



# Mauritania :

## Profile of cereal and livestock markets: Implications for food security

Strengthening Emergency Needs  
Assessment Capacity (SENAC)

September 2006

## **Mauritania: Profile of cereal and livestock markets: Implications for food security**

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\ a: The technical annex is available at WFP: [WFP.Nouakchott@wfp.org](mailto:WFP.Nouakchott@wfp.org); or [Geert.Beekhuis@wfp.org](mailto:Geert.Beekhuis@wfp.org).

## **1 Executive summary**

This market profile aims to complete the Comprehensive Food Security and Vulnerability Analysis (CFSVA). It is meant to help understand the linkages between the behaviour of markets and households' economic access to food products. The analysis of primary and secondary data has led to the following conclusions.

Mauritanian households are highly dependent on markets, particularly for their food purchases. Buying imported products such as rice, wheat, oil and sugar is widespread throughout the country, and present amongst households belonging to all food security categories. Purchases of sorghum, which is produced locally or imported from Mali, is very common in the South of the country, at least at times when prices are low. By contrast, the sale of animals and agricultural products is much less common. The sale of farm products is concentrated in the country's three "agricultural" areas in the South of the country. Households in these areas sell large quantities of farm produce immediately after harvest to settle their debts and make any urgent payments due, even food insecure households. Livestock is sold only by households that own animals, which are typically not among the poorest households, but they run the risk of falling into that category when hit by a shock.

While noting the large dependency of households on markets and imports, a number of risks affect the food security situation of households. They include the following:

- i) price increases and/or interruption of supplies of imported products, resulting from a depreciation of the local currency (the Ouguiya), increased international commodity prices, shortage of foreign currency reserves and difficulties in securing import permits, increased formal/informal taxes and the fact that a few importers dominate the market;
- ii) increased prices and/or supply breaks affecting sorghum following a drop in national and/or Malian production, and the closure of borders between Mauritania and Mali;
- iii) a fall in livestock prices: this could result from sharply increased offer due to a lack of grazing or water, a fall in external demand following a strengthening of the Ouguiya, new livestock import regulations or increased formal/informal taxes;
- iv) a fall in demand for labour in rural or domestic or international urban areas (remittances) with negative consequences on revenues and access to food; and
- v) in pastoral, agro-pastoral and valley areas, a fall in the prices of sorghum, *niébé* and rice immediately after harvest. This would immediately lower household revenues.

WFP and its partners currently do not have the capacity to monitor the above risks adequately. Neither WFP nor the government have a functioning system for collecting and analysing prices. It is therefore advisable that WFP and its partners strengthen their capacity to monitor markets and trans-boundary flows. This would permit detecting any problems arising in any of the following areas: (i) access to food through markets; (ii) supply of cereals to markets; and (iii) sale of food aid at markets. Although it would be preferable to build up the Government's capacity, WFP does not have the resources required. As an interim solution, the authors of the present study suggest using WFP's sub-offices to monitor markets until the Government's own capacity is improved. Consumption and revenue baskets could also be created so as to translate price movements into changes in real purchasing power.

Aid programmes using cash or coupons are not recommended because of the difficulty of physical access to markets and the lack of competition on local and remote markets. In addition, the existence of a marketing system based on credit and trust between villagers and local retailers argues against the distribution of coupons or cash as a way of improving food security: it is very much in the interest of beneficiaries to use coupons or cash immediately to repay any outstanding debts and thus maintain good relations with retailers and continue having access to credit.

Purchasing locally-produced cereals is not recommended because of a production deficit. It is unlikely that purchasing products imported from Mauritanian-based companies would have negative consequences on the market providing the following conditions are respected: (i) payments should be made in hard currency to avoid the problem of foreign currency shortage; and (ii) purchases must be planned in advance.

Details of the recommendations are set out in Chapter 9. A synthesis of recommendations adopted by participants to the validation workshop held in Nouakchott is presented in Chapter 9.1.

## ***2 Introduction and methodology<sup>1</sup>***

WFP and its partners<sup>2</sup> initiated a CFSVA in October 2005. A market analysis component was included in the CFSVA in order to understand more fully the interactions between market trends and economic access by households to food products. The key objective of the component is to show how markets can mitigate or accentuate the effects of crises on groups identified as vulnerable by the CFSVA, to identify risks arising from the operation of markets and to analyse the impact of market trends on household food security. The study also puts forward a proposal for a market monitoring system.

First, market analysis allows evaluating the availability component of the food security analysis: cereals, milk and meat markets play a role as “distributor” for national production and food imports. The analysis therefore seeks to answer such questions as: are markets well supplied? What are the risks to supply?

Then, in analysing the second component of food security “access to food”, markets have a role to play because of their influence on: i) revenue levels (sales prices); and (ii) purchase prices and therefore on the level of purchasing power in real terms. The graph below summarizes those interactions with markets and the relationship with the access to food.

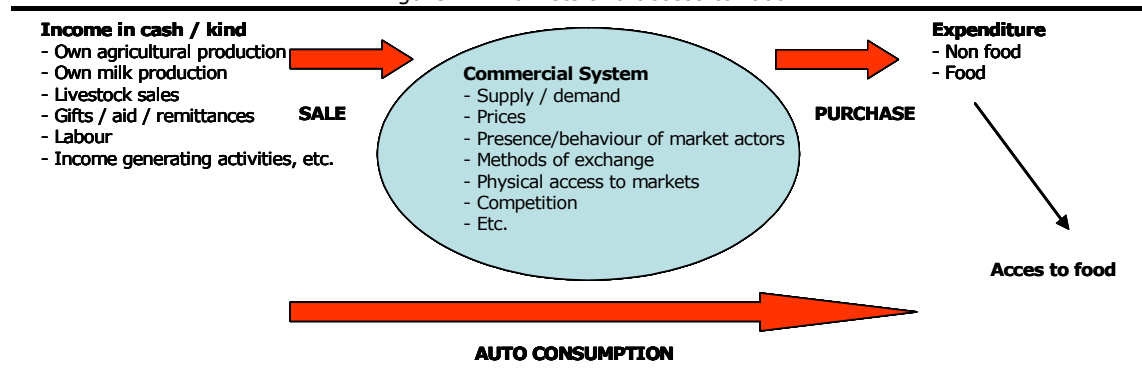
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<sup>1</sup> A detailed presentation of objectives and methodology is to be found in the technical annex.

