RICE IMPORT LIBERALIZATION IN GHANA
Implications for Smallholder Rice Producers in Northern Ghana

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ABSTRACT

The case of rice import liberalization in Ghana is an interesting and a highly distinctive one. One of the policies of the Ministry of Food and Agriculture (MoFA) is to support an increase in local rice production in order to reduce imports by about 30% as part of efforts to promote food sufficiency. Its strategy aims to increase mechanization, the cultivation of inland valleys, effective and efficient use of existing irrigation systems and further development of irrigation. Ironically, this policy effort is pursued against the backdrop of macro-economic policy framework of free market where trade liberalization allows for the free flow of goods and services will severe implication for the rice industry. This paper discusses trade liberalization policy effects on rice imports in Ghana and the implications for smallholder rice farmers in Northern Ghana. A field survey reveals that the liberalization policies

have worsened the income base of rice farmers - the real price per unit weight of domestic rice in Ghana has been declining following rice import liberalization and the economic returns of the rice farmers have been low and negative over the production seasons surveyed from year 2002 to 2004. Despite the increasing relevance of rice as a staple food and cash crop, the combination of the effects of rice import liberalization and high input costs attributed to the removal of input subsidies have severe consequences for smallholder rice producers in Northern Ghana.

KEY WORDS: Rice Production, Consumption, Import Liberalization, Rural Income and Cross-border Trade.

INTRODUCTION

Ability to sustain agricultural growth, achieve food security and increase farmer incomes in the face of trade liberalization is a major priority for governments, producers, marketers, legislators and other interest groups of most developing countries (Huang *et al*, 1998). Perhaps the Government of Ghana has its own misgivings about the ideology of liberalized trade, but given the current rule of global capital where a country's access to international finance is largely determined by its proven record of "sound" economic policies, Ghana would have to adhere to the demands of global capital by subscribing to appropriate" macroeconomic and structural adjustment policies asymmetrical they may be to its own internal realities (Tiepoh, 2000).

The development of the local rice industry is one of five priority areas in the Ghana Poverty Reduction Strategy (GPRS). The policy of the Ministry of Food and Agriculture (MoFA) is to support an increase in local rice production in order to reduce imports by about 30% (ISSER, 2005). Its strategy aims to increase mechanization, the cultivation of inland valleys, effective and efficient use of existing irrigation systems and further development of irrigation.

Some studies have hailed trade liberalization as a major breakthrough in efforts toward the efficient use of resources, having provided favourable estimates of the comparative effects of trade liberalization on prices, production, trade and economic welfare. Supporters of trade liberalization expect that the liberalization of agricultural commodities will raise prices, increase output, ensure efficient input use and enhance consumer value for their money (Rao, 1998). Seshan (2005) revealed that global rice trade liberalization yielded a total economic surplus gain of USD 7.4 billion annually, with importing countries, as a group, gaining USD 5.4 billion and exporting nations, USD 2 billion.

Liberalization is however not without problems. Trade reforms in many countries have led to problems in the national economy in relation to issues on inputs availability and access to farmers, outcompetition of local producers by importers, price variability and more critically income and food security of farm households. This fact underscores the view of Krueger and his associates (1988) that many developing countries, especially those experiencing food surplus, that have adopted price, trade and exchange rate liberalization policies, experience discrimination against their rural sectors due to adverse effects from the unfair agricultural commodities market. Drawing from literature, primarily from Pearce's (1992) assessment of the impact of trade liberalization in Ghana, it can be concluded that even though liberalization might have met some short term goals, especially of salvaging the economy from collapse, the longer term objectives of extending the benefits to all Ghanaians have not been met. Some Ghanaian households have actually become worse off after trade liberalization.

Against the backdrop of the conflicting views of the implications of trade reforms, what is clear is that, by adopting trade liberalization Ghana agreed to open its domestic market to be flooded with foreign and usually cheaper substitute commodities to the detriment of its own industries and micro-economic needs. The agricultural sector, especially the crop production sector with potential for sur-

plus production under favourable weather, has been worst affect as marketing of produce even in the local market has been difficult. This situation further eroded expected benefits of domestic rice producers. According to Asuming-Brempong (1998), trade liberalization in Ghana has negatively affected the competitiveness of rice production since the mid 1980s. This competitiveness has further been jeopardized by increases in the cost of fertilizer, a key input in rice production.

