in the Sahel, particularly considering the unpredictable rainfall during the 2011/2012 agricultural season. These gross margins should cover the grain storage and transport costs and the opportunity cost of the operating capital (2% per month for microfinance loan). The grain transportation cost takes an important share of the grain trader's gross margin due to the poor road conditions in the region. The grain transportation cost represents 30-40% of the gross margin which varies slightly between regions. In the pastoralist areas, the average transportation cost of a sack of grain was 1,088 FCFA in Gao (Mali), 1,600 FCFA in Timbuktu (Mali), and 1,880 FCFA in Agadeze. In the grain production regions, the transportation cost (between villages) varies from 250 FCFA to 500 FCFA per sack or 2.5-5 FCFA/Kg. The low gross margin for coarse grains in West Africa discourages many traders to store grains for a long period. It also reflects the grain market in general in the Sahel, which is highly competitive. **Therefore, commercial grain traders in the surveyed areas should not be considered to be speculators. Their business margins explain the economic context of this activity in the Sahel.**

Table 9: Commercial gross margins for grains (FCFA/Kg)

Type of Cereal	Country	NB of Cereal Banks	Average (FCF/Kg)	Std. Deviation
Millet	Chad	8	75	43.75
	Mali	27	43	35.05
	Niger	78	47	29.91
	Total	113	48	32.83
Sorghum	Chad	2	80	28.28
Maize	Mali	14	59	45.48

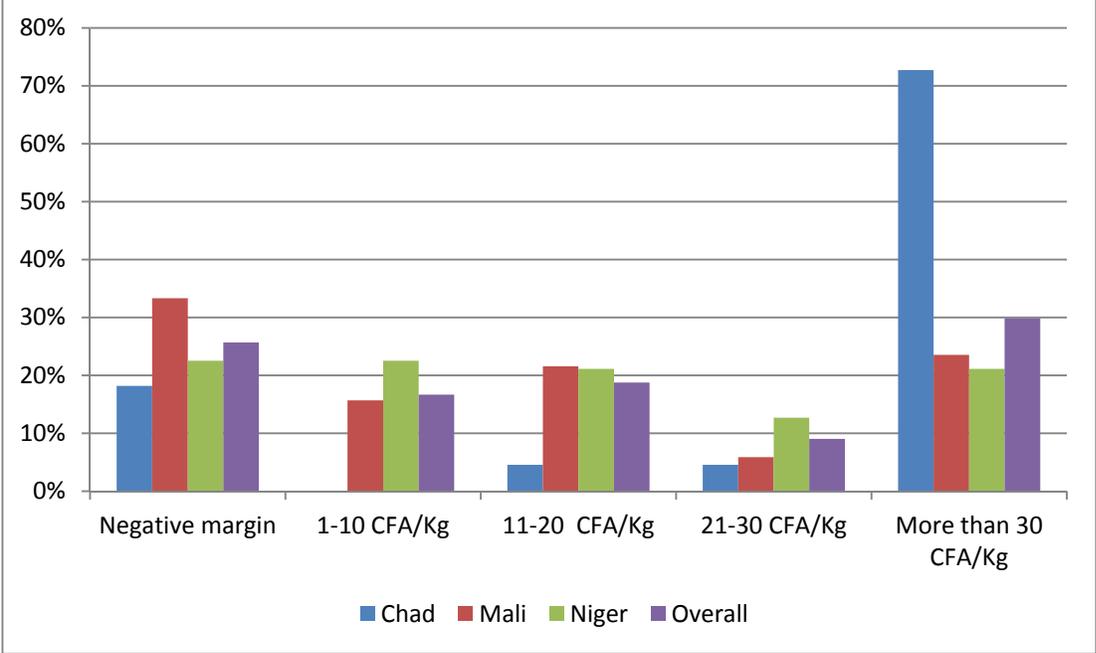
### Operating Efficiency of Cereal Banks

The sustainability of the cereal banks surveyed has been evaluated based on how efficiently they are operating. The marketing net margin was one of the criteria used to assess their performance. This criterion reflects the managerial behavior of cereal banks. For instance, a cereal bank that gives grain loans will have cash flow problems when it needs money to buy cereal at low prices. Consequently the cereal bank's net marketing margin will be low.

<sup>6</sup> For six months of storing period

The net margins were computed by subtracting the total cost (e.g. grain purchase transportation cost, packaging, storage, handling, and remuneration of the cereal bank manager in some cases) of a kg of grain from its selling price. Overall a third of the cereal banks assessed were not operating efficiently as the cereal banks were losing money. A third (34%) of the cereal banks surveyed in Mali had negative net margins; in addition to 30% in Niger and 18% in Chad also with negative net margins. 29% of the cereal banks had net margins above 30 FCFA/Kg and are thus the most efficient cereal banks; 75% of the cereal banks in this group were found in Chad. However, it should be noted that although cereal banks in Chad were better operated than village/community owned cereal banks, they mainly benefited “interest groups” that represented only a few individuals (<15 persons) of the population in the village.

