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Grain and Feed Annual

West Africa Rice Annual

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Report Highlights:
Total MY (Oct - Sept) 2010/11 milled rice production for West Africa is 4.06 million tons, a 24 percent increase from last year based on good rainfall distribution and governmental and donor investment in irrigated areas and subsidized inputs. Post forecasts MY 2011/12 rice production to increase 10 percent. Imports of MY 2010/11 milled rice are estimated at 3 million tons with Cote d'Ivoire (900,000 tons) and Senegal (700,000 tons) importing the lion's share. Despite the relatively large increases in rice production, imports will likely remain stable in coming years as population and consumption grow.

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MY (Oct - Sept) 2010/11 rice production was excellent based on expanded area harvested, favorable rain conditions and governmental and donor investment in the sector. Even though we see large percentage increases in production for several countries, it has not made much of a dent on demand. MY 2010/11 milled rice production is estimated at 4.06 million tons (see Table 1) which represents a 24 percent increase from the previous year.

MY 2011/12 milled rice production is estimated at 4.46 million tons as irrigation schemes are expanded, but for production to increase, positive government policies and investments need to continue at its current pace.

Government policies dedicated to increasing rice production are driven by West Africa's exposed vulnerability to price volatility (see GAIN report SG8009). These policies include subsidizing seeds, inputs, expansion of irrigated area and better organization of the rice market and value chain.

In conclusion, if governmental and donor investments hold and rainfall is abundant and well distributed, Post forecasts a 10 percent increase for MY 2011/12 rice production for West Africa (see Table 1). However, West Africa will still have to import 3 million tons or 50 percent of demand in MY 2011/12.

In addition to production and trade, this report looks at consumption, policies and marketing. We recommend reading USAID's Global Food Security Response case studies on specific countries for additional analysis.

*West African countries included in this report: Burkina Faso, Cape Verde, Chad, Cote d'Ivoire, Gambia, Guinea-Bissau, Guinea-Conakry, Mali, Mauritania, Niger, Senegal and Togo

II- Production:

MY 2010/11 milled rice production is estimated at 4.06 million tons, and MY 2011/12 is forecast to increase 10 percent to 4.46 million tons. In MY 2010/11, Mali accounted for 37 percent of production while Senegal and Cote d'Ivoire comprised 20 percent.

A. Cote d'Ivoire

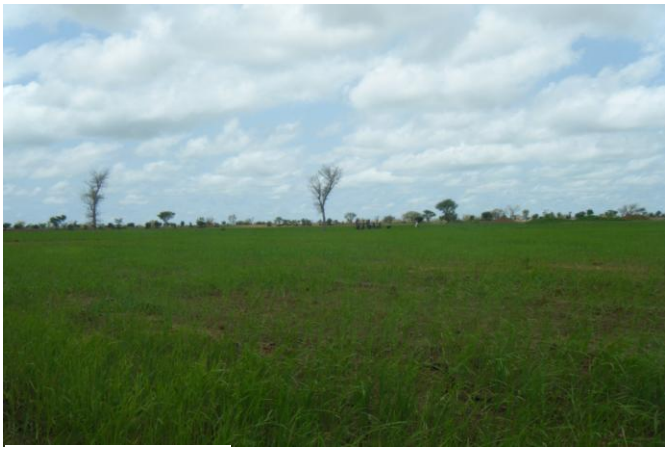
Rainfall in 2010 was better than normal with rain continuing until October. CILSS estimated MY 2010/11 milled rice production at 416,000 tons, a 10 percent increase. However, the success of next year's crop depends on the ability of the new government to gain footing, but Post estimates that MY 2011/12 milled rice production reaches 374,000 tons. Cote d'Ivoire has fallen short of its goals under the previous administration's June 2008 national program to increase milled rice production by 200,000 tons each year by 2012. However, production has improved on increased area harvested and access to improved seeds to 60 percent of the producers.

In Cote d'Ivoire, there are three principal production systems: rain-fed upland, rain fed lowland and irrigated lowland. Rain-fed upland and lowland account for 90 percent of rice production and mainly produced in the North and West part of the country. There are several major production areas where each account for at least 7 percent of production: Divo, Gagnoa, Daloa, Man, Bouaké, Korhogo and

Odienne. Plus, there are new regions coming on line from the program for rehabilitation of old irrigation or new regional development projects.

B. Mali

The MY 2010/2011 campaign was characterized by normal to excess rainfall with some cases of flooding and *Comite Permanent Inter-Etats Lutre contre la Secheresse dans le Sahel* (CILSS) reported milled production at 1.5 million tons, a 46 percent increase from the previous year. Post forecasts a 12 percent increase in MY 2011/12 rice production based on GOM and donor initiatives.