Like in many developing countries, Ghana's trade reforms under the International Monetary Fund (IMF) and World Bank led structural adjustments in past appear to have not been informed by a critical analysis of the full implications of liberalized trade for agricultural markets, macroeconomic performance, local food production, food security, household income and general poverty. The key question is what has rice import liberalization meant for smallholder rice farm households in Northern Ghana with regards to their food and income security objectives? This paper attempts to answer the above question by examining the current state of rice import liberalization in Ghana, and the consequent implications of the trade reforms for rice production, demand, prices, rural income, farm household food security and poverty. It uses domestic rice price differentials between Ghana and border markets in Burkina-Faso and Togo to assess whether a vibrant sub-regional market exists for surplus of locally produced rice in Ghana. This has been particularly relevant since Ghana cannot back down on its current trade policy given the need for foreign aid, loans and debt relief, which requires participation in WTO globalization processes. Consequently, proposals are made for initial policies that are informed by critical analysis of the impact of agricultural trade and marketing policies on poor households in Northern Ghana in particular, Ghana as a whole and, by extension, other developing countries with economies akin to that of Ghana.

TRADE LIBERALIZATION IN GHANA

Ghana's agriculture is dominated by traditional smallholder farming systems. It is estimated that about 85% of Ghanaian farmers are smallholder operators, who produce over 80% of the total agricultural production in Ghana (MOFA, 2002; cited in Ayambila, 2004). A majority of these farmers are resource poor; who produce using traditional technologies and operate under quite unfavourable soil and climatic conditions. In the face of this crisis, the ingenuity of the peasant rice farmer of Northern Ghana and limitations in livelihood options are the key reasons that seem to keep rice producers on the land. Increasingly, the success of rice farmers and their chances to continue production are worsening due to trade liberalization, increasing poverty (caused indirectly by liberalization) and the high cost of inputs. There is therefore a general and growing trend toward trade liberalization pessimism in some quarters in Ghana and other Sub-Sahara African countries.

The economic reforms in Ghana, especially the exchange rate devaluation and import deregulation, have produced several effects on the marketing of major domestic agricultural products, and hence on the income of smallholders. Rice is of primary concern because other cereals such as millet and sorghum, which are produced in northern Ghana, have little significance as imports. Starchy food crops like cassava and sweet potato are not produced at significant levels in most parts of Northern Ghana and yam, which is a major non-traditional export produce, has no negative liberalization consequences since the country exports rather than imports yam.

In the pre-liberalization period, the marketing of rice was to some degree state-managed; the Ghana Food Distribution Corporation (GFDC) bought locally produced rice from farmers in the Northern Region for milling by the Nasia Rice Company (NRC) and consequent sale to consumers. Following liberalization, however, the marketing of the crop in Ghana has been privately organised; gov-

emment neither controls nor subsidizes the cost of marketing of both domestic and foreign rice. This means the price offered per unit quantity of rice is virtually a function of the market forces of demand and supply.

Rice is an important cash crop in Ghana. It is cultivated principally for cash since it has the potential for generating high producer returns in years of normal yields and favourable marketing conditions. Rice also plays a critical role in the diet of urban dwellers next to maize. Studies by Bam and his associated (1998) indicated that locally produced and parboiled rice is well patronized in the country especially in the Northern Ghana. Studies conducted covering Tamale, Kumasi and Accra revealed consumptions levels of 74% in Tamale, 40% in Kumasi and 38% in Accra of the respondents respectively, regularly patronize and consume locally produced parboiled rice (ibid). This fact underscores the importance of local rice in the northern region.

Rice production has however been depressed since the import liberalization of agricultural commodity markets. Of the about 800,000 hectares of rice fields available nationwide, less than 100,000 hectares (i.e. about 12.5%) are currently cultivated. Available data demonstrates that rice production at the national level in Ghana lags behind consumption. Consequently, rice imports to supplement local consumption deficits created by the inadequate domestic production, is about 200% of the quantity of rice produced locally.

