Government Policies and Competitiveness of Nigerian Rice Economy*

by

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i. Background

Globally, rice is a very important food crop. It is an ancient crop consumed as healthy and staple food by more than half of the world population. Rice is consumed by over 4.8 billion people in 176 countries and is the most important food crop for over 2.89 billion people in Asia, over 40 million people in Africa and over 150.3 million people in America with estimates based on FAO report of 1996. More than 90% of global production occurs in tropical and semi-tropical Asia.

Table 1: World rice (milled) production in 1999/2000 - 2002/2003 (‘000 metric tones)

Country	1999/2000	2000/01	2001/02	2002/03
China	138,936	131,536	124,320	123,200
India	89,700	84,871	91,600	80,000
Indonesia	33,445	32,548	32,422	32,500
Bangladesh	23,066	25,086	25,500	26,000
Vietnam	20,926	20,473	20,670	20,500
Thailand	16,500	16,901	16,500	16,500
Burma	9,860	10,771	10,440	10,440
Philippines	7,772	8,135	8,450	8,300
Japan	8,350	8,636	8,242	8,200
Brazil	7,768	7,062	7,480	7,600
United States	6,502	5,941	6,764	6,457
Korea, South	5,263	5,291	5,515	5,300
Egypt	3,787	3,965	3,575	3,800
Pakistan	5,156	4,700	3,740	3,500
EU	1,751	1,567	1,620	1,792
Taiwan	1,349	1,342	1,245	1,197
Australia	787	1,259	930	965
Others	28,282	27,270	27,575	28,156
WORLD TOTAL	409,200	397,354	396,588	384,407

Source: USDA, Foreign Agricultural Services (FAS), Aug 2002.

Rice production occurs in all agro-ecological zones in Nigeria with the middle belt enjoying a comparative advantage in production over the other parts of the country. Production is primarily by small-scale producers, with average farm size of 1-2 hectares. Yield pre hectare is low due to production systems, aging farming population and low competitiveness with imported rice. Rice growing environment in Nigeria are usually classified into five rice ecosystems namely: Rain-fed upland, Rain-fed lowland, Irrigated lowland, Deepwater and