Malian rice field
(*Source: FAS Dakar*)

Rice is a strategic crop in Mali where it leads in West African production and according to the Government of Mali (GOM), contributed 5 percent to the 2009 GDP. Rice is grown extensively along the banks of the Niger River between Segou and Mopti, with the most important area under the *Office du Niger* (ON), located north of Segou toward the Mauritanian border. Using water diverted from the Niger River, the ON irrigates about 80,000 hectares of land for rice and sugarcane production. The ON is a government-owned firm that acquired control of a series of development projects in the Middle Niger River Valley including hydroelectric dams, irrigation canals and agricultural villages devoted to the production of rice and cotton. It represents about 40 percent of total production due mainly to investment in large scale gravity fed irrigation infrastructure. Average rice yields increased 20 percent from 1999 to 2008 mainly due to adoption of improved production techniques including transplanting of seedlings, increased use of fertilizer and improved access to credit. Mali exports a small quantity of rice in the sub-region to Mauritania and Guinea.

Since 2008, the Government of Mali (GOM) launched many initiatives to boost local rice production:

- The Malian Investment Plan to increase rice production via planting new irrigated zones and intensification of lowland areas. The goal is to produce 168,262 tons of paddy rice on 27,027 hectares by 2015.
- USAID/Mali, under Feed the Future strategy, to work on the rice value chain along with other USG agencies such as the *Millennium Challenge Corporation* (MCC) to help the GOM achieve its objectives. USAID will build small scale irrigation systems, encourage access to credit for seed and fertilizer procurement, improve extension services, build improved storage facilities and market information

systems.
- The national strategy to push paddy rice production to 2 million tons by 2009, 2.7 million tons by 2013 and 3.9 million tons by 2018 on 1.1 million hectares using rain-fed, total water control and floating rice production systems.

C- Senegal

The Government of Senegal (GOS) estimates MY 2010/11 paddy rice production at 604,000 tons (390,000 tons of milled rice) on 147,000 hectares; a 18 percent increase. Post estimates MY 2011/12 paddy rice production at 700,000 tons (455,000 tons of milled rice). The GOS plans to increase milled rice production to 1 million tons by 2012 through the combined efforts of government, donors and the private sector.

Senegal has two types of production systems: irrigated land (70 percent) located in the Senegal River Valley (SRV) and the basin of Anambe and the rain-fed upland (30 percent) located in the regions of Fatick, Ziguinchor, Sedhiou, Kolda, Tambacounda and Kedougou. Coinciding with Senegal's rainy season (June-October), rice is typically planted from June to July and harvested from November to January. There is a second planting season in the SRV that begins in February with harvesting in June. Rice is cultivated on small landholdings except for some large-scale paddies located near the delta of the Senegal River. In the SRV, average yield for paddy rice is 4 tons per hectare and ranges from 2 tons per hectare to 13 tons per hectare. Because of the potential for irrigated land, the government of Senegal (GOS) is focusing its recent production boosting initiative, *Great Agricultural Offensive for Food and Abundance* (GOANA) (See GAIN Report SG9001), on the SRV. This includes development of irrigation infrastructures, increase of area harvested, access to credit, subsidized inputs, improved access to good quality seeds, use of high yield varieties and adequate equipment for harvesting and processing, and a better organization for rice marketing.

Production is increasing considerably due to rehabilitation of land in the SRV (increasing from 80,000 hectares in MY 2007/08 to 98,000 hectares in MY 2010/11) by GOS and donors. This trend should continue over the next four years since the GOANA objective is to harvest 1.5 million tons from 327,000 ha of good quality milled rice by 2012. For the MY 2010/2011 campaign, the GOS subsidized $9.0 million worth of inputs.

Rain-fed rice is typically shrugged off as a minor contribution to overall production since most is consumed and not sold. However, USAID contribution through its implementing partners (Wula Nafaa and PCE) consist of heavily investing in improved rain-fed rice varieties, like NERICA (New Rice for Africa) and increasing small scale irrigation in the south. This should raise yield from less than 1 ton per hectare to 2-3 tons per hectare for rain-fed rice.
The GOS is also assisted by:

- The *Société Nationale d'Aménagement et d'Exploitation des Terres du Delta du Fleuve Sénégal* (SAED), a government extension service:

- Developing new irrigation structures and maintaining old ones
- Assisting farmers to form associations
- Providing research-based advice to the farmers' associations
- Linking farmers' associations to the National bank for Agriculture (CNCAS) and processors to

traders
- Providing technical assistance to millers

- SAED reported that the World Bank will provide funding of $8 million to rehabilitate an additional 7,000 hectares in the Delta of the Senegal River.