Figure 6: Comparison of cereal banks based on their level of operating efficiency.



**Impact of Cereal Bank Mismanagement**

One direct impact of cereal bank mismanagement is the decapitalization in grain stocks over time. To assess this trend, the amount of the initial endowment of grains to the cereal banks was compared with the cereal banks last grain supply. The findings show that on average, the annual grain supply of cereal banks was maintained over time. The first endowment quantity was on average 9,244 Kg of grain against 9,205 Kg for the last supply<sup>7</sup>.

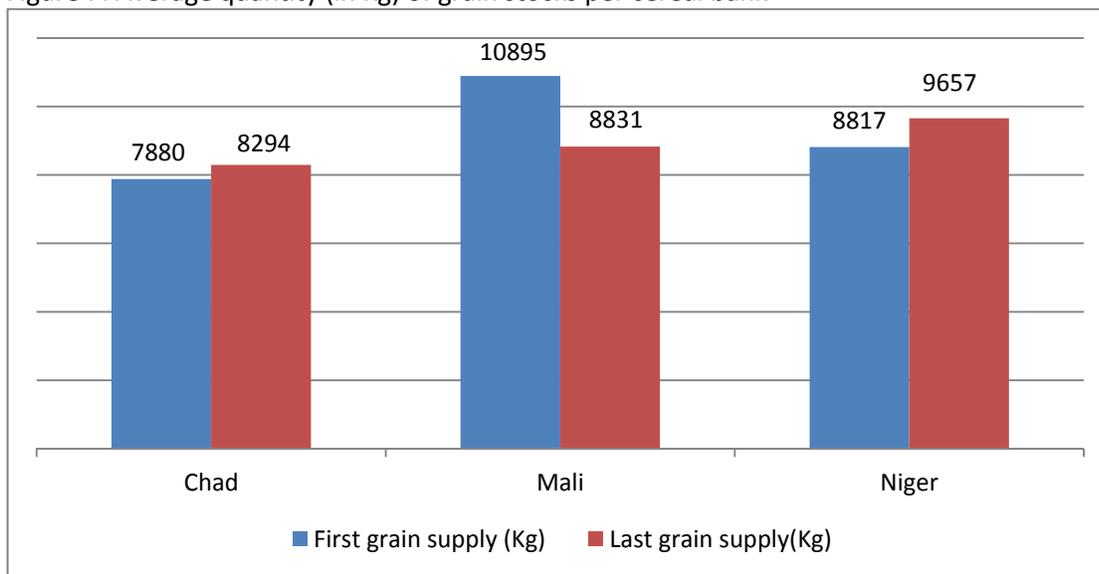
However, these statistics hide the great disparity between the performance of cereal banks across the region and the cereal bank management types. In Chad, a slight increase in supply was observed, which is indicative of stronger performance in a high number of cereal banks in this country. In comparison, in Mali the majority of cereal banks had decapitalized grain stocks. The difference between the initial first year supply in cereal banks in Mali and the last supply quantity was 2,065 Kg (-25%) on average. This

<sup>7</sup> These averages were computed based on 188 cereal banks for the first endowment and 198 cereal banks for the 2010/2011 supply

decapitalization of these stocks can be explained by the fact that the majority of these cereal banks are created communally and monitored by government services.

In Niger there is a slight improvement in the consistency of cereal bank grain supplies, but this increase in grain quantity is related to the rehabilitation of old cereal banks by Title II private voluntary organizations (PVO). For instance, 20% of surveyed cereal banks in Niger have had their cereal stocks replenished. In the pastoralist zone of Agadeze, the first year grain endowment was on average 10.5 metric tons per cereal bank and 8.1 metric tons per cereal bank in 2010/2011. The grain supply quantity was decapitalized by two metric tons on average over time in the Agadeze region. In the Zinder region where Counterpart International (CPI) replenished some cereal banks, the grains supply increased from 8.6 metric tons to 9.7 metric tons on average per cereal bank

Figure 7: Average quantity (in Kg) of grain stocks per cereal bank



Based on the data in Table 9, cereal banks managed by women increased their stored grain over time. This quantity increased from 7,417 to 9,548 Kg per cereal bank on average (+28%). That supports a hypothesis that woman management cereal banks are better managed. In contrast, for man and mixed management cereal banks, the stocks have been decapitalized over time. Many of them have been replenished with grain supplies.