<sup>2</sup> Including: the ‘Commissariat à la sécurité alimentaire’, UNICEF, FEWS NET and a number of NGOs such as World Vision and ACORD



Figure 1 – Markets and access to food



The market analysis was divided into three segments organized according to the level and the method of data collection data, which took place between December 2005 and May 2006: (i) a consultant collected and analysed data on markets at national, regional and local level; (ii) a second consultant held a series of focus groups with vulnerable groups in a sub-sample of CFSVA sample villages (35 out of the 210 villages); and (iii) the analysis of data collected by CFSVA’s “closed” questionnaires at village and household level. The three components were integrated by the WFP regional officer responsible for market analysis in West Africa. Results are presented in this report, which consists of two volumes: (i) the main report; and (ii) a technical annex. The documents will be presented to CFSVA’s steering committee for validation.

The principal weakness of this market profile is related to the quality of secondary data: prices, agricultural and animal production, sizes of herds, exports, imports, etc. Data available in Mauritania are neither complete nor reliable. The mission has been able to mitigate this weakness through wide-scale collection of primary data, by an extensive evaluation of existing data<sup>3</sup> and by discussions with “resource persons”.

### 3 Availability: cereals supply and demand<sup>4</sup>

Over the last five years national cereal production has averaged 142,000 mt – far below the needs of the population estimated at 525,000 tonnes. Although cereal production covers on average a third of the requirements, in 2004–2005 it only covered 15 percent. Such sharp differences in domestic supply are caused by the vagueries of rainfall patterns as well as locust infestations and are compounded by an inadequate level of water management.

Availability at national level is principally provided by imports (cf. Table 1 – Summary cereal balances, page 10). Imports fluctuate from one year to the next and are likely to be lower in 2005–2006 than in 2004–2005 because of a better 2005–2006 harvest. In the long term, the role of imports is increasing whereas that of national production is diminishing. This results from soil degradation, low rainfall registered over the past few years and population growth.

A deficit of 62,000 mt is expected in 2005–2006. This stems from a drop in the level of commercial imports and of food aid without a corresponding increase in

<sup>3</sup> For example: *Mauritania Livelihood Profiles*, FEWS, 2005.

<sup>4</sup> Details are to be found in the technical annex, chapter 2.

national production. It should, however, be noted that national stocks are estimated at 90,000 mt, more than the amount of the deficit.

**Table 1 - Summary cereal balances**

	2004/2005	2005/2006 \ a
Gros production	115 000	202000
Net production	76000	151000
Initial stocks	36000	59000
Commercial imports	423000	319000
Imported food aid	49000	17000
<b>Resources</b>	<b>584 000</b>	<b>546 000</b>
Exports	0	0
Final stocks	59000	92000
Consumption \ b		
<i>total</i>	526000	516000
<i>per capita</i>	184	176
<b>Uses</b>	<b>585000</b>	<b>608000</b>
<b>Deficit / surplus</b>		<b>-62 000</b>
\ a: Preliminary figures		
\ b: For 2004/2005: realized consumption; for 2005/2006: consumption according to the norms		

Source : Islamic Republic of Mauritania, 28 February 2006

Cereal production consists largely of rice and sorghum, which are grown on irrigated land in the valleys, whereas sorghum is cultivated under rain-fed conditions in the Centre and South of the country. Although national production amounts to less than the annual imports, it has a major role to play because it helps to create the revenues needed to purchase different foods at market.

The volume of imports is mainly determined by: (i) demand, which depends on purchasing power, as well as on the Mauritanian, Senegalese and Malian production, plus food aid distributions; (ii) cost prices, dependent on international market prices, exchange rates and transport costs and taxes; (iii) regulations linked to import and export certificates and procedures governing foreign currency exchange, which is regulated by the Central Bank; and (iv) the presence or absence of formal and informal restrictions on food exports from Mali and Senegal.

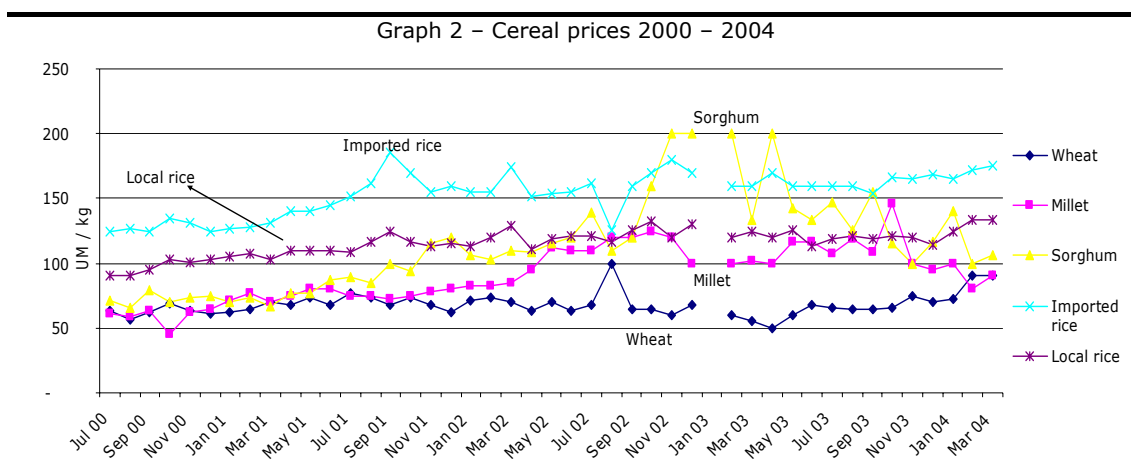
A characteristic of Mauritanian households is their dependence on markets for food supplies. According to CFSVA, almost 100 percent of the population including farmers buy their food on the market. This includes products imported from Europe (wheat, sugar, rice, etc.) and from Mali and Senegal (millet, sorghum, rice). External demand also involves livestock (see chapter 5) and "in-transit" products such as wheat, tea, sugar and other products which are imported from Europe and sent on to Mali.

Generally-speaking cereals are fairly widely available at national level thanks to commercial imports. Imported wheat plays a key role. Nonetheless, it should be noted that several substantial risks are related to imports: (i) the (non-) convertibility and the lack of foreign currency; (ii) the exchange rate between the Ougaya and hard currencies; and (iii) the prices of wheat and rice on the international market. In addition, the country is dependent for its food security on a small group of entrepreneurs as imports of wheat and rice are managed by a limited number of importers.