The domestic demand and supply quantities of rice over the period 1990 to 2003 was used to compute the resultant domestic production deficits or surpluses. Local production of rice generally increased from 1990 to 2002, declining only between 1998 and 1999 by 37 000Mt from 146 000Mt in 1998 to 109 000Mt in 1999 and between 2002 and 2003 production seasons; by 18 000Mt from 135 000Mt in 2002 to 117 000Mt in 2003 (SRID, MOFA 2003). The estimated national consumption of rice on the other hand increased

throughout the period resulting in varying levels of deficits, which were met by rice imports. There has been a consistent increase in rice importation, rising from 37,867,684 kilogrammes in 1998 to 755,039,169 kilogrammes in 2003, despite government policy to reduce such imports (ISSER, 2005).Surprisingly, as national production levels increased, so did the estimated consumption and hence the demand (consumption) deficits.

METHODOLOGY

Both primary and secondary data were gathered for the analysis. Primary data were obtained from comprehensive household surveys of rice farm families in the Tolon-Kumbungu and Gushiegu-Karaga districts, two major rice-producing areas in the Northern region of Ghana using structured questionnaires. A sample of ten (10) rice-producing villages each was sampled from the two districts. The sample selection was designed to represent two major sectors of the rice industry - producers and marketers/traders. Thus, sample stratification by districts was done, and then in each district, 10 rice-farming communities randomly sampled, constituted the actual respondents to the questionnaire. Eighty (80) rice farmers and 20 traders/processors were interviewed in each district, giving a sample size of 100 respondents per district and 200 for the whole survey. Key informant interviews and group discussions with rice producers and processing cooperatives, local rice traders and rice-based restaurants were also conducted.

Types of data collected included household production costs, access to and use of inputs, rice output levels, producer rice prices, quantities sold and consumed, potentials and risks of production, processing, storage, distribution and marketing patterns. The secondary data obtained from the Statistics, Research and Information Department (SRID) of MOFA and the Ghana Living Standard Survey (GLSS) encompassed time series data of national and regional production and consumption levels and prices at the wholesale and retail levels of locally produced and

imported rice and covered a pre-liberalization period of five (5) years, the early post-liberalization (first 7 years) period from 1984-1990 and the distant post-liberalization period (10 years) from 1993 to 2002.

Methods of Analysis

To assess the effects of trade liberalization on output, changes in rice production levels were estimated using production trends in the pre-liberalization and post-liberalization periods. Apparent consumption values were used to estimate the effects of liberalization on demand for rice. Descriptive statistics such as percentages and averages were used in analysing changes in producer costs, output, price, income and profitability of rice farmers.

To discover whether a vibrant sub-regional market exists for surplus locally produced rice in Ghana, monthly price differentials between the price per bag of local rice in the northern region of Ghana and border towns located in two of Ghana's neighbours, Burkina Faso and Togo for the 2004 and 2005 years was assessed using the relation:

$$Dt = Pit - Pjt$$

Where Dt is the price differential in the year t, Pit is the price in the exporting country i at year t, (Ghana in this case) and Pjt is the price in the importing (Burkina Faso and Togo) country j at year t.

RESULTS AND THEIR IMPLICATIONS

The results encompass the nature and challenges of rice production and marketing in Northern Ghana and the implications of rice import liberalization for domestic rice production, producer price and income, household food security, and poverty. The possibility of a regional market for rice produced in Ghana is also assessed.