**The main reasons for stock decapitalization are: unpredictable food security shocks and/or rampant inflation in food prices; unpaid grain loans; and the incapacity of cereal banks to renew their supply because they are selling grain at prices below the market prices.**

Table 9: Average quantity (in Kg) of grain supply per cereal bank according to management type

Type of Management		First supply quantity (Kg)	Last supply quantity (Kg)
Male management	Mean	9,788	9,223
	N	104	106
Mixed Management	Mean	8,965	9,039
	N	62	64
Woman management	Mean	7,417	9,548
	N	22	28
`	Mean	9,239	9,209
	N	188	198

The grain stock decapitalization was also assessed from another angle. For each cereal bank, the grain inventory status was assessed by comparing the first quantity of grains provided by the sponsor and the grain quantity purchased in 2010/2011. A negative difference indicates that the inventory has decreased since the first endowment. A difference equal to zero points out the inventory has been stable over time. A positive difference shows that the grain inventory has grown. Based on cereal banks with complete data (184 out 218 cereal banks), 41% of cereal banks have seen their grain stock decreasing since the startup of activities, 21% have stable grain stocks. 38% the cereal banks had grain inventories that increased over time. Across the countries, there is no significant difference in this distribution. A slightly increase in the cereal banks with an increased inventory in Niger (42% as compared 31% in Mali and 38% Chad) was observed. That could be explained by the cereal bank rehabilitation policy applied by certain NGOs during these last three years.

T-tests were performed to assess the impact of some variables (countries, cereal bank, management type (man, woman, mix), remuneration of the cereal bank manager) on the distribution of the cereal banks. The conclusion was at 95% confidence level, education level of the manager, type of management, and the remuneration of the manager did not affect the this distribution. However, we found that 46% cereal banks managed by women had an increased inventory against 43% for cereal banks with mix management and 35% for cereal banks managed exclusively by men.

To conclude this section, Dr. Berg stated in 1998 that “ironically, but not surprisingly, the cereal banks that tend to survive are those that help their members the least – they don’t buy at above-market prices, they don’t sell at below-market prices, they don’t loan to people in need, and they aren’t located in the poorest areas. These are the cereal banks that act the most like private traders.”

Table 7: Distribution of cereal banks according to their grain inventory status

Country				Grain Inventory Status			Total	
				Decreasing supply	Stable supply	Increasing supply		
Chad	Region	Atti	N	3	0	4	7	
			%	42.9	.0	57.1	100.0	
		Abeche	N	11	4	7	22	
			%	50.0	18.2	31.8	100.0	
	<b>Total</b>			N	<b>14</b>	<b>4</b>	<b>11</b>	<b>29</b>
				%	<b>48.3</b>	<b>13.8</b>	<b>37.9</b>	<b>100.0</b>
Mali	Region	Gao	N	3	1	4	8	
			%	37.5	12.5	50.0	100.0	
		Mopti	N	6	3	8	17	
			%	35.3	17.6	47.1	100.0	
		Timbuktu	N	17	6	5	28	
			%	60.7	21.4	17.9	100.0	
<b>Total</b>			N	<b>26</b>	<b>10</b>	<b>17</b>	<b>53</b>	
			%	<b>49.1</b>	<b>18.9</b>	<b>32.1</b>	<b>100.0</b>	
Niger	Region	Agadeze	N	7	5	3	15	
			%	46.7	33.3	20.0	100.0	
		Diffa	N	6	5	6	17	
			%	35.3	29.4	35.3	100.0	
		Dosso	N	3	3	8	14	
			%	21.4	21.4	57.1	100.0	
		Tahoua	N	9	5	8	22	
			%	40.9	22.7	36.4	100.0	
		Tilaberi	N	2	0	5	7	
			%	28.6	.0	71.4	100.0	
	Zender	N	8	6	13	27		
		%	29.6	22.2	48.1	100.0		
<b>Total</b>			N	<b>35</b>	<b>24</b>	<b>43</b>	<b>102</b>	
			%	<b>34.3</b>	<b>23.5</b>	<b>42.2</b>	<b>100.0</b>	
<b>TOTAL</b>			N	<b>75</b>	<b>38</b>	<b>71</b>	<b>184</b>	
			%	<b>40.8</b>	<b>20.7</b>	<b>38.6</b>	<b>100.0</b>	

## Cereal Bank Grain Lending

According to the literature, the record of cereal bank grain lending is generally ruinous. Cereal banks that attempted to lend grain more favorable conditions than those offered by private traders are in general at exposed to high risks. Villagers who borrow grain from cereal banks frequently feel little moral obligation to pay back their loans because they perceive the cereal bank as a “social” institution<sup>8</sup>.