#### 4 Prices of agricultural products<sup>5</sup>

On the basis of a price analysis (cf. technical annex, chapter 3), the following conclusions may be drawn: (i) the price of imported rice is generally the highest of all cereal prices; (ii) sorghum and millet prices are vary variable; (iii) the price of wheat is lower than that of rice, millet or corn; and (iv) the price of sorghum is generally higher than the price of wheat, particularly since mid-2001, but the price differential may narrow when the price of sorghum falls (after a good harvest) and the price of wheat increases as in late 2005. For example, in December 2005 the price of sorghum was below that of wheat according to data collected in villages by CFSVA.

The graph below illustrates these findings together with data from the CSA. The average price of cereals on the markets of Socogim (Nouakchott), Tidjika and Néma is shown; prices on individual markets move up and down in a similar manner (cf. chapter 3 of the technical annex).



Source : CSA

Comparative prices recorded in December 2005 in the villages (CFSVA) and at the markets supplying those villages showed a substantial difference. This is explained by the high cost of transport from markets to villages as well as by the limited supply at village level (there is often only one trader or shopkeeper). For a sub-sample of markets/villages visited, the difference between prices on-the-stall at market and prices to consumers in the villages was around 16 percent for wheat, or about 14 Ouguiya per kg. The example of Tightghir, 85 km from Tintane, shows that the differential can be much wider: the prices of rice and wheat were respectively 50 UM and 25 UM per kg higher in Tightghir than on the market at Tintane.

**Wheat.** The price of wheat in Mauritania is mainly determined by international market prices, the availability of hard currency for imports and tariffs and taxes. Also, prices at markets lying farthest from the ports of landing and/or the main roads are higher than average. In 2003–2004 the price of wheat varied between 60 UM and 100 UM, following international price movements. In December 2005 the price reached 147 UM (AGSVA) in the villages. The margin between cost price (importer’s warehouse) and the sales price to consumers (Socogim market in

<sup>5</sup> Please note that the quality of data on prices could be improved (cf. chapter 2) and that all prices mentioned in this chapter are prices to consumers.

Nouakchott) was low (generally four percent) pointing to an acceptable level of competition at import level.

**Rice.** The price of imported rice is on average 45 percent higher than that of local rice (Socogim market). The correlation between the price of imported rice and the rice sold locally is shown in graphs 1-3 in appendix 5 of the technical annex. The seasonality of prices does not emerge. The price of rice in producer *wilayas* (regions) is generally lower than in other *wilayas*. Assuming that the quality of data is acceptable, it is clear that the price of imported rice fails to reflect closely the fluctuations of price on the world market and that the margin between the international price and that charged to consumers in Nouakchott is high and possibly excessive. It would appear that the rice import market is neither very competitive nor efficient. The explanation lies in the various tariff and non-tariff barriers to imports and the limited number of importers.

**Millet and sorghum.** Sorghum is generally more expensive than millet (by about 25 percent). Sorghum and millet prices vary considerably. Existing data permit no clear conclusion as to their seasonality (incomplete and not very reliable data). Sorghum prices were particularly high following the poor harvests in 2002 and 2003.

Comparing prices on a geographical basis shows that sorghum is more expensive in *wilayas* that either do not produce, or produce very little sorghum; for millet, the price data concern mainly markets in the south as little millet is consumed in the centre/north of the country. The factors which determine the price of sorghum and millet are mainly the level of national production, imports from Mali and, to a lesser extent, Senegal, which are in turn influenced by production in Mali and elsewhere in the sub-region. Other factors include prices in Mali and the sub-region and the obstacles (tariff and non-tariff) to exports and imports.

In conclusion, it should be noted that since early 2004 the CSA no longer tracks and collects cereal prices. Given the importance of monitoring prices and their impact on food security – especially in a country like Mauritania where households are very dependent on markets – a proposal on how to monitor markets is put forward in chapter 9.

## **5 Marketing of cereals**

### **5.1 Types of markets and their location**

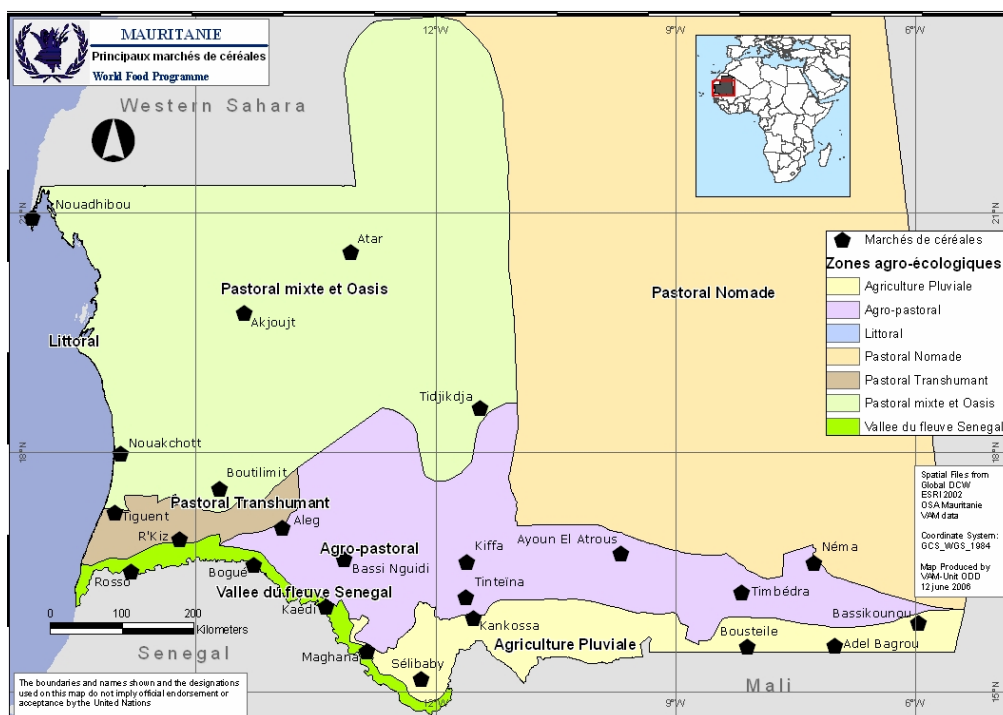
Cereal markets may be classified in various categories according to the stage in the marketing chain that they represent. They may be collector, regrouping or consumer markets and, according to their geographical location may either be domestic or frontier markets. This classification can change from one season to the next and according to the latest harvest results.

