

**IMPROVING THE COMPETITIVENESS AND
MARKETABILITY OF LOCALLY-PRODUCED
RICE IN GHANA**

**DEPARTMENT FOR INTERNATIONAL DEVELOPMENT
(DFID)**

CROP POST HARVEST PROGRAMME

PROJECT R6688

1. Marketing of Rice in Ghana

**1.2 - Analysis of Rice Marketing in Northern Ghana -
Augustine Langyintuo and Peter Oldham, March 1997**

Collaborators:

*Natural Resources Institute (NRI)
Savannah Agricultural Research Institute (SARI)*

1. Introduction

Agriculture is the largest sector of the Ghanaian economy contributing about 50% to the Gross Domestic Product and accounting for about 60% of export earnings (Statistical Service, 1991). Over 60% of the population is engaged in agriculture, 85% of which is made up of small scale farmers producing crops and keeping livestock. While maize, millet, sorghum, cowpea, yam and cassava are produced for home consumption, groundnuts and rice are cash crops. Rice is, however, an important food crop among urban dwellers.

Over 63% of the country's local supply of paddy rice of 180,000 MT. (about 81,000 MT. milled rice) is produced in the inland valleys of northern Ghana mainly under rain-fed conditions (PPMED, 1996). Domestic production is growing at a slower rate compared to demand due to a number of factors including poor marketing arrangements. Annual shortfalls in production are offset by imports up to 200% of local production (SOFRECO, 1996).

2. Objectives of the study

The main objective of this study was to examine the marketing arrangements for rice. More specifically, the study aimed at identifying the bottlenecks to marketing efficiency that would aid in proposing recommendations for the improvement in rice production and hence reduce the economic burden on the economy by the importation of rice to meet domestic demand.

3. Methodology

In the last quarter of 1996, the study was conducted in Northern Region (NR) and Upper West Region (UWR) of northern Ghana. In the NR, the study focused on Gbirimani in the Tolon-Kumbungu district where 40 farmers were interviewed. Ten and 25 traders in the Katinga rural and Tamale-Aboabo urban

markets were interviewed as well as five and two rice millers in Tamale and Tolon, respectively. In the UWR 30 rice producers in Sing and 10 traders in Wa market were the focuses of the study. Five rice millers were also interviewed in the Upper West regional capital of Wa. Ten rice traders in Techiman in the Brong-Ahafo Region (BAR) were also interviewed in the first quarter of 1997. Data collected were complemented by baseline survey conducted earlier in 1996 as well as secondary data from the Policy Planning, Monitoring and Evaluation Division of the Ministry of Food and Agriculture.

4. Rice marketing in northern Ghana

4.1 Organisation of rice marketing at the farmer level

Results from the baseline survey conducted by Langyintuo (1996) indicated that in northern Ghana rice is cultivated mainly in the inland valleys. Rice fields in NR average 2.5 ha, about 50% of the total cultivated area. In the UWR, they are about 1.5 ha, about 44% of the cropped area. While in UWR farmers cultivate mainly three different varieties (*Muikpong*, *Muibile* and *Muikagyie*) in relatively pure stands, rice fields in NR contain mixed varieties. One could easily count up to five different varieties on the field. Popular among those cultivated were *Mandi*, *Afefe*, *Bontanga*, *Anyufula*, *Farrow 15* and *Anyufula*. The variety with the largest proportion in terms of area coverage is named as the main variety on the field. Mean yields are about 1.15t/ha in the NR and 1.2 t/ha in the UWR. Farmers use both combine harvesters and the sickle during harvesting. When the sickle is used rice is dried on a cleared piece of land for threshing. The grains are therefore sometimes collected with debris including stones.

During the 1996-cropping season, land preparation and post harvest operations appear to be the most expensive operations (Table 1). Total cost of production less cost of capital were ₵¹167,895/ha and ₵166,140/ha equivalent to about ₵14,675.59 and ₵11,076 a bag respectively in the NR and UWR.

Currently farmers finance the cost of production from their own resources. In the past they enjoyed a system of credit whereby traders financed cost of production by advancing money to farmers with the surety that the produce would be sold to them. This has since been discontinued in both regions because

¹ The national currency is the Cedi (₵). The exchange rate was 1 US\$ = ₵1870 as at February 1997.

farmers and traders alike lost confidence in each other. Farmers felt cheated when traders dictated the time and price of sale.