Due to loan repayment failures of cereal banks, the majority (66%) of cereal banks opt only accept cash payments in exchange for cereals. However, 34% of cereal banks are still selling cereals for both cash and on credit, presumably to allow the most vulnerable households to borrow from the bank during the lean season and pay it back after the harvest. The food insecurity situation in many communities pushes cereal banks to provide grains on credit. In general, most FFP partners do not encourage this system and tend to advise communities to provide food loans only for special cases (destitute households, women headed households with children, etc.) as decided by the community. The selling price of cereal banks in the surveyed programs is set by the communities and is in general below the cereal market prices, which puts the cereal banks at risk.

As of October 2011, 55% of the surveyed cereal banks did not have unpaid grain loans; 31% had unpaid grains loans; and 15% had unpaid grain loans, although the loan amount was not known by the management committee. In Mali 84% of the cereal banks have unpaid loans from villagers, Chad 49%, Niger 27%. The overall average amount of loan per cereal bank was 418,265 FCFA (US\$836)<sup>9</sup>. This amount varies across the region. In Atti (Chad) the average loan amount was 50,500 FCA (US\$ 110) whereas in Dosso (Niger) the average loan amount was 1,064,250 FCFA (US \$2128.5). These loans include the previous unpaid amounts and the 2010/2011 grain loans.

The average unpaid loan was 469,956 FCA (US\$ 1,044) for male managed cereal banks; 405,997 FCFA (US\$902) for mixed management cereal banks; and 175,917 FCFA (US\$391) for female managed cereal banks. In general, it has been reported that female managed cereal banks provide less grain loans when compared to the other management types.

As of October/November 2011, 68% of surveyed cereal banks reported having positive balances in their cereal bank accounts or “caisses.” The average amount was 616,832 F CFA (US\$1,233)<sup>10</sup> per cereal bank. Only 36% of cereal banks had an average of 1,246,732 F CFA (US\$2,500)<sup>11</sup> in their bank or microfinance institution. Note that about 10% of surveyed cereal banks have declared having positive balances in “caisses” or banks, but the amount was not known by the management committee.

## Cereal Bank Inventory Tracking

One of the weaknesses of cereal bank management is the lack of regular monitoring of warehouse inventory. In general, this task is not done by an individual who has the requisite training. The survey results indicate that: 11% of cereal banks tracked their warehouse inventory bi-weekly; 43% of cereal

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<sup>8</sup>Notes from the Workshop on: Community-level Grain Storage Projects (Cereal Banks) - Why do they rarely Work and What are the Alternatives? Page13.

<sup>9</sup> For 30% of surveyed cereal banks

<sup>10</sup> For 68% of surveyed cereal banks

<sup>11</sup> For 36% of surveyed cereal banks

banks tracked their warehouse inventory on a monthly basis; 15% of cereal banks did tracking on a quarterly basis; and 15% of cereal banks only had their inventory tracked on a yearly basis, right before the startup of the grain sales. 15% of the cereal banks assessed reported that the inventory monitoring was not done on a regular basis.

Overall, only 42% of the cereal banks reported that the inventory monitoring was done by the oversight committee members. Inventory control was done by the management committee members (the controller, president, and secretary) for 35% of cases. For the rest, the inventory monitoring was done by the warehouse keepers, government service staff, and the sponsor agency's field agents. In Niger, 58% of cereal banks had their inventory tracked by the oversight committee members in comparison with 32% in Mali. In Chad, cereal bank inventory tracking was done by the management committee members 82% of the time.

About 64% of cereal banks had stock in their warehouses as of September/October 2011. In Chad, the majority (85%) of cereal banks had grains in their warehouses. In Mali about half (55%) of cereal banks had grains in their warehouses. In Niger 63% of surveyed cereal banks had grains. The grain availability at this time of the year (September/October) depends on the cereal banks' sell strategy. According to staff at CPI Niger "certain cereal banks have been able to prepare a sale schedule spread out up to the end of the month of September/October, getting closer to the harvesting period. This strategy is based on the calculation of the quantities to sell per person and per week for all beneficiaries throughout the lean period." For Plan International, in order to avoid grain speculation and allow access to most vulnerable households, grains are sold in small quantities on a daily basis up to the new harvest.

The average quantity of cereal in storage per cereal bank was estimated at 5,132 Kg. This average was highly variable across the region. It varies from 1,842 kg in Mali to 7,310 Kg in Niger. The highest numbers have been recorded in Niger where many cereal banks had not sold yet their stored grains. These averages concern only the cereal banks that had grain inventories (64%). Taking into account the cereal banks that did not have grain stock the overall average is 3,470 Kg per cereal bank.