- Africa Rice, a rice research organization, has developed high yielding short-duration variety, "Sahel," that is suitable for double cropping in rice irrigation schemes. Three Sahel varieties are grown in more than 70 percent of the SRV. Africa Rice is planning to establish an international training center for rice in Senegal. The center's goal is to increase the number and level of expertise of extension workers, researchers and technicians of the rice industry.

- *Institut Senegalais de Recherche Agricole* (ISRA) provides foundation seeds for new rice varieties

- The MCC signed a $540 million grant with the GOS of which $170 million will be used to help irrigate and desalinate as much as 36,500 hectares of land in the Senegal Valley River.

Table 1: MY 2010 - MY 2012: Area Harvested, Production, Imports and Consumption

Countries	Area Harvested			Production, Milled			Imports			Consumption		
	1000 HA			1000 MT			1000 MT			1000 MT		
	2010	2011	2012	2010	2011	2012	2010	2011	2012	2010	2011	2012
Burkina Faso	109	135	160	142	178	208	228	250	260	308	318	327
Cape Verde	1	2	2	4	6	8	34	29	30	32	33	33
Chad	100	154	187	90	119	130	20	10	10	110	129	131
Cote d'Ivoire	362	380	314	378	416	374	900	900	950	1,260	1,290	1,314
Gambia	73	86	112	50	63	82	95	90	90	101	104	106
Guinea-Bissau	100	115	130	100	115	130	109	128	128	203	207	211
Guinea-Conakry	871	932	1017	975	1,040	1,137	320	320	315	1200	1,220	1,250
Mali	580	686	773	1,043	1,523	1,700	165	135	140	855	877	900
Mauritania	13	27	32	37	75	88	100	100	100	137	141	144
Niger	25	28	31	60	66	72	259	260	260	285	296	307
Senegal	131	147	162	330	390	455	685	700	700	1,022	1,049	1,076
Togo	42	38	42	78	72	78	80	80	80	79	81	83
Total	**2,407**	**2,730**	**2,962**	**3,287**	**4,063**	**4,462**	**2,995**	**3,002**	**3,063**	**5,592**	**5,745**	**5,882**

Source: CILSS data and FAS Dakar estimates

III- Consumption:

Average per capita consumption, using official population figures, is forecasted to boost MY 2011/12 demand by 2.4 percent to 5.9 million tons. However, consumer preferences for rice vary across West African, as explained in Table 2.

Table 2: Rice varieties based on consumption habits of some West African countries

Countries	Broken 100%	25 – 35 %	15 – 20 %	Mostly Unbroken Grain
Senegal	90	3	5	2
Mali	20	70	7	3
Guinea	10	80	6	4
Côte d'Ivoire	30	55	10	5
Mauritania	60	30	6	4

Source: Study on the distribution of imported rice in SENEGAL- PCE/ USAID, Dec 2010

A. Cote d'Ivoire

Cote d'Ivoire's MY 2010/11 rice consumption is estimated at 1.2 million tons (60 kg per capita) and MY 2011/2012 consumption at 1.3 million. Rice accounts for 21 percent of household food supply followed by fish (17 percent), and rice is the most popular cereal and most consumed staple food after cassava and its derivates. However, rice is more consumed in Abidjan and in other urban centers (Bouaké, Daloa, Gagnoa, Korhogo, Man and Odienne) while cassava remains the most consumed staple among the rural population.

Per Table 2, Ivoirians prefer mostly broken rice, but it is of inferior quality and mostly consumed by people of modest income while mostly whole grain rice or 'luxury rice" (0 to 15% broken) is consumed by wealthy households. Imported luxury rice from Asia and America is mainly purchased at hyper/super markets and grocery stores conditioned in small packages of 5 kg for small families (2-5 people).

B. Mali

According to the Global Food Security Response Case Study: Mali (August 2009), Malian consumers prefer the taste of local rice even though consumers report that imported rice gains more volume when cooked. Malian irrigated rice is often called *Gambiaka* also known as *Gambiaka suruni* or *Kogono* 91-1, which are disease resistant varieties introduced in the 1990's.

Malian local rice is classified by the ON:

- RM40 or unsorted rice with broken grains not exceeding 40 percent;
- ELB or *extra long blanchi* for polished extra long rice with not more than five percent of broken rice; and
- broken rice with homogenous grains

Malian rice consumption increased from 56 kg per capita in 2006 to 62 Kg per capita in MY 2010/11 making rice the most cereal consumed in urban areas. In Bamako, more than half of the consumption is satisfied by imports and rural populations are increasingly turned to imported rice from 10 percent in 1990s to 30 percent in 2007. Post estimates the MY 2011/12 rice consumption at 0.9 million tons.