General Profile

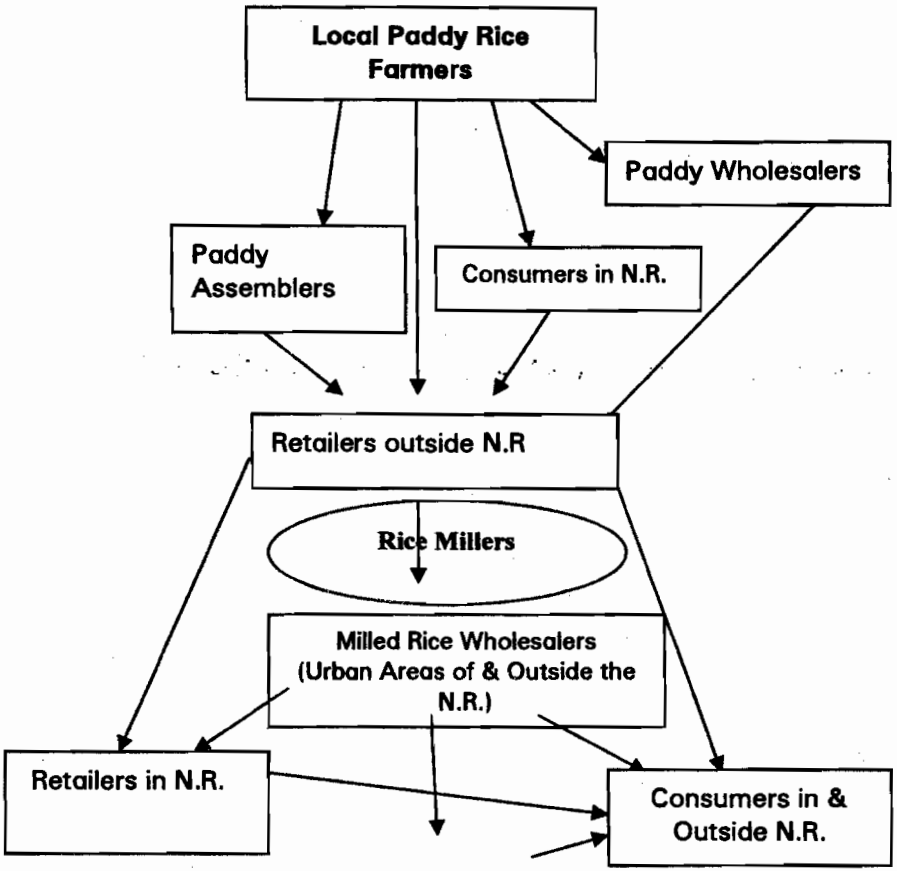
Rice production in the Northern Region of Ghana is characterised by smallholder rain-fed farms that have an average size of 1.7 acres and mostly (80%) located in valley bottoms, lowlands or on river banks. The average acreage remained stagnant over the period of the survey, 2002 to 2004. Though rice is a staple crop in Ghana, it is by far the most important cash crop in the Northern Region; every farm household (100%) has at least a small field on which the crop is cultivated principally as a major cash income source for about 99.2% of the households. Cooked rice has become a common dish in urban areas in Ghana. This means that domestic production shortfalls may have higher food security implications for urban households and greater farm income insecurity implications for rural households

Structure of the Domestic Rice Marketing System

Different types of market functionaries interact through various marketing channels to bring rice in the form of paddy from the farm gate and to ensure its distribution to the consumer (Figure 1).

Paddy rice millers who are individual women or women associations account for about 71% of the market functionaries that buy rice from farm households; this category of participants is able to provide transportation to the farm gate and hence help alleviate the transportation difficulties of the farmer, which are often critical. Wholesalers or wholesale agents and retailers also buy about 53% and 48% respectively of their rice produce from farm households, while assemblers buy only 20%. A considerable volume of local rice from Ghana is also exported to Togo and Burkina-Faso. The buying and selling of rice by State Owned Enterprises (SOEs) is no longer existent.