Table 8: Average Quantity of Cereal in Warehouse

		Cereal Bank with Inventory	
		Number Cereal Bank	Average Quantity (Kg)
Chad	Atti	9	2,939
	Abeche	19	2,421
	<b>S/Total</b>	<b>28</b>	<b>2,588</b>
Mali	Gao	6	891
	Mopti	11	449
	Tumbuktu	13	3,460
	<b>S/Total</b>	<b>30</b>	<b>1,842</b>
Niger	Agadeze	5	6,890
	Diffa	7	2,579
	Dosso	15	11,196
	Tahoua	21	5,605
	Tilaberi	5	14,020
	Zender	25	6,478
	<b>S/Total</b>	<b>78</b>	<b>7,310</b>
<b>Total</b>	<b>136</b>	<b>5,132</b>	

## Constraints

The constraints that face the surveyed cereal banks have been identified during focus group discussions with the cereal bank management committee members. Also, some key informants have been interviewed regarding this subject. The figure below summarizes the findings of these discussions and interviews.

The three major constraints listed by cereal bank actors are: lack of an adequate warehouse for storing grains, limited operating capital, and lack of training. Other constraints are listed in figure 8.

**Lack of adequate grain storage** – in the cereal banks creation agreement, warehouse construction is the responsibility of the recipient community. In general, the warehouse is constructed jointly by the community, which provides local material and labor. The sponsor provides additional support in the form of cement, zink sheets, and doors and windows in some cases. Generally, warehouses are constructed with local materials without any specific design. As a result, the proposed warehouse is not appropriate for storing grains as there is often times limited space and no ventilation. Small warehouses and the poor quality of roofs were pointed out by those interviewed as the main causes of grain infestation and wet grains. Poor grain storage conditions are the main cause of cereal bank food losses. For instance in Niger in 2010/2011 certain cereal banks were forced to sell grain below its purchasing price for fear of infestation because the warehouse was not appropriate for grain storage. The lack of storage equipment such as palettes was also mentioned by those interviewed as a potential cause of grain loss.

The grain storage issue is more important in Chad as opposed to Mali or Niger. About 60% of focus groups pointed out that the quality of warehouses is a major constraint to cereal bank sustainability in Chad. In Mali 38% and in Niger 31% of the focus groups sampled listed the lack of adequate warehouses for storing grain as a constraint.

**Limited operating capital** – different approaches are used for the constitution of the operating capital of cereal banks. In general, operating capital is provided by the sponsoring agency, but for certain cereal banks it is contributed by the community. These personal contributions give villagers a greater sense of responsibility<sup>12</sup>. The first contribution is generally in-kind (grain) and this endowment should increase through the profits generated by the cereal banks. In reality there are only a few cereal banks that are capable of increasing their operating capital. In addition, the high interest rate (2% per month) of micro-finance loans does not encourage them to replenish their grain stocks from bank loans. All of the interviewees unanimously stated that cash shortages, which did not leave them with the money needed to buy enough cereals to cover the beneficiary population's cereal needs during the lean season was a major constraint to cereal bank operations. Moreover, the grain loans provided to vulnerable households were not always paid in time to allow the cereal banks to store enough grain at a low cost.

**Lack of Training** – cereal bank management committee members carried out considerable tasks, the quality and regularity of performance seemed to be a function of the amount of training they received and the amount of training provided by the sponsoring agency. Some sponsoring agencies plan four phases of training: an information phase, literacy training, training in food management (storage, handling, selling and replenishment, accounting, etc.) techniques, and monitoring. Of the population