C. Senegal

Rice consumption has grown since the 1970's and has replaced millet as the most important staple food. Broken rice is the preferred style of rice and is used in many dishes, particularly the most popular dish, *thieboudienne* (broken rice with marinated fish with tomato paste and vegetables), which is appreciated in other West African countries, as well.

Per capita consumption is 84 kg per year and MY 2010/11 milled rice production meets only 30 percent of demand. Millet, sorghum and maize are the three alternate sources of energy to rice.

This ad shows broken rice on the right; the basis for Senegal's beloved national dish, *thiéboudienne*.
(*Source: FAS Dakar*)

IV- Trade:

West Africa imports about 46 percent of its rice consumption needs and Post forecasts stable imports for MY 2010/2011 and MY 2011/2012 despite increases of local rice production and incentive measures in the major rice producing countries of Mali, Senegal and Cote d'Ivoire who account for 57 percent of the total production. Guinea-Bissau, Mali and Mauritania are less dependent on the imported rice market. Local and imported rice prices have declined since their highs in 2008, but the price differential continues to exert pressure on imported rice and increasing demand for local rice.

In West Africa, cross-border flows of agricultural products are usually very dense and frequent from cereal surplus areas to deficit zones. However, the Ivorian crisis has slowed traffic at the port of Abidjan, heavily used by importers and Malian exporters. Cote d'Ivoire is a strategic country in the food economies of several countries in the region including Mali, Burkina Faso and Niger. However, CILSS thinks that the Ivorian conflict may have impacted and disrupted food insecurity, regional supply, and revenue in countries that depend on Cote d'Ivoire like Mali, Burkina Faso and Niger.

(For additional information, we recommend reading the USAID funded report, *Cross-border Trade and Food Security in West Africa: Case of the Western Basin* (2009).)

A. Cote d'Ivoire

About seventy percent rice consumed in Cote d'Ivoire is imported. Thailand remains the largest supplier (49 percent) followed by Vietnam (21 percent) and Pakistan (5 percent). U.S. rice only represents less than 1 percent of imports.

Côte d'Ivoire imports rice mainly in bulk (cargo rice - similar to brown rice) and then packages and re-exports it in the form of semi-milled rice. In MY 2010/11, just 14,000 tons were exported to the sub-region: Burkina Faso (72 percent), Ghana (12 percent) and Mali (7 percent). In the past Cote d'Ivoire also exported in Liberia.

The importation of rice is monopolized by large companies, and customs duties are set at five percent for all grades imported from non-WAEMU countries.

B. Mali

Mali's national strategy for the development of rice, initiated in 2009, is to increase milled rice production to 1.5 million tons and become a rice exporter. Mali has increased rice production considerably and only imports 10 percent of consumption. GOM estimated MY 2010/11 imports at 135,000 tons, mostly from Asia (India, Thailand, Vietnam, Pakistan and China). Rice imports are a mix of broken and whole grains and are monopolized by two to three major importers accounting with two-thirds of the market share. Post forecasts a 4 percent increase in MY 2010/11.

Rice is not imported by rail from Dakar due to the absence of space and long delays. Importers prefer road transport from Guinea, Cote d'Ivoire or Ghana.

C. Senegal

Senegal imports about 60 percent of its rice for domestic consumption. Markets are inundated with cheaper rice from Asia, and the Senegalese prefer 100 percent broken rice. In MY 2010, rice imports represented about 46 percent of imported food followed by vegetable oils, wheat and dairy products. Imports are mainly done by private companies and totaled $518 million in 2008 (863,371 tons), $336 million in 2009 (714,890 tons) and $271 million in 2010 (685,875 tons). Thirteen private companies share the market with the largest controlling 24 percent of the market. Importers buy shiploads of rice through a cluster of twelve brokers located in Switzerland rather than directly from exporting countries, which they then store in their own warehouses in Dakar compared to smaller importers that deal with container-sized transactions.

In MY 2010/11, the top suppliers for Senegal were Thailand (42 percent) and Vietnam (20 percent) followed by Brazil (11 percent). In 2010, the U.S. supplied 10 tons of rice compared to 22 tons in 2008, which accounts for 2 percent of the total imported rice. Senegal exported a small quantity (5,000 tons) of rice in Guinea (3,000 tons), Guinea Bissau (1,000 tons), and Mali (1,000 metric tons).

In October 2009, the PCE/USAID study on Global Food Security Response Senegal RICE reported that rice exports from Senegal are minimal, not exceeding 133,000 MT in the past eight years. This quantity typically represents re-exports of imported rice to neighboring Guinea-Bissau, Mali and The Gambia. The GOS estimates that 20-30 percent of total rice exports flow informally to neighboring countries, presumably locally produced rice crossing the Senegal River to Mauritania in small transactions.