Figure 1: Rice Marketing Channels in the Northern Region (N.R) of Ghana

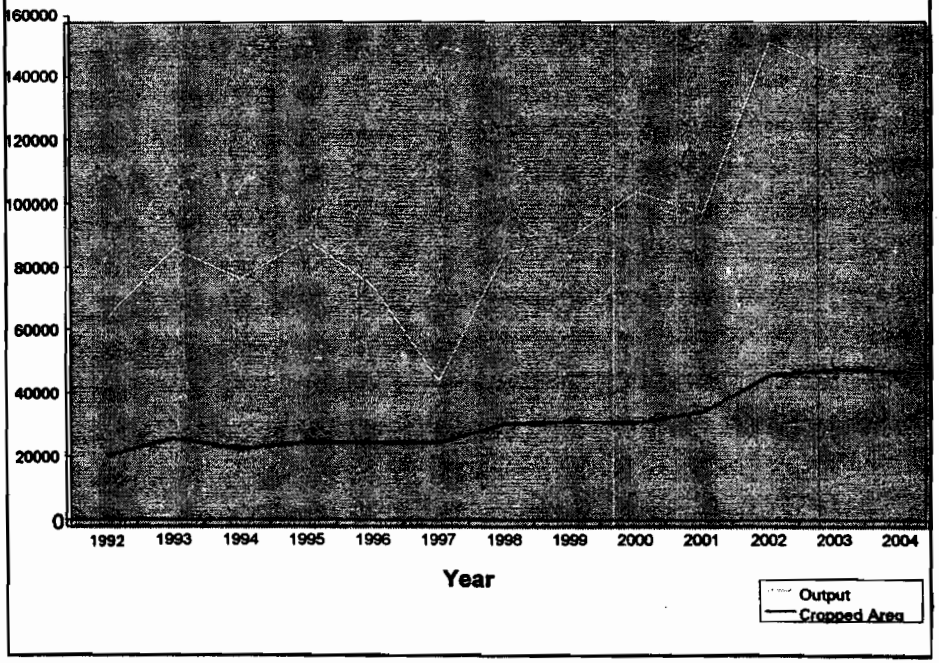


Acreage and Output Trends

A trend analysis of the total area cropped, nationally, and annual output of rice, from 1992 to 2004, is illustrated in Figure 2. It demonstrates that a relatively high peak of about 80,000 MT in the immediate rice import pre-liberalization period (1992 to 1995) is followed by a drastic drop in national output by about 50% to 40,000

MT in 1997, the year following full rice import liberalization in Ghana and a production boost thereafter. The decline may be attributed to the sudden peaking of the liberalization process in 1996 and especially without much-needed initial policy measures to safeguard domestic production or other production boost in anticipation of measures adopted by government later on to encourage production and consumption. Of particular note was the JICA/FDA sponsored Lowland Rice Development Project (LRDP). The acreage increase during the pre-liberalization period from about 20,000 hectares to about 40,000 hectares was very appreciable, and like output can be credited largely to ad hoc government measures rather than import liberalization incentives.

Fig. 2: Cropped Area (Ha) and Output (Mt) Trends of Local Rice in the Northern Region (1992 - 2004)



Price Trends in the Pre- and Post-Liberalization Periods

Price variability as a determinant of risks and uncertainties of production is critical to the smallholder agricultural producer. In determining the behaviour of prices of locally produced rice, monthly domestic rice prices in the immediate rice import pre- liberalization period (1993 - 1995) and post-liberalization period (1997 -1999) were used to run price trends (Figures 3 and 4).

Fig. 3: Monthly Actual Price Trends in the Pre-liberalization Period (1993 - 1995)

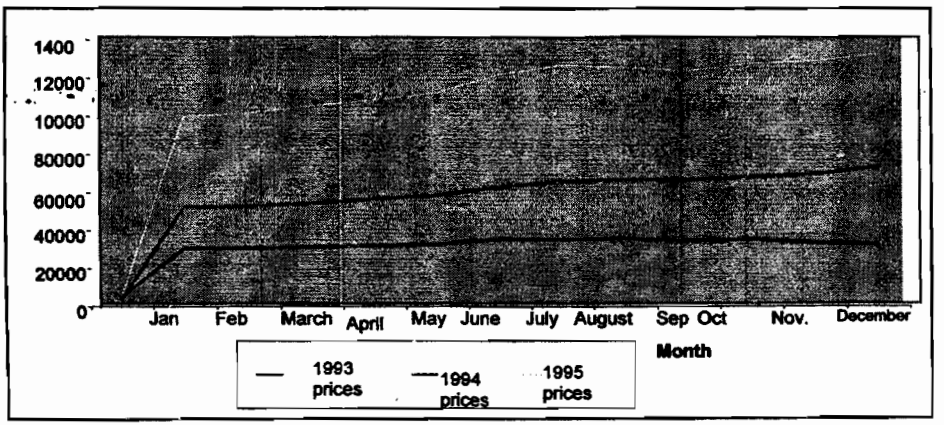
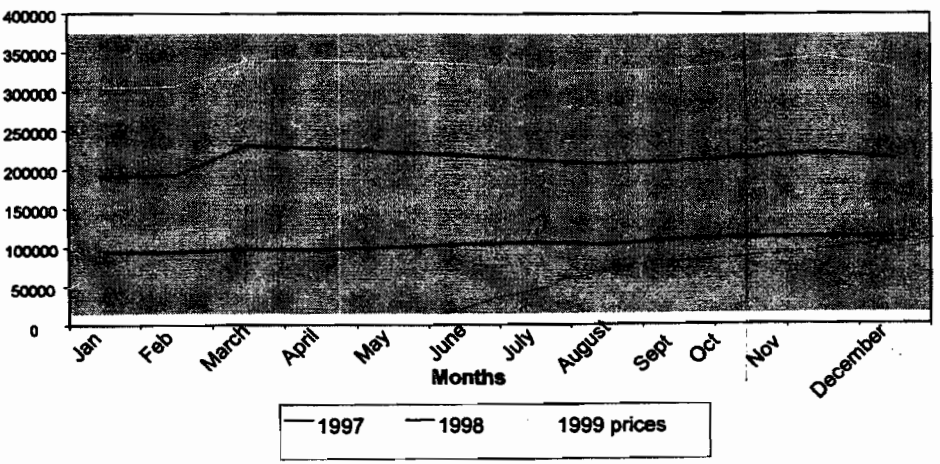