**Collectors markets** are located in the south of the country. They specialize in rice, corn and sorghum in the southwest and focus on millet and sorghum in the centre-south and south-east of the country. The markets of Kaédi, Sélibaby and Bousteïla are good examples of big collector markets. The principal **regrouping markets** are either near international borders or in production areas. Boghé and Tintane markets are two examples. Two kinds of **consumer markets**, urban and rural, may be distinguished. The latter are to be found almost all around the country and when they are far away from a trading centre and/or road transport, costs and reduced competition may result in excessively high prices. The major

**frontier markets** are Galoya, Dodel and Thilone for trade with Senegal, as well as the markets of Kaédi, Boghé, Rosso, Gouraye, Sélibaby and Abdel Bagrou.

Apart from Néma and Bassikounou close to the border with Mali (cf. map below) there are no large markets in the nomad-pastoral zone. Local cereal products sold there in fact supply the nomads driving their herds between Mali and Mauritania. In the oasis/mixed zone the biggest markets are those of Atar, Zoueratt, Akjoujt and Tidjikja, all of them consumer markets serving several departmental markets. The main markets on the coast are at Nouadhibou, Nouakchott and Saint Louis, all of them port cities where imported food products are unloaded.

In the transhumant-pastoral zone the main markets are on the road to Rosso (Tiguent) and l'Espoir (Boutilimit), as well as on the shores of lake R'kiz. There is a huge number of different kinds of markets (collector, regrouping, trans-boundary and consumption) in the agro-pastoral and rain-fed agricultural zones. In the agro-pastoral zone the markets of Aleg, Kiffa and Aioun are worth mentioning, as are those of Sélibaby, Kankossa and Bousteila in the agricultural zone. Major urban centres are supplied from a number of markets including Rosso, Bogué and Kaédi, to name but three. Principal markets are shown on the map below<sup>6</sup>.

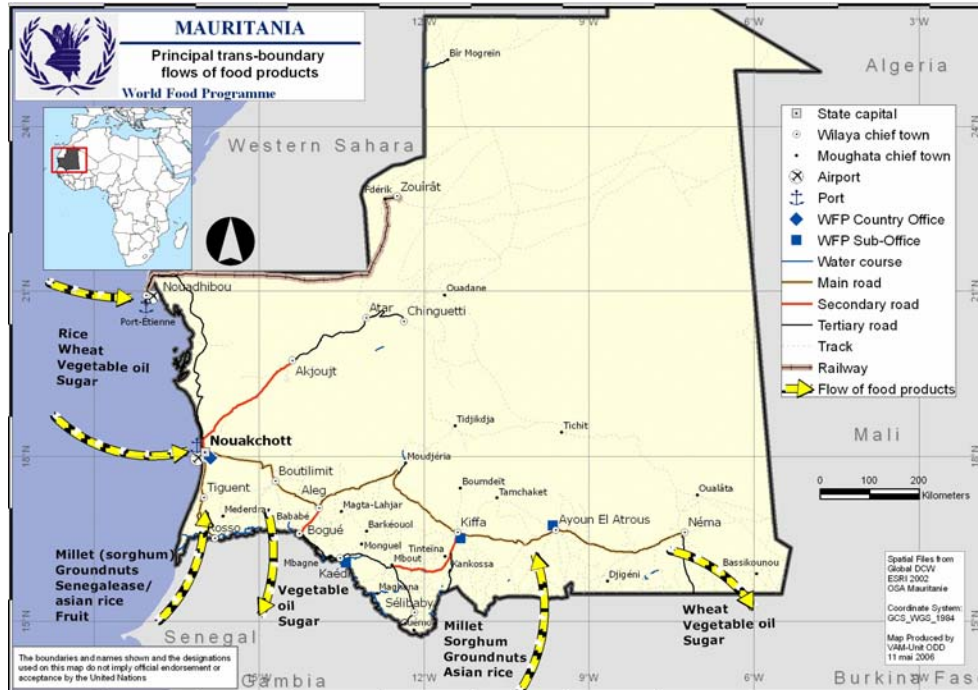


## 5.2 Marketing circuits

Imported cereal products such as wheat, rice and barley almost all arrive at the ports of Nouakchott and Nouadhibou. Shipments unloaded at Nouadhibou are sent on directly to the *wilayas* of Tiris Zemmour and Adrar, and towards northern Tangant. They are loaded onto the trains used to haul mining products to the port, and trucked from Choum to Atar. There are almost no interruptions in supply lines in these areas. If unloaded in Nouakchott, the commodities are taken to other markets in the the South and South-east. Asian rice imported from Mali and Senegal is also to be found in some markets in these areas.

<sup>6</sup> The 27 markets visited during a field visit in December 2005 are listed in appendix 3 of the technical annex.

Local production (local rice, sorghum, corn millet) is shipped in the opposite direction. Products from the domestic production zones are taken to Nouakchott and forwarded to deficit areas or, during the lean period, back to the areas where they originated. The products may also sometimes be shipped directly to surrounding *wilayas*.



### 5.3 General characteristics of markets

Markets are often characterized by poor management of human resources and storage installations. These shortcomings lead to food losses and have a negative impact on quality. Additional costs resulting from losses or extra operating costs are passed on to consumers in the form of higher prices.

Retailers operate in an environment where bank credit for commercial activities is non-existent. But credit is very widespread between the other stakeholders in the trading system. The entire system, from producer to stallkeeper is based on this kind of credit. For example, the relationship between small retailers and consumers is often based on trust. The former offer credit during the lean period and the latter pay them back after the harvest or on receiving a remittance. Distribution of coupons or cash as a food aid instrument does not work in such an environment Food-insecure households are liable to use such resources to repay their debts immediately so as to maintain good relations with shopkeepers and continue to be eligible to obtain credit. It should also be mentioned that a group of large-scale traders with the necessary capital and warehouses appears to be setting up an organized network of collection and marketing of cereals.

Physical access to markets is not simple in Mauritania: (i) distances between villages and their nearest market are often very long (70 km on average according to the CFSVA I); and (ii) access is blocked for one or two months a year. This makes it unlikely that interventions using cash instead of food during or immediately after a food crisis can succeed.

### 5.4 Competition and market integration

The largest markets are relatively well-integrated. Especially where local products are concerned, collect and regrouping markets are closely linked. A shock in any one of these markets is sure to have repercussions on the others. Shortages or gluts in any one market immediately make themselves felt in the others and price levels rise and fall according to supply and demand. In contrast small, rural consumer markets where prices are set by one or two semi-wholesalers are less likely to follow the evolution of supply and demand at the national level.