In Senegal, tariffs on rice vary according to grade. The customs duties are set at 10 percent for all

grades. There is no surtax on broken rice, which fixes its maximum tariff at 12.7 percent compared to 27.7 percent for brown rice and 32.7 percent for semi-milled rice. There is no VAT applied to rice imports.

V- Policy:

Today, most governments are encouraging local rice production as there is a perception that imports are a major burden for the countries' trade balance and leave them vulnerable to fluctuating world rice supplies and prices.

In the coming year, CILSS foresees local and imported rice prices converging, except in Mali where imported rice represents a very small market share and along coastal countries such as Senegal, Mauritania and Côte d'Ivoire where substitution effects of dry cereals to rice will likely generate higher prices.

In Senegal, as well as Mali and Cote d'Ivoire, the governments are trying to meet food security challenges having launched national programs to boost local rice production. The programs' objectives are to reach 1 million tons of milled rice by 2012 (Senegal), increase milled production 200,000 tons annually by 2012 (Cote d'Ivoire) and increasing production by 50 percent from MY 2008/09 campaign to achieve self sufficiency (Mali). Recently, The Malian Government declared it would become a rice exporter in the sub-region in the coming years. It remains to be seen if Cote d'Ivoire will continue to implement initiatives and programs from the previous administration.

VI- Marketing:

West African markets are characterized by direct and in-direct actors and private entities like supermarkets. All of the players operate in several channels ranging from large commercial centers to rural markets to subsistence farmers. According to the 2009 USAID funded report, *Cross-border Trade and Food Security in West Africa: Case of the Western Basin*, there are three main types of markets existing in the western basin (Gambia, Guinea-Bissau, Guinea-Conakry, Mali, Mauritania and Senegal) each hosting specific modes of exchange. The weekly rural market, or *lumo*, the assembly market and the urban consumer market each have specific and well defined roles in the system. In rural areas, most exchanges take place on weekly markets where unprocessed commodities are traded against manufactured goods. The *lumos* of a specific local area coordinate their schedules, each holding its market day in turn. These weekly rural markets operate in relationship with an assembly market. These assembly markets, which host transactions between wholesalers, function as an interface between the port (and the international market) and urban consumer markets. The urban consumer market receives supplies from the assembly markets for local goods, and from the port for imported commodities.

A. Cote d'Ivoire

Imported and local rice are sold by local importers and producers, distributors (wholesaler, semi wholesaler and retailer) and consumers (small restaurants) through modern (supermarkets/ hypermarkets) and traditional (open markets, small shops) channels.

B. Mali

Mali needs to improve rice processing technology to prevent high levels of loss and post harvest techniques to increase quality of milled paddy rice especially if Mali envisions exporting rice in the sub region.

The main actors in the rice value chain are:

- Small family farmers established on the ON lands with annual farming leases or permit
- Commercial farms located in the ON zones with a 30 or 50 years lease
- Farmer organizations which pools farmers to access credit from financial institutions, providing group orders of inputs and harvest and post harvest services and marketing
- Mini rice mills providing services to farmers which improve loss rate at 60 to 62 percent
- Collectors who usually purchase rice either at the farm gate or in the weekly markets in the major production zones and transport it to major market centers. They are mainly independent traders or agents (wholesaler/importers and semi-wholesalers). They can also be retailers or sell directly to retailers
- Seven to ten Wholesaler/importers are involved. However, there are three main operators who are dealing with other cereals and own industrial wheat flour mills.
- Semi-wholesalers who own warehouses in proximity to major urban markets, who also buy imported rice from wholesalers/importers.
- Market retailers/sorters can be found in markets across from the Grand Mosque in Bamako and buy directly from rice collectors and hand sort non-homogenous sacks of rice to produce pure extra-long, large-grain and small-grain broken rice for sale by the kilogram or by sack.
- Retailers are located in open-air markets or in neighboring store fronts and purchase rice from rice collectors or semi-wholesalers in the capital.

Rice is being sold in different channels:

- At the production site
- Traditional small-scale trade channel representing the largest channel (80 percent of the total trade quantity)
- Industrial rice milling channel
- Farmer association channel
- Mini rice mill channel
- Commercial farm channel

C. Senegal

Since the liberalization of the rice market, importers focus on diversifying their sources for good quality rice at a better price. As a result, we see a trend of the urban population preference for fragrant rice. As for the locally-grown rice in Senegal, most is used as a subsistence product and is not sold in larger urban centers. Between 50 and 60 percent of it is produced, marketed, and used around the SRV. Only

a small share is exported towards other areas through Saint Louis to be sold in Dakar and in the other regions of Senegal. Small quantities are exported to Mauritania. However, in 2010, the GOS created a new company to promote and market Senegalese local rice, *Societe de Promotion et de Commercialisation du Riz au Senegal* (SPCRS). SPCRS includes private importers, farmer associations and rice millers for a better distribution of the product in the country. The company took over marketing of paddy rice in winter 2010. Regarding the paddy rice price, industry players agreed with farmer associations on a reference price of $0.23 per kg in the SRV.