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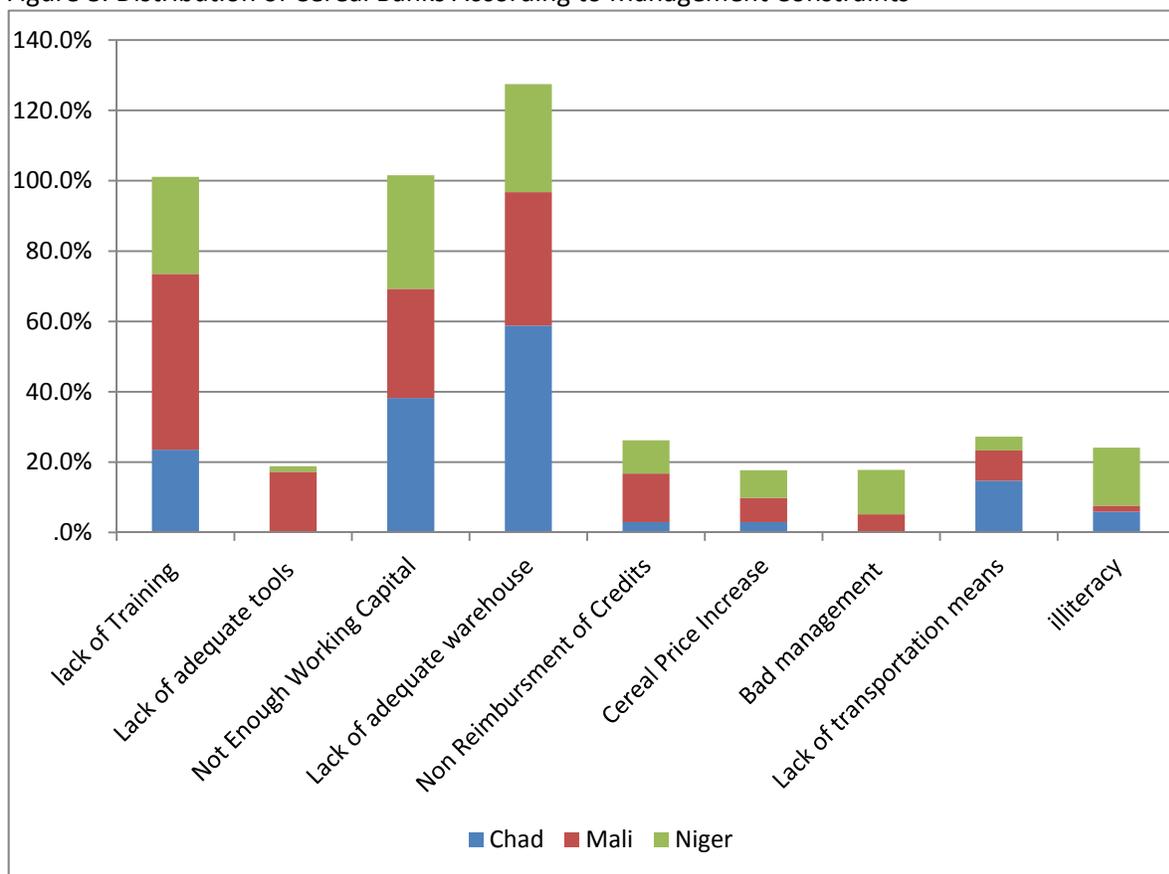
<sup>12</sup> Cereal banks in Niger by Francisca Beer – July 1990

surveyed, 21% of cereal bank management committee members and 28% of cereal bank managers had not received training. For those cereal bank members that received trainings, the average number of training received was two.

The lack of training, the quality of the trainings provided and their follow-up is an issue which is more important in Mali when compared to Chad and Niger. In these countries the majority of surveyed cereal banks had been setup by the Government.

Dr. Berg (1998) questioned whether the problems of cereal banks can be resolved through more training. He advised that the management problems that cereal banks face are inherent in the collective management structure. More training can help improve operations in the short run but it probably does not represent a solution to the unsustainability of cereal banks.

Figure 8: Distribution of Cereal Banks According to Management Constraints



### Impact of Cereal Banks on Food Security and Resilience

Several reports have noted the positive impact of cereal banks on household’s food security and resilience, for example, a relief worker<sup>13</sup> told IRIN “even if a bank is not buying, storing and selling grains, this does not mean it has died. They may have periods of inactivity, but banks come back to life because

<sup>13</sup>Laouali Sam, the Director of anti-poverty UN Development Programme in Zinder that launched 220 cereal banks

communities need them. Even if a bank is not perfect, it helps stabilize a community. Besides, what is our option? Not do anything to fight hunger?”

WFP tells the story of “Fatih, a widowed mother who toils against the odds to provide for her children. Between harvests, during what they call the lean season, she used to travel for miles in the blazing heat to pay exorbitant prices at faraway food markets. Now, she and other women in her village are shielding themselves from hunger with the help of a cereal bank where they can borrow grain at low interest rates when food supplies run low.”<sup>14</sup>

Please note below a success story from IFAD as well. “Before the cereal bank, I was able to feed my family only for three to four months a year. With the bank, now this period is extended for two more months. The quantity we receive is still very low but at least we have been able to work effectively for three additional weeks in our own plot. So now I only go to work on other people’s plots for one day per week to get a salary, instead of the four days in the past. With the bank, my own production has increased, I have less debt, and we don’t have to harvest too early in the season. Our families can feed themselves much better. We can afford four to five meals per day for children and three for adults. We are not forced to sell our goats and sheep anymore. This year our family sold just one animal, while last year we had to sell four. In 2006, I worked, secured my production, sold niebe (cowpeas) and bought millet to reimburse what my wife borrowed from the bank. My wish is that the bank would open earlier, so that our food needs are covered during a longer period to allow us to concentrate on working on our farms. The general feeling in the village is that we are very happy with the establishment of the bank.”<sup>15</sup>

**These statements summarize the importance of cereal banks towards smallholder households’ food security in the Sahel. All communities surveyed in this study were unanimous about the usefulness of cereal banks in the context of building food security and resilience.**

Focus group discussions with cereal bank beneficiaries have highlighted four broad categories of this impact in the Sahel:

**Accessibility and availability of food** – about 80% of interviewed beneficiaries reported increased cereal availability and accessibility in the village at any time and reduced long distance travel as the result of FFP-supported cereal banks. Some interviewed added that cereal availability increased for the most vulnerable households because cereals were sold at retail prices.