Fig. 4: Monthly Price Trends of Local Rice in the Post-liberalization (1997-1999 Period (1997 -1999)



Whereas prices gently increased throughout the period without a notable effect on the seasonality of the produce in the immediate pre-liberalization period (Fig.3), prices tend to decline during the harvesting months at the post liberalization period (Fig. 4). This may mean most households substitute locally produced rice for available foreign rice when the price of the former naturally increases just before a new crop is harvested and processed. Anecdotal observations reveal that rice price variability could reach about 50% between the two harvest seasons; usually declining immediately following harvests and rising from then till the next crop is harvested.

Changes in Average Producer Costs, Output, Price, Income and Profitability (2002- 2004)

The impact of changes in the average levels of producer costs, output and price on the income and profitability of the rice farmer between 2002 and 2004 is illustrated in Table 1 below. About 94.2% of farm households in the study area produce marketable surplus of rice in the Northern Region.

Table 1: Changes in Average Producer Costs, Output, Price, Income and Profitability (2002- 2004)

Year (Abs. Values)	Mean Q'ty Harvested	Nom. Mean Price/Bag (¢)	Mean Total Returns (¢)	Mean Producer Cost	Net Returns
2002	23	114 000	2 622 000	2 634 000	-12 000
2003	21	148 000	3 108 000	3 273 900	-165 400
2004	20	165 000	3 300 000	3 644 000	-344 000
Year (% Changes)	% Change in Q'ty	% Change in Price	% Change in TR	% Change in Cost	% Change in NR
2002	-	-	-	-	-
2003	-8.7%	29.8%	18.5%	24.3%	-27.4%
2004	-5.0%	11.5%	6.2%	11.3%	108%

Source: Field Survey Data, 2004.

Average per acre production levels fell slightly by 8.7% and 5% respectively between 2002 and 2004. The costs of production and marketing by the producer are significant determinants of the profit level of rice farm households (Minot and Goletti, 2000). These costs do not only help in the analysis of net returns to the farmer but also the determination of relative efficiency of the marketing system. The share of cash expenses allocated to land preparation using tractors (or draught power in few cases) was the most significant production cost; constituting about 25%, 23% and 21% of the total production cost for the 2002, 2003 and 2004 production seasons respectively, while the major cost component of marketing was storage material and transportation costs. The overall cost of production showed a nominal rise of 24.3% and 11.3% over the three years.

Nominally, the mean annual producer price per bag of paddy rice increased by about 30% and 45%, for 2003 and 2004 respectively. As is the case with other commodities, the incentive for domestic rice production and consumption is a function of not only the nominal price values, but real prices, as well. Factoring in rising input cost over the period, the price trends obviously made producer incomes and profitability worse off as observed in the Table 1 above. Over the three years, 2002 to 2004, the net returns from the sale of paddy rice for the producer remained negative, with the producer's profitability worsening from 2002 to 2004. Since the incentives for paddy rice production and consumption is a function of not only the nominal prices, but also the real prices, the observation implies a negative effect on the producer's income and production levels. Conclusively, if rice producers in the Northern Region were to adhere strictly to accounting definition of financial profit, they would cease production.