Direct actors in rice distribution are localized in the region of Dakar, Touba and Kaolack. The Touba market, a major hub of Senegal's agricultural trade, imports food and cash from all origins, and channels the products to the urban areas of Dakar, the Petite Cote and the northern Groundnut Basin. In exchange, Touba supplies the rest of Senegal and Guinea-Bissau (at certain times of the year) with imported rice. However, there are indirect actors, upstream and downstream from the direct actors who are agents and traders, semi-wholesalers, retailers, some government structures (through their food cooperatives) and private entities such as supermarkets and convenience stores.

According to a PCE/USAID study on Global Food Security Response for rice in Senegal, there are three main channels that move about one-third of irrigated rice production in which Saint-Louis provides the majority of commercial SRV.

- The primary channel includes network of in-direct actors (agents and traders, semi-wholesalers, retailers, some government structures (through their food cooperatives)) and private entities. They distribute imported rice but also one-third of domestic irrigated production. They are mainly concentrated in urban and surrounding urban markets due to the concentration of purchasing power.

- The second channel located in poorer and more rural areas, is dominated by small, informal traders (known as *bana-banas*) who sell local rice (roughly one-third of total irrigated production) and are characterized by smaller sales mainly by producers.

- The third channel represents subsistence production/consumption and rarely involves commercial actors except for the purchase of some inputs and for occasional service-milling.

Private entities obtain rice from wholesalers (62 percent), *bana-banas* (23 percent) or directly from producers. Of the 66 retailers in the Saint-Louis markets, 86 percent sell local rice, compared to 63 percent selling imported rice.

Senegal has two industrial mills still in operation in charge of collection and processing of rice dispersed in small quantities and transactions. Their equipment is out-dated and are not operating at full-capacity. Processed rice is sorted into broken, mixed, and whole grain rice, unlike at smaller service mills.

There are small service mills in the larger rice production areas that clean and mill local rice. However, mill operators are facing constraints due to lack of working capital and that they do not buy paddy rice themselves; instead they process on behalf of *bana-banas* or for individual farmers.

Local rice producers have increased their levels of production knowledge, skills and practices generating consistently high yields and marketable surpluses due to intensive governmental support over the past decade. They claim there is unfair competition from imported Asian rice and the non-protection for the local rice, but marketing and quality are two major problems of local rice. Some reasons for weak consumption are listed below (See Table 3). In order to compete more effectively with imported rice, farmers need to improve awareness among consumers and make significant advances in operations. Also, appearance, packaging and cleanliness are important characteristics that need to be improved to influence buying decisions.

Table 3: Reasons for the Weak Consumption of Senegal River Valley Rice (percent)

Reasons	Sellers	Household Heads	Producers
Competition	0.4	1.1	56.6
Lack of marketing	40.7	39.5	53.7
Lack of quality	38.9	25.6	41.4
Preparation difficulties	0.4	24.3	10.6
Availability on the market	6.2	35.2	4.5
Weakness of the offer	26.1	1.8	1
Weakness of the production	0	9.3	25.3
Consumer taste	0	1.8	0
Consumer habits	1.8	5.5	1
Price	0.4	3	2.5

Source: October 2009 PCE/USAID's Global Food Security Response Case Study: Senegal

VII- Production, Supply and Demand Data Statistics:

Rice, Milled Senegal	2009/2010		2010/2011		2011/2012	
	Market Year Begin: Oct 2009		Market Year Begin: Oct 2010		Market Year Begin: Oct 2011	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post

Area Harvested	131	131	135	147		162
Beginning Stocks	100	100	105	77		98
Milled Production	330	330	390	390		455
Rough Production	508	508	600	600		700
Milling Rate (.9999)	6,500	6,500	6,500	6,500		6,500
MY Imports	690	690	700	700		700
TY Imports	650	685	700	700		700
TY Imp. from U.S.	35	35	0	0		0
Total Supply	1,120	1,120	1,195	1,167		1,253
MY Exports	10	3	10	10		10
TY Exports	10	4	10	10		10
Consumption and Residual	1,005	1,040	1,070	1,059		1,143
Ending Stocks	105	77	115	98		100
Total Distribution	1,120	1,120	1,195	1,167		1,253
1000 HA, 1000 MT, MT/HA						