The prices of imported commodities are fixed or determined by wholesalers in Nouakchott. No one offers different prices, given the existence of monopolies operated by one or two individuals. All that the other stakeholders along the supply chain do, is to adjust their prices by adding on their own margins. Imported rice is one example. Despite large-scale informal imports from Senegal, prices always end up being set by the big importers in Nouakchott. At village level, consumers and small-scale retailers have to follow the importers' prices. Since there is no organization to defend them, prices can only increase, or supplies may even be interrupted.

## **6 Livestock production and marketing**

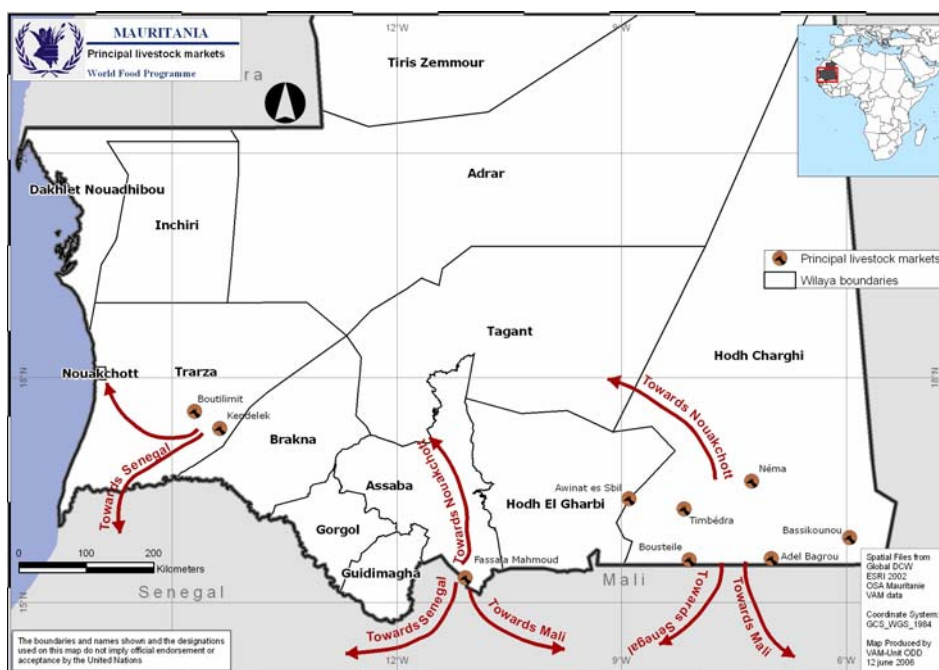
In a basically pastoral country like Mauritania livestock plays a major role in people's food security: (i) pastoralists represent the majority of the population; (ii) Mauritania's comparative advantage in extensive livestock production is clear; (iii) stock breeding creates a high level of added value; (iv) milk and butter strongly contribute to improving people's nutrition; and (v) as a form of savings, livestock represents a considerable cushion during lean years. Lastly, stockbreeding leads to a broad re-distribution of resources as a result of the employment generated and of traditional forms of social solidarity.

The national herd is estimated at 15.9 million sheep and goats, 1.4 million cattle and 1.4 million camels, that is 1.4 TBU (tropical bovine unit) per household. Potential meat production has always generated a surplus – exportable on the hoof – estimated at 17,000 mt/year, corresponding for example to 330,000 small ruminants. It is estimated that Senegal imports two thirds of Mauritania's small ruminants and one third of its cattle; the remainder is absorbed by Côte d'Ivoire. National demand for livestock is centred in cities such as Nouakchott where people have more purchasing power and are more likely to buy meat.

The collect and regrouping markets are located in the two principal stock raising areas, (i) the southeast of the country, in the *wilayas* of Hodh El Chargui, Hodh El Gharbi and Assaba; and (ii) the south-west, in the *wilayas* of Trarza, Brakna and Gorgol. Although there seems to be no strict geographical specialization in terms of marketing, Segegalese buyers are much more present in the south-eastern markets. The map below shows the principal livestock markets and the trading routes.

After regrouping, traders normally use vehicles for transporting livestock. But sometimes, when markets are close such as the ones located between the *moughatas* (districts) and the regional capital, for example, or the ones between adjoining regions, a herder may often be enough to transport the animals on the hoof. An exception to the rule is the religious feast of *Tabaski* when animals are herded to Dakar starting three to four months before.





The correct functioning of the export circuit for livestock is vital if surplus animals are to be successfully sold off. Any problems over exports have immediate repercussions on the price of animals and on the revenues of all the stakeholders along the entire supply chain. Currently, exporters are not meeting any difficulties but it should be recalled that, rightly or wrongly, sanitary limitations may be decreed by importing countries at any moment for all kinds of unofficial economic or political reasons. That, in effect represents a permanent menace to Mauritanian livestock exports. Continuing normal exports of livestock surpluses also depends on the following factors: (i) increasing demand in urban areas; (ii) the rate of exchange; (iii) formal and informal taxes. A depreciation of the FCFA is one of the key short term risks that could create difficulties for exports and hence bring down the price of animals..

The principal risk to livestock holders is falling prices just when they have to sell their livestock either to meet urgent financial obligations or to avoid having to pay for animal feed. This sometimes happens during a drought when water and grazing becomes scarce in Mauritania and/or outside the country.

Prices of livestock are not recorded at present.<sup>7</sup> Although the CFSVA did collect the data for prices in December 2005 it is difficult to draw any conclusion from them due to the lack of information on previous periods. Efforts should be made to collect the prices of at least one type of animal. If the CSA initiative proves unsuccessful WFP could begin monitoring and analysing prices at the level of one or two markets. Monitoring the Ouguiya/FCFA exchange on the parallel market should be incorporated in order to evaluate the prospects for selling animals abroad.

## **7 Household commercial behaviour**

The commercial behaviour of households with respect to food determines how an evolution of market conditions affect food security. A qualitative analysis of commercial strategies was undertaken with some 30 focus groups comprising 300–500 people and its results are summarized below. Details by category and

<sup>7</sup> The CFS is currently starting to collect and analyse livestock prices.



livelihood group are set out in the technical annex. The results of the CFSVA's household survey are used to describe clients' behaviour at the time of the CFSVA.