Below are some anecdotes from the focus group discussions:

*“The retail sale of grain provides access to all vulnerable households of the village. The cereal bank makes cereals permanently available during the lean season.”*

*“Cereal banks have allowed everyone to be supplied with cereals without traveling long distances or paying transportation expenses. Also, cereal banks provide cereal loans to people in need. It gives grain loans to women for retail selling.”*

*“Thanks to the cereal bank some very poor people will no longer die of hunger as in the past.”*

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<sup>14</sup><http://www.wfp.org/stories/niger-women%E2%80%99s-cereal-bank-hedges-against-hunger>

<sup>15</sup><http://www.ruralpovertyportal.org/web/guest/country/voice/tags/niger/banks>

*“In the case of difficulties in selling animals, there is the possibility to get grain loans and to refund them once the animals are sold at a good price.”*

*“The cereal bank has reduced a lot of the communities suffering in its search for food”*

**Accessibility of food at lower cost** – 32% of communities believe that cereal banks help to stabilize cereal prices in the villages during the lean season and are affordable for the poorest of the poor. However, the sale of cereal bank commodities at a price below the market price does seem to have negative consequences on the sustainability of cereal banks and explains why 25% of surveyed cereal banks do not operate efficiently (selling price below the total costs of cereals).

**Access to credit to persons in need** – for 20% of communities cereal banks are the only cash sources in the village. The banks provide cereal loans to the most vulnerable households and in some cases also provide cash loans to support families in times of need (funerals, etc.). Only 7% of interviewed communities have access to microfinance services and in places like Chad, 47% of cereal banks provide such services, although as noted before in Chad the majority of cereal banks belong to associations and not to villages.

**Household Migration** – Increased head of household mobility during the lean season is one of the major sources of food insecurity in the Sahel. During the hungry season many vulnerable heads of households are forced to leave their families in order to look for money to buy food or sell their labor when needed. This often leads to reduced farm production and family cohesion including increased divorces. For 26% of communities interviewed in the three countries, cereal availability and accessibility in the village reportedly reinforces family equilibrium and increased farm production at the household level. In Niger, farmers benefiting from the cereal banks have found that the banks allowed them to continue working in their fields, rather than being forced to sell their labor elsewhere and neglect cultivating their own crops. Moreover, the banks ensure that food is at home so that farmers can maintain their strength as they work on their farms through this difficult period.<sup>16</sup>

CPI Niger’s cereal bank activities are a good illustration in that regard. The 2011 agricultural season was not satisfactory in Niger, with dire consequences on food access and availability in the most vulnerable communities. With FFP funds, Counterpart International is working to strengthen the resilience of 150 communities by supporting cereal banks during the lean periods. This support has allowed these communities to mitigate food insecurity in a sustainable manner. A cereal bank beneficiary in Bangam village named Malamissa testified as follows "I am head of the household of a family of eight people. Today with the support of CPI in our village, our organization has set up a cereal sale system allowing us to meet the need of our household’s cereal consumption continuously and regularly during this difficult period. God bless CPI and USAID. And that CPI remains with us to enable us to promote more.”

### **Need for Innovative Approaches**

Cereal bank management faces great challenges in the Sahel due to the level of vulnerability of households, the education level of the population, and also a lack of a structured training program. However, great strides have been made to render cereal banks sustainable. The current situation of cereal banks in the Sahel should not be compared to that of year 1990 as described by Lawrence Kent & Dr. Elliot Berg in 1998.

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<sup>16</sup><http://www.ruralpovertyportal.org/web/guest/country/voice/tags/niger/banks>

Cereal Bank success stories exist in all three of the countries studied, which should be capitalized upon by replicating the successful methods of creation and management found in these instances. For example, many donors are promoting female-managed cereal banks given the promising achievements observed in the Sahel in that regard. Also more and more, sponsoring agencies are encouraging the creation of cereal banks with a limited number of members, which are easier to manage. This is the case in Chad, where Africare is creating 10-25 person interest group cereal banks, in which farmer's associations have their own communal lands. The grain production from these collective lands is used to replenish cereal banks in case of need. In other circumstances, cereal banks activities are coupled with other income generating activities (animal feed sales, animal fattening, staple foods sales, and micro-credit). The revenue from these activities has the potential to reinforce the sustainability of cereal banks.

During the implementation of its first Development Assistance Program (2000 – 2005), Catholic Relief Services Niger supported the beneficiary population in the creation of 68 Arabic gum tree sites. These trees were planted on land recuperated using Food for Work activities. In Takaré 34,540 trees (65% of these trees are *Acacia Senegalensis* - Arabic gum) were planted. It was estimated that the village will earn at least 21 Million FCFA (\$39,000) of gross income each year when the gum production starts. In the future, the villagers have planned to use this revenue to run a cereal bank for the village and to create other infrastructure.