Rice, Milled Cote d'Ivoire	**2009/2010**		**2010/2011**		**2011/2012**	
	Market Year Begin: Oct 2009		**Market Year Begin: Oct 2010**		**Market Year Begin: Oct 2011**	
	USDA Official	**New Post**	**USDA Official**	**New Post**	**USDA Official**	**New Post**
Area Harvested	362	362	380	350		314
Beginning Stocks	50	50	50	50		60
Milled Production	378	378	416	416		374
Rough Production	687	687	756	756		680
Milling Rate (.9999)	5,500	5,500	5,500	5,500		5,500
MY Imports	860	900	900	900		950
TY Imports	860	840	900	900		950
TY Imp. from U.S.	0	0	0	0		0
Total Supply	1,288	1,328	1,366	1,366		1,384
MY Exports	0	17	0	10		10
TY Exports	0	14	0	10		10
Consumption and Residual	1,238	1,261	1,296	1,296		1,314
Ending Stocks	50	50	70	60		60
Total Distribution	1,288	1,328	1,366	1,366		1,384
1000 HA, 1000 MT, MT/HA						

Rice, Milled Burkina	2009/2010		2010/2011		2011/2012	
	Market Year Begin: Oct 2009		Market Year Begin: Oct 2010		Market Year Begin: Oct 2011	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post

Area Harvested	109	109	110	135		160
Beginning Stocks	10	10	30	20		7
Milled Production	139	141	143	178		208
Rough Production	214	217	220	274		320
Milling Rate (.9999)	6,500	6,500	6,500	6,500		6,500
MY Imports	205	228	190	250		260
TY Imports	205	228	190	250		260
TY Imp. from U.S.	6	0	0	0		0
Total Supply	354	379	363	448		475
MY Exports	0	0	0	0		0
TY Exports	0	0	0	0		0
Consumption and Residual	324	359	353	441		465
Ending Stocks	30	20	10	7		10
Total Distribution	354	379	363	448		475
1000 HA, 1000 MT, MT/HA						

Rice, Milled Mali	2009/2010		2010/2011		2011/2012	
	Market Year Begin: Oct 2009		Market Year Begin: Oct 2010		Market Year Begin: Oct 2011	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	510	580	575	686		762
Beginning Stocks	15	15	85	86		100
Milled Production	1,043	1,043	1,148	1,523		1,700
Rough Production	1,580	1,580	1,739	2,308		2,576
Milling Rate (.9999)	6,600	6,600	6,600	6,600		6,600
MY Imports	125	165	100	125		100
TY Imports	125	165	100	125		100
TY Imp. from U.S.	0	0	0	0		0
Total Supply	1,183	1,223	1,333	1,734		1,900
MY Exports	0	0	0	0		0
TY Exports	0	0	0	0		0
Consumption and Residual	1,098	1,137	1,233	1,634		1,750
Ending Stocks	85	86	100	100		150
Total Distribution	1,183	1,223	1,333	1,734		1,900
1000 HA, 1000 MT, MT/HA						

Rice, Milled Chad	2009/2010	2010/2011	2011/2012
	Market Year Begin: Oct 2009	Market Year Begin: Oct 2010	Market Year Begin: Oct 2011

	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	100	100	111	154		168
Beginning Stocks	0	0	0	0		0
Milled Production	90	90	120	119		130
Rough Production	131	131	175	174		190
Milling Rate (.9999)	6,850	6,850	6,850	6,850		6,850
MY Imports	20	20	20	10		10
TY Imports	20	20	20	10		10
TY Imp. from U.S.	0	0	0	0		0
Total Supply	110	110	140	129		140
MY Exports	0	0	0	0		0
TY Exports	0	0	0	0		0
Consumption and Residual	110	110	140	129		140
Ending Stocks	0	0	0	0		0
Total Distribution	110	110	140	129		140
1000 HA, 1000 MT, MT/HA						

Rice, Milled Niger	2009/2010		2010/2011		2011/2012	
	Market Year Begin: Oct 2009		Market Year Begin: Oct 2010		Market Year Begin: Oct 2011	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	25	23	26	26		27
Beginning Stocks	0	0	0	0		0
Milled Production	59	60	58	67		70
Rough Production	89	91	88	102		106
Milling Rate (.9999)	6,600	6,600	6,600	6,600		6,600
MY Imports	215	260	220	260		260
TY Imports	215	260	220	260		260
TY Imp. from U.S.	25	0	0	0		0
Total Supply	274	320	278	327		330
MY Exports	0	0	0	0		0
TY Exports	0	0	0	0		0
Consumption and Residual	274	320	278	327		330
Ending Stocks	0	0	0	0		0
Total Distribution	274	320	278	327		330
1000 HA, 1000 MT, MT/HA						