### 7.1 Qualitative analysis

**Purchases.** Households chiefly buy imported food products, which make up their basic diet. Rice is the staple for the mid-day meal followed by wheat or wheat flour at dinner time. These products have become part of people's food habits in the last few years because they are more readily available and often cheaper than dry cereals. What people most often eat is imported rice unless the cheaper local rice is available. If the household in question is relatively well-off, oil, sugar and *niébé* may also be purchased. Such purchases take place all year round. Purchases are generally paid for in cash, with credit transactions being the second most important way of settling bills. Although the pattern is much the same around the country, it is clear that a preference exists for sorghum in the south. If the price is right, households will buy sorghum daily. Given that food prices are lower at regional food markets than in villages, household generally buy their food at the former. But if they need credit they are forced to shop wherever retailers are ready to offer it, usually in villages.

**Sales.** Animals are only sold in case of need. Males are only sold prior to major holidays such as Tabaski and the end of Ramadan and during the lean period when household needs become pressing. Animal ownership is very widespread in Mauritania. Nonetheless, if needed, livestock owners prefer to sell goats and camels in the north, whereas in the south they may sell their sheep and cattle. As agriculture is almost non-existent in many areas of the country, farm produce is only sold in the valley areas and in the rain-fed farming and agro-pastoralist zones. Although people in those areas are often short of cereals, much of the production of paddy rice, local sorghum and *niébé* is sold immediately after the harvest in order to settle pressing debts and make urgent payments. Small quantities are sold all year round to cover immediate needs. The households in question are obliged to buy imported products later on in the year to make up their deficit. Sales often take place in the villages, directly to the local shop or to visiting traders.

**Strategies during a crisis year.** In the event of a crisis, resorting to credit to buy food becomes chronic, with tradition encouraging retailers to help out their clients. Household debts increase considerably because prices for goods sold on credit terms are often higher. People increasingly sell off their animals in order to purchase food. Although the males are sold first, it is hard to keep the females in a crisis year. Other strategies include early migration, starting in January, towards urban centres in search of work, or the sale of equipment. Such strategies are implemented everywhere in Mauritania. Their impact on food security, although short-lived, depends on the level of social and animal resources.

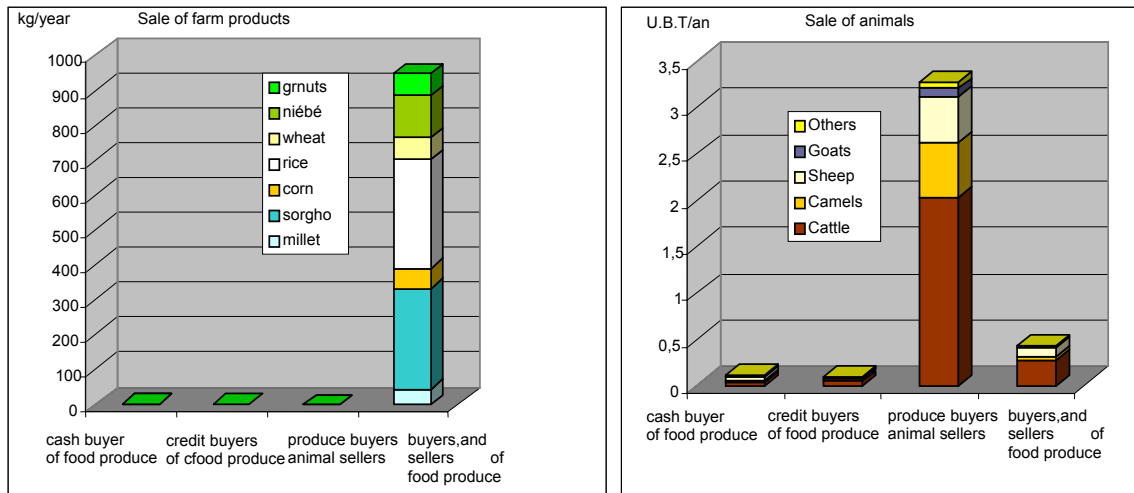
### 7.2 Quantitative analysis

An SPSS analysis of data collected through the CFSVA household questionnaire shows that all households buy food products while a minority (15 percent) sell their animals or agricultural products (three percent, cf. table 5). In the group selling neither crops nor animals the majority make their purchases with cash (58 percent).

The two graphs below show the sale of farm produce and animals by the different groups – “cash food produce buyers”, “credit food produce buyers”, “buyers of

food produce and sellers of animals” and “buyers and sellers of food produce”. The sale of food products involves sorghum, rice and cash crops such as niébé and groundnuts. Livestock sales mainly concern cattle followed by camels and sheep.

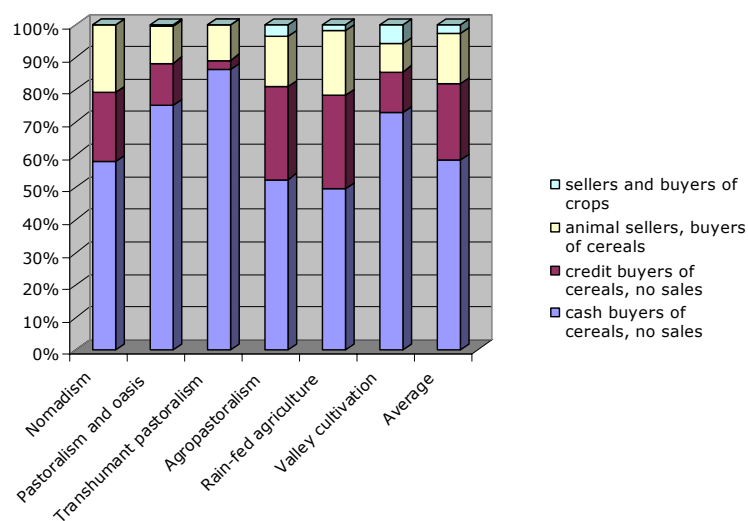
Graphs 3 and 4 – Sale of farm products and animals



Source : CFSVA Survey, 2006.

The graph below shows households’ commercial behaviour according to agro-ecological zones. The graph makes it clear that any drop in livestock prices has negative consequences on all households keeping animals and particularly on residents of the nomadic and rain-fed agriculture zones. A drop in local cereal prices (sorghum, rice, etc.), however, has a negative effect on the agro-pastoral, rain-fed agriculture and valley zones. Purchasing food on credit is common everywhere and especially in the agro-pastoral and rain-fed agriculture areas, but not very frequent in the transhumant pastoral zone. This is important in monitoring food security and particularly in measuring the impact of prices on access to food.