Table 1. Production cost of rice (¢/ha).

Variable	NR	UWR
<u>Labour input (Man-days)</u>		
Broadcast of seed	2.00	2.00
Weeding	50.00	45.00
Fertiliser application	1.00	1.00
Bird scaring	15.00	15.00
Harvesting	18.00	20.00
Threshing and winnowing	15.00	20.00
Total labour	101.00	103.00
Ploughing and harrowing of field by tractor	90,000.00	90,000.00
Cost of seed (100 kg)	50,000.00	50,000.00
Cost of transporting grain from farm to house	3,500.00	2,000.00
Sub-total	143,500.00	142,000.00
Cost of capital at 35% for half a year	24,395.00	24,140.00
Cost of production excluding value of labour	167,895.00	166,140.00
Value of labour	121,200.00	123,600.00
Cost of production including value of labour	289,095.00	289,740.00
Output (kg/ha) paddy	1,150.00	1,200.00
Value of output @ ¢425	488,750.00	510,000.00
Profit	199,655.00	220,260.00

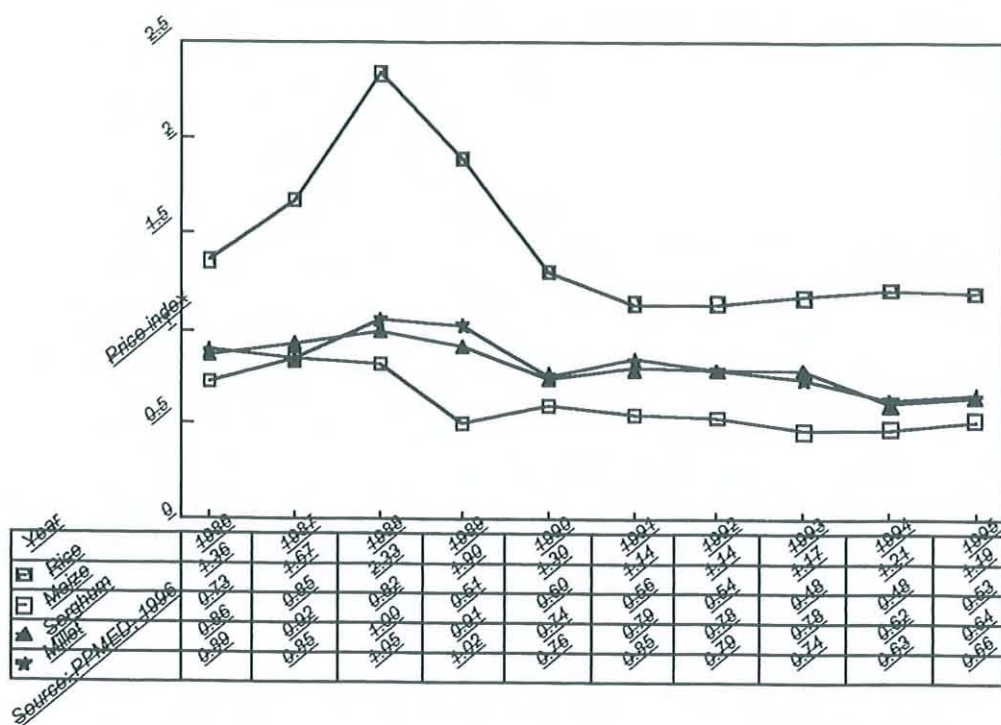
Source: Field study, 1996

More often than not traders bought the produce soon after harvest thereby giving farmers no option to cash in on higher prices at later periods. On the other hand traders buy at that time so that they could store to sell at a later date when prices are higher to compensate for the cost of the interest-free credit