#### **A new type of food bank from IFAD in Niger**

IFAD-funded cereal banks in Niger were traditionally used to store crops immediately after the harvest, so that farmers could sell them during the dry season when market prices are higher. In response to the 2005 food crisis, IFAD's *"Project for the Promotion of Local Initiatives for Development in Aguié"* created a new type of food bank in the Maradi region of Niger. This initiative is known locally as a "soudure" bank; it lends food to farmers during the planting period to help them get through the hunger season that precedes the harvest. The initiative is based on exchange. Every week poor households receive cereal as a credit. They then pay back the loan – not with money, but with cereals, once their own crops are harvested. The interest rate is 25%, to replace the stock and cover the cost of storage and maintenance. By 2010 the "soudure" banks totaled 168 with a total stock of about 2,800 tons of millet. This stock meets the food requirements of about 350,000 people for at least a month. More than 50,000 women are involved in managing the banks.<sup>17</sup>

#### **IV. Conclusion**

There are disagreements on the objectives of cereal banks among their promoters, with some arguing that cereal banks are social instruments (safety nets) that should not be evaluated on the basis of their economic performance. As long as there is no common understanding about the precise role of grain banking institutions, there will be a range of methodologies used to manage cereal banks which could lead to their failure. Cereal banks can be development tools as well as safety net activities as long as sponsoring agencies do not mix the two strategies.

The data shows that the assessed cereal banks succeeded in providing better grain marketing services to consumers. On the other hand, the sustainability of these marketing services is uncertain because 80%

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<sup>17</sup><http://www.ruralpovertyportal.org/web/guest/country/voice/tags/niger/banks>

of the surveyed cereal banks sold grains at prices, which were below the market price. Also, the data analysis shows that some cereal banks sold their 2010-2011 grains at below purchase prices because NGOs encouraged them to do so in order to mitigate the impact of the 2010 food crisis. Overall a third of cereal banks assessed were not operating efficiently because they were losing money. This is due in part to the fact that some cereal banks are still provide cereals on credit, in order to allow vulnerable households to borrow from the bank during the lean season and repay their debt after the harvest.

The lack of adequate warehouses for storing grains, limited operating capital, and lack of training and mismanagement are the major constraints, which face cereal banks in the Sahel. One direct impact of these constraints is the decapitalization of grain stocks over time. Based on available statistics, close to half of cereal banks surveyed have seen their grain stock decrease over time.

Despite, these challenges and constraints, there is no doubt about the usefulness of cereal banks in the context of building food security and resilience in the Sahel region.

Great efforts have been made by the food security community to render cereal banks sustainable in the Sahel. The current situation of cereal banks in the Sahel should not be compared to that of the year 1990. However, there is an urgent need to develop strategies, tools and policies to help cereal bank institutions to better serve vulnerable households.

## **V. Recommendations**

Given the low economic capacities of communities and governments in the Sahel, these actors cannot afford to indefinitely support subsidized cereal banks. The following recommendations and assumptions for improving the sustainability of cereal banks have been made based on the assessments findings:

- While humanitarian emergency response is essential to saving lives, development assistance focusing on the root causes of vulnerability is important as well. Thus, a coordinated mix of short, medium and long-term instruments such as cereal banks is needed to strengthen resilience.
- The economic and social functions of cereal banks should be separated. In normal conditions, the sponsoring agencies should promote the sustainability of cereal banks. Cereal banks should not sell grain below the market price. The grain sale price should at a minimum cover the cost of purchase. It should also not be assumed that the starting grain inventories of cereal banks will be completely subsidized by donors rather than by the contributions of willing members. The cereal bank can and should operate on tried and true microfinance institution (MFI) principles where ever possible.
- Subsidized grain sales or free grain distribution in emergency cases should be handled outside of normal cereal bank loan transactions so as to differentiate the MFI-like operation of a cereal bank with the use of a cereal bank as a charitable organization.
- Grain loans in non-emergency cases should normally be provided by the cereal bank based on the member's ability to repay the loan. A small percentage of cereal bank loans will be provided to the most vulnerable households in the community based on need and this small percentage of loans will be assumed highly speculative and full loan repayment may not be expected.

- Sponsoring agencies should promote the creation of grain banking institutions/networks that monitor and supervise cereal banks even after the project has ended. Similarly, cereal banks should avail themselves of trained community staff that are working for donor agencies in commodity management, or have had previous commodity management training. Sponsoring agencies should also try to implement food for work or cash for work schemes within the community that are designed to improve a community's cereal bank grain storage.