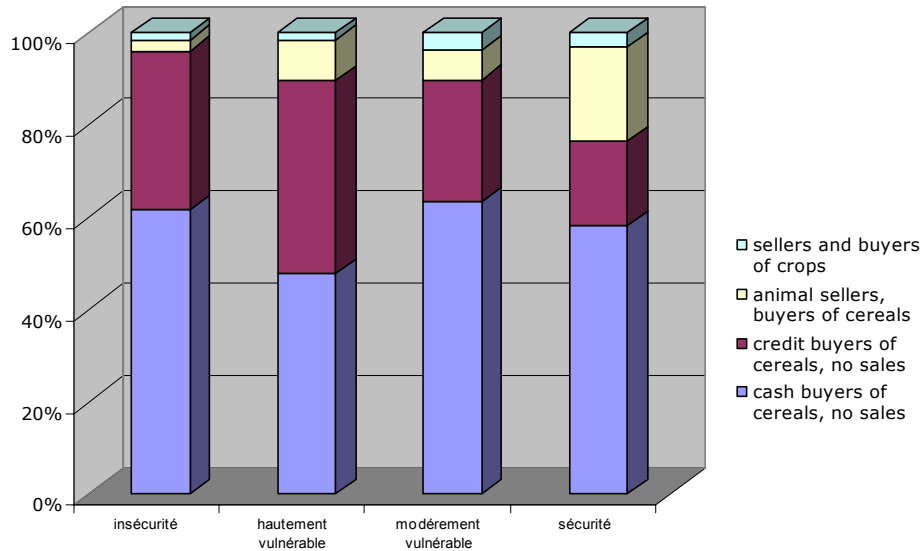
Graph 5 – Commercial behaviour by agro-ecological zone



Source : CFSVA Survey, 2006.

Graph 6 shows commercial behaviour by food security category. It is interesting to note that households facing food insecurity sell very few animals and crops. Lower prices have little effect on their food security. But other groups comprising households which sell their animals and products are liable to be harder-hit by any drop in prices.

Graph 6 – Commercial behaviour by food security category



Source : CFSVA survey, 2006

## 8 Principal commercial threats to food security

The risk of an increase in prices of imported products such as rice, wheat, sugar, oil and of niébé, are a major threat to access to food. Similarly any disruption in supplies of imported products would be liable to make such produce less readily available on local markets. Price rises or a disruption in imports might stem from: (i) a depreciation of the Ouguiya; (ii) increased prices on the international market; (iii) lack of hard currency or problems in obtaining import permits; (iv) an increase in formal/informal taxes; and (v) for rice in particular, a decision on the part of the small group of importers to increase their profit margins and/or reduce the volume of their imports.

Apart from the north, where less sorghum is consumed, high sorghum prices could also cause some food-access problems. A halt in imports from Mali or a fall in national production could lead to shortages of sorghum and increased prices.

Further, in pastoral nomad and oases/mixed zones low prices for goats and camels would reduce household revenues and their access to food. In other areas problems would arise from the low price of cattle, sheep and goats. Prices could fall as a result of: i) a sharp rise in supply following a shortage of grazing or water; ii) lower external demand, following a rise in the value of the Ouguiya for instance; iii) new regulations governing livestock imports in neighbouring countries; and iv) an increase in formal/informal taxes.

Further, weak demand for labour both in rural and urban areas, at both national and international level (because of remittances) would have a negative impact on revenues and on access to food.

Lastly, in agro-pastoral and valley agricultural areas, excessively low prices for sorghum, niébé and rice immediately after harvest would mean lower revenues for households (and greater difficulty in debt repayment).

## **9 Recommendations**

### **9.1 Summary of recommendations adopted by the validation workshop**

On the basis of recommendations put forward by the authors of the present study and described in sections 9.2 – 9.5, participants in the validation workshop held in Nouakchott in early September 2006 adopted the following recommendations:

- Avoid purchases of locally-produced cereals given the current production deficit. But buying imported commodities from Mauritanian-based companies would have no negative effects on markets if payment is made in hard currency and purchases are planned in advance.
- Monitor the prices of the principal food products and of livestock.
- Reinforce the existing market information systems and use them as regular tools or, alternatively, consider using the option proposed by WFP but on condition that the SIM/OSA is maintained because a common operational market monitoring system is needed.
- Continue monitoring wheat and rice imports as done by OSA through the Specialized Technical Group and WFP. No monitoring of food security can be complete without an appreciation of the main trans-boundary flows determining food security in Mauritania.

### **9.2 Implications for food aid**

Most of the villagers interviewed reported that access to markets was a problem: distances are enormous and during the rain season roads may be blocked for a month and a half on average at the height of the lean period. Also, local markets are often not very competitive. With rural populations, aid programmes using cash therefore need accompanying measures to finance transportation between villages and markets at the *moughata* or *wilaya* level.

The existence of a marketing system based on credit and trust between villagers and their local retailer does not argue in favour of distributing coupons or cash as a means of providing food aid. It would be in the interest of beneficiaries to use the coupons or cash to settle their debts and thus maintain good relations with their trader so as to continue obtaining credit in the future.

Purchasing locally-produced cereals is not recommended because of the national production deficit. But it is unlikely that buying imported products from Mauritanian-based companies would have negative consequences on the market providing the following conditions are met: (i) payment is made in hard currency in order to avoid problems arising from a shortage of currency; and (ii) purchases are planned ahead (4–6 weeks). Facilities exist for producing enriched flour in

Nouakchott. If WFP is interested, an expert on local purchasing should be asked to obtain more detailed, technical information.

### **9.3 Market reaction to a fall in supply**

As noted above (Chapter 8), the main threats have to do with either cereal imports or agricultural and/or animal production.

There are two response mechanisms in the event of major disturbances affecting wheat and rice imports – using existing Mauritanian stocks and/or increasing imports of dry cereals from Mali and Senegal. Given that food stocks are not very substantial and that dry cereals surpluses are generally small in neighbouring countries a food crisis could occur.

In the event of a fall in agricultural production, wheat importers<sup>8</sup> have the capacity required to make up for the shortfall on condition that they are not handicapped by a lack of foreign currency or by other import barriers. That is not to say that there would be no problems related to the access to food: (i) a drop in production would lead to a drop in revenues in some areas; and (ii) distances, high transport costs, fragmented demand and scarce competition at village level offer little guarantee of cereals being available at an acceptable price.