Rice, Milled Mauritania	2009/2010		2010/2011		2011/2012	
	Market Year Begin: Oct 2009		Market Year Begin: Oct 2010		Market Year Begin: Oct 2011	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post

Area Harvested	17	13	18	27		32
Beginning Stocks	0	0	0	0		10
Milled Production	46	37	75	75		88
Rough Production	68	54	110	110		129
Milling Rate (.9999)	6,800	6,800	6,800	6,800		6,800
MY Imports	75	100	80	100		100
TY Imports	75	100	80	100		100
TY Imp. from U.S.	0	0	0	0		0
Total Supply	121	137	155	175		198
MY Exports	0	0	0	0		0
TY Exports	0	0	0	0		0
Consumption and Residual	121	137	155	165		188
Ending Stocks	0	0	0	10		10
Total Distribution	121	137	155	175		198
1000 HA, 1000 MT, MT/HA						

Rice, Milled Gambia, The	2009/2010		2010/2011		2011/2012	
	Market Year Begin: Oct 2009		Market Year Begin: Oct 2010		Market Year Begin: Oct 2011	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	53	73	50	86		112
Beginning Stocks	0	0	0	30		30
Milled Production	50	50	64	63		82
Rough Production	79	7,937	102	100		130
Milling Rate (.9999)	6,300	63	6,300	6,300		6,300
MY Imports	95	95	100	90		90
TY Imports	95	95	100	90		90
TY Imp. from U.S.	0	0	0	0		0
Total Supply	145	145	164	183		202
MY Exports	0	0	0	0		0
TY Exports	0	0	0	0		0
Consumption and Residual	145	115	164	153		172
Ending Stocks	0	30	0	30		30
Total Distribution	145	145	164	183		202
1000 HA, 1000 MT, MT/HA						

Rice, Milled Guinea-Bissau	2009/2010		2010/2011		2011/2012	
	Market Year Begin: Oct 2009		Market Year Begin: Oct 2010		Market Year Begin: Oct 2011	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post

Area Harvested	100	100	100	115		130
Beginning Stocks	0	0	0	0		20
Milled Production	100	100	115	115		130
Rough Production	154	154	177	177		200
Milling Rate (.9999)	6,500	6,500	6,500	6,500		6,500
MY Imports	100	109	115	128		128
TY Imports	100	109	115	128		128
TY Imp. from U.S.	0	0	0	0		0
Total Supply	200	209	230	243		278
MY Exports	0	0	0	0		0
TY Exports	0	0	0	0		0
Consumption and Residual	200	209	230	223		238
Ending Stocks	0	0	0	20		40
Total Distribution	200	209	230	243		278
1000 HA, 1000 MT, MT/HA						

Rice, Milled Togo	2009/2010		2010/2011		2011/2012	
	Market Year Begin: Oct 2009		Market Year Begin: Oct 2010		Market Year Begin: Oct 2011	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	42	42	42	38		42
Beginning Stocks	0	0	0	0		0
Milled Production	78	78	65	72		78
Rough Production	120	120	100	110		120
Milling Rate (.9999)	6,520	6,520	6,520	6,520		6,520
MY Imports	90	90	95	80		80
TY Imports	80	80	95	80		80
TY Imp. from U.S.	39	39	0	0		0
Total Supply	168	168	160	152		158
MY Exports	0	0	0	0		0
TY Exports	0	0	0	0		0
Consumption and Residual	168	168	160	152		158
Ending Stocks	0	0	0	0		0
Total Distribution	168	168	160	152		158
1000 HA, 1000 MT, MT/HA						

Rice, Milled Guinea	2009/2010		2010/2011		2011/2012	
	Market Year Begin: Oct 2009		Market Year Begin: Oct 2010		Market Year Begin: Oct 2011	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post

Area Harvested	875	875	900	932		1,017
Beginning Stocks	0	0	0	50		75
Milled Production	975	975	1,040	1,040		1,137
Rough Production	1,500	1,500	1,600	1,600		1,749
Milling Rate (.9999)	6,500	6,500	6,500	6,500		6,500
MY Imports	200	320	225	320		315
TY Imports	200	320	225	320		315
TY Imp. from U.S.	4	4	0	0		0
Total Supply	1,175	1,295	1,265	1,410		1,527
MY Exports	0	80	0	80		80
TY Exports	0	80	0	80		80
Consumption and Residual	1,175	1,165	1,265	1,255		1,347
Ending Stocks	0	50	0	75		100
Total Distribution	1,175	1,295	1,265	1,410		1,527
1000 HA, 1000 MT, MT/HA						