Potentials for Sub-Regional Cross Border Trade

Though information on the nature of the trade in rice and other grains occurring between Ghana and neighbouring West African

countries is limited and of questionable accuracy (Alderman and Shively, 1991), the available evidence indicate that some trade relations exist between Northern Ghana, Burkina Faso and Togo. Leaning of that evidence, computations were made on price differentials between markets in Ghana on the one hand, and border markets in Togo and Burkina-Faso, on the other. The analysis was meant to discover whether a vibrant sub-regional market exists for surplus local rice produced in Ghana. The results in Table 3 seek to demonstrate whether a vibrant sub-regional market exists for surplus local rice produced in Ghana. This was done by computing the monthly price differentials per bag of local rice between markets in Northern Ghana and border markets in Burkina Faso and Togo for the 2004 and 2005. Table 3 below illustrates the situation.

Table 3: Sub-regional Local Rice Price Differentials between Ghana, Togo and Burkina Faso (Wholesale Price/100Kg Bag in Cedis)

Month/ Country	2004: Ghana	Togo	Price Differential	2005: Ghana	Togo	Price Differential
January	321 700	288 000	+ 33 700	480 000	316 500	+ 163 500
February	321 500	300 800	+ 20 700	428 300	324 500	+ 103 800
March	326 800	320 000	+ 6 800	458 600	348 500	+ 110 100
April	356 900	368 000	- 11 100	484 300	351 600	+ 132 700
May	369 100	376 000	- 6 900	500 000	385 200	+ 114 800
June	378 900	352 000	+ 26 900	528 300	393 200	+ 135 100
July	369 000	385 600	- 16 600	529 900	390 000	+ 139 900
August	401 600	390 400	+ 11 200	578 300	394 800	+ 183 500
September	445 600	366 700	+ 78 900	535 000	391 600	+ 143 400

	Ghana	Burkina Faso	Price Differential	Ghana	Burkina Faso	Price Differential
January	321 700	N.A	-	480 000	385 200	+ 94 800
February	321 500	N.A	-	428 300	383 600	+ 44 700
March	326 800	372 400	- 45 600	458 600	391 600	+ 37 000
April	356 900	378 000	- 21 100	484 300	399 600	+ 84 700
May	369 100	385 200	- 16 100	500 000	426 800	+ 73 200
June	378 900	386 800	- 7 900	528 300	449 150	+ 79 150
July	369 000	385 200	-16 200	529 900	414 000	+ 115 900
August	401 600	385 200	+ 16 400	578 300	441 200	+ 137 100
September	445,600	399 600	+ 46 000	535 000	407 600	+ 127 400

Source: Computed Secondary Data, 2004.

The results show that except in a few cases in 2004 where local rice prices in Ghana are lower, the rests of the years show that prices in Ghana are higher than in neighbouring countries. These results therefore indicate some potential for cross-border sub-regional export of rice from these countries to Ghana. That does not mean that Ghana cannot export rice to these countries, in fact the quality of rice milled in Ghana is higher compared to that from the neighbouring countries. Hence, the higher price is a consequent of the high potential demand and price levels in markets in Togo and Burkina Faso.

CONCLUSIONS AND RECOMMENDATIONS

Increases in the production level of rice were due basically to a response in area improvement brought about by population growth and ad hoc rice production and consumption incentives introduced by the government. Also, returns for the domestic producers of rice in the Northern Region of Ghana are not only low but have been negative over the past few years.

Despite the existence of a potential for boosting domestic production and rising caloric value of rice in the diet of Ghanaians, especially in urban communities, the increasing local supply deficits are met by equally increasing imports, which have a downward effect on domestic producer prices and incomes. The household surveys showed that the net income positions of rice farmers worsened between 2002 and 2004. This served to his hurt rice farm households and increased the incidence of poverty.

It is certain that promoting growth in the local rice sector by creating effective producer support programmes; viz, developing effective input distribution systems to farmers at cost, providing efficient marketing systems through improved market information dissemination and infrastructure, supporting extension and research and, increasing access to financial infrastructure will promote competitive local production, processing and marketing of rice in Ghana. Government measures to improve the domestic rice industry through rice variety, mechanization and irrigation facilities improvement should embody the involvement of the farm households and the private sector, two key players currently responsible for all the activities in the domestic rice industry, but constrained by limited access to inputs, credit, marketing, processing and transportation facilities.

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