The animal sector could face difficulties deriving from recurring events such as poor grazing, water shortages, low prices, etc. or because of export problems. Any of these would have an impact on revenues and access to food.

### **9.4 Monitoring agricultural and livestock prices**

#### **9.4.1 Objective**

Clearly, reinforcing the capacity of CSA with regard to collecting and analysing prices would be the best way of achieving improved monitoring of agricultural and livestock prices. Nonetheless, assuming the responsibility to reinforce the CSA goes beyond WFP's capacity. It would require large financial and human resources as well as a considerable amount of time. The traditional donor – the European Union – withdrew from the activity in 2004. It is estimated that the cost of reinforcing the CSA would be too high for WFP alone, even though no precise calculations have been made for Mauritania. WFP's experience with SIMA in Niger shows that strengthening the existing system could easily cost more than \$US50,000 a year. Lastly, although other partners may possibly intervene to help inject some new dynamism into the system in the coming years, this would take time and WFP cannot afford to wait.

The interim objective is thus to set up a light but operational capacity for monitoring markets through WFP's sub-Offices with a view to improving targeting of food aid. Such a capacity would allow one to detect any problems involving: (i) access to food through markets; (ii) supplies of cereals to the markets; and (iii) sales of food aid on markets. The expected product is a descriptive analysis of trends at markets to be integrated into WFP's monthly SitRep. When the system is up and running, food and revenue "baskets" could be created to translate any change in prices into changes in effective purchasing power.

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<sup>8</sup> It is difficult to predict how rice importers will respond.

#### 9.4.2 Method

The general principle is to collect regular information on the basis of a few main indicators across a small sample of markets regarded as important in terms of food security. The information would be collected every two weeks by personnel from the WFP Office in Nouakchott, from WFP sub-offices and WFP 'antennas' and transmitted to the monitoring and evaluation unit based in Nouakchott. This unit would be charged with organizing and analysing the data and with preparing a "Price Movements" section to be included in the SitRep.

A selection of markets was made in Chapter VI 3: *Commercial risks and indicators to be monitored (Cf. technical annex)*. Twenty-five markets were selected on the basis of their relevance to food security in a given agro-ecological area. Subsequently markets closest to the WFP 'antennas' and sub-offices were selected in order to minimize the costs of the system. The markets are: Néma, Tidjika, Nouakchott, Aleg, Kiffa, Aioun, Sélibaby and Kaédi. With the exception of the transhumant pastoral zone, all zones would be covered. A solution for this area would need to be found at a later date.

Data would be collected on the basis of a questionnaire. The products to be monitored were also listed in Chapter VI 3: *Commercial risks and indicators to be monitored*. They are: local rice, imported rice, sorghum, wheat, sheep, goats and sugar. Consumer prices will be collected in terms of local units, whose weight will be verified once a month. Surveyors will translate into kilograms on the spot. The age and size of animals to be monitored will be determined subsequently.

Surveyors will visit markets on the same day at the same time every two weeks in order to observe three transactions for each of the products monitored. The calendar per market will be fixed subsequently. Surveyors will be trained ahead of the operation.

The analysis will be performed on the basis of a detailed knowledge of the functioning of the markets and their impact on food security, as set out in the present document. Initially, little data will be available to carry out an in-depth analysis and at least a year will be needed to collect sufficient data to compare prices over time. Technical support on analysis will be available through the regional bureau and WFP's partners, particularly FEWS-NET.

#### 9.4.3 Follow-up

Activities to be undertaken are:

- Finalizing the list of markets and indicators;
- Finalizing the questionnaire;
- Finalizing the data-collection methods;
- Training surveyors;
- Setting up the simplest-possible database; and
- Preparing a plan for analysis.

It is suggested that data collection begin at the end of September 2006.

### **9.5 Monitoring of imports and exports**

#### 9.5.1 Introduction

Monitoring the food security situation would be virtually impossible without keeping track of cross-border flows as these are a major element in determining Mauritania's food security. Several threats to imports and exports have been

identified, for which the following quantitative indicators would serve to assess the risk level over the course of the year:

- UM/US\$, UM/EURO and UM/FCFA exchange rates;
- wheat and rice prices on the international market;
- the direction and quantity of commodity movements between Mauritania on the one hand and Mali and Senegal on the other ;
- the quantity of animals exported; and
- the quantity of wheat and rice imported.

In addition, there is a need to conduct qualitative monitoring of prospective wheat and rice imports, together with surveillance of currency availability for wheat and rice imports and formal and informal barriers to livestock exports.

#### 9.5.2 Proposed method

**Exchange rate:** collection of data will be integrated with prices on the Nouakchott market (cf. 9.3); the rates will be those on the parallel market for UM/US\$ and UM/EURO (the UM/FCFA rate can be calculated on the basis of the UM/EURO exchange rate). Data will be incorporated into the Monitoring and Evaluation Unit's "prices" database. Results of the analysis may be included in the SitRep if the trend is alarming.

**Prices of wheat and rice on the international market:** data are available on the FAO website: <http://www.fao.org/es/esc/prices>. They will be incorporated into the Monitoring and Evaluation Unit's "prices" database. Results of the analysis may be included in the SitRep if the trend is alarming.

**Monitoring of trans-boundary flows with Senegal and Mali:** The monitoring system should be included as part of the implementation of a regional system for monitoring trans-boundary flows. The question is being dealt with by CILSS in collaboration with partners. The system should function independently of official structures : (i) given that the majority of trans-boundary flows are informal and that traders and customs officers prefer to avoid making official contact; and (ii) given that if a crisis occurs tension between authorities wanting to limit food exports and traders could mount. CILSS will propose a regional monitoring system in August 2006 following a series of missions in the region's border areas.

**Monitoring of rice and wheat imports:** Collection – even in part – of data by the Port of Nouakchott will serve as the basis. Monthly data will be incorporated into the WFP Office's Monitoring and Evaluation Unit's "prices" database.

**Import prospects:** It will be vital to strengthen collaboration with some of the leading wheat and rice importers. Relations with les Grands Moulins de Mauritanie – which already exist – could be reinforced by regular meetings. It would be interesting to find out their views on markets and imports. Availability of hard currency and import prospects could be examined together.

**Obstacles to livestock exports:** It is not expected that there will be much variation here, but this factor could have a profound impact on livestock-holders' revenues. Information will be available through the newspapers. It is mentioned here in order to draw attention to the importance of continuing to export livestock without any formal or informal barriers.