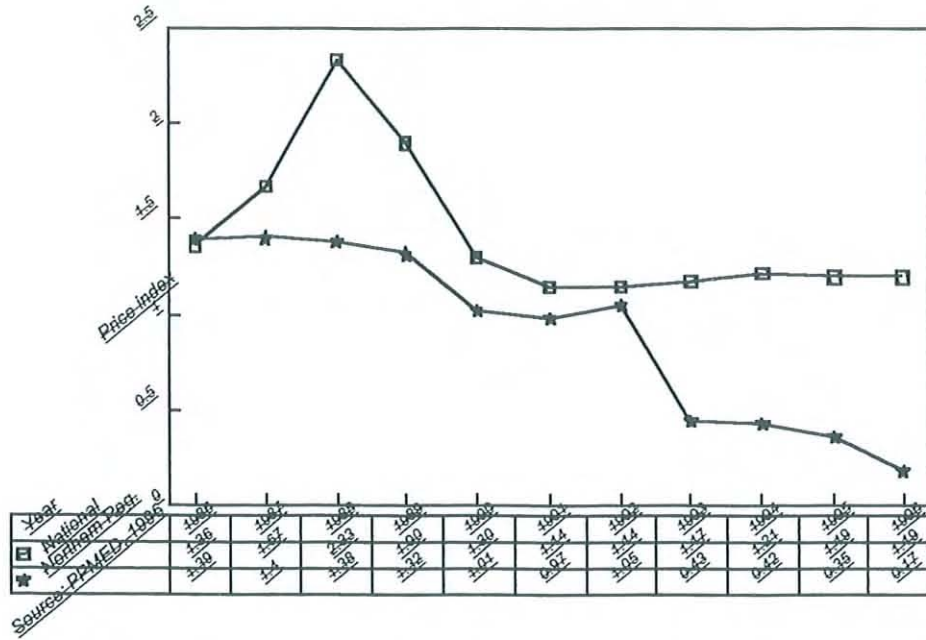
advanced farmers. Traders on their part were not happy with the attitude of farmers when they refused to sell the grain to them.

Even though rice is a cash crop farmers donate about 10.4% of the total output to relatives, mainly those who assist them in some of the field operations, especially harvesting. In addition up to 10.8% is given out as payment for labour. Consumption attracts a meagre 2.5% while seed for the next season claims 5.8%. The remaining 59% are sold as paddy directly to traders. A bag of paddy rice weighs 80 kg, which is the unit of measurement. Sometimes rice is sold in mini bags of 40 kg. Given that seed requirements are fixed, the proportion of sales decreases with decreasing output and vice versa. As their source of livelihood, the standard of living of the average farmer would be linked to how much he is paid for his produce in relation to the general standard of living.

Between 1986 and 1996, prices paid for food crops at the national level showed a decline in real terms. Sorghum, millet and maize for instance suffered price deterioration evidenced by price indices of less than 1 with their relative prices in 1977 (Figure 1). While sorghum and millet attracted real wholesale prices of 16% lower, maize suffered up to 38%.



Rice on the other hand experienced a gradual increase up to 133% in 1988. The price began to decline until stabilising at 17% between 1990 to 1996. Although the national figure for rice gives an impressive positive price index, real price in NR is to the contrary. Figure 2 shows that in 1986, both the regional and national averages were similar. While at the national level the price began to increase afterwards, that for NR remained static. It began to decline steadily from 1989 attaining an index of 0.17 by 1996 against an index of 1.19 obtained at the national level. This implies that the real price for rice in 1996 was about 83% lower than that obtained in 1977.



The disparity between the national figure and that obtained in the NR may be due to relatively higher prices paid for rice in other parts of the country compared to that in NR. Trade liberalisation leading to the massive importation of relatively cheap rice could have contributed in squeezing out the low quality locally produced rice from NR.

4.2 Farmers marketing strategies

Farmers have categorised the time of marketing rice into four “Periods” according to the level of prices received. Marketing done at harvest time in December is “Period” 1. “Period” 2 refers to marketing done within the first two months after harvest while “Periods” 3 and 4 designate marketing done 3 - 4 and 5 - 6 months after harvest, respectively. Successive Periods attract higher prices than preceding ones (Table 2). From June to December, traders control local rice supply.

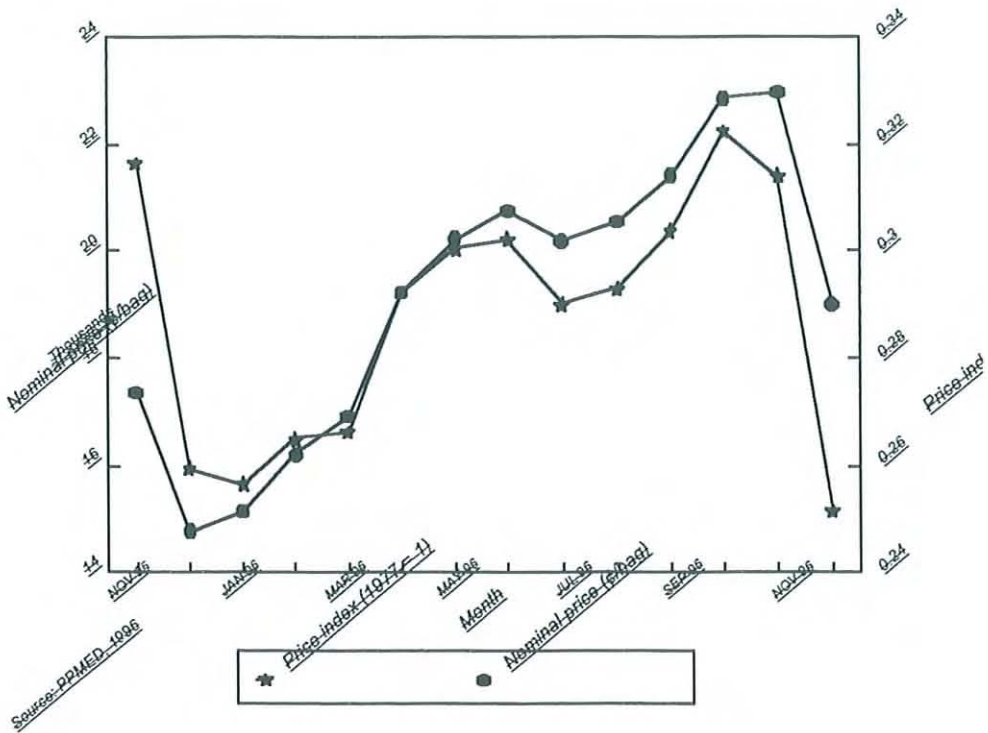
Table 2. Sales of rice at the farm level in northern Ghana, 1995.

Period	Time period	Paddy price (¢/kg)	Proportion of sale	
			NR	UWR
1	December	300	6	12
2	January - February	400	16	80
3	March - April	500	75	8
4	May - June	550	3	0

Source: Field survey, 1996

Sales are made on the farm in order to pay for labour. Where a combine harvester is used, operators prefer to collect portions of the harvest usually two and half bags per hectare as payment. Even though farmers are aware of price movement, sales are made based on felt need and the proportion marketed depends on the cash needs of farmers rather than the general price level. In general marketing activities at the farmer level end six months after harvest. Seasonally, rice prices demonstrate cyclical movement with the highest prices received between September and November and the least between December and March. Inflation imposes an illusion on the prices paid. For instance while the nominal price of ₵19,000 paid for rice in December 1996 is 28% more than that in December 1995, it is in fact 4% lower in real terms (Figure 3). A comparison of the real wholesale prices of local rice in Figure 3 with the distribution of sales as presented in Table 2 shows that a bulk of sales are made between December and April when prices are lowest. This thus confirms the assertion that farmers sell their produce when prices are lowest.

A closer look at the sales in the two regions indicates differences in marketing strategies between the farmers. In the NR 22% of their sales are made within the first two months after harvest against 82% in the case of UWR. The main reason for this observation is that farmers in NR are able to obtain credit from traders to meet their immediate cash needs with the promise to sell the produce to them. Sometimes a farmer may collect small sums from several traders making it possible for him to pay for his production and other related costs thus making it possible for him to store the grain for a little while before selling.



In contrast, a farmer in the UWR who does not benefit from such an arrangement is compelled to sell his produce to pay for his production and other related costs. Traders in the NR on their part may buy rice on credit from farmers to pay back after sales while those in the UWR pay cash to procure the grain.

This arrangement favours farmers more than traders because of the apparent stiff competition traders face. As a result of this competition, traders are more than willing to advance such credit on demand to guarantee access to the produce. Apart from bearing the risk and cost of credit, traders still visit farmers with cola to solicit their loyalty to reserve the grain for them to buy. When a farmer wants to sell his grain he invites traders, giving preference to his creditors and ones with whom he has long-standing relationship. Prices paid are, however, those traders quote as being the ruling ones in the Tamale regional market. Because sales are made in the home female family members are not involved in the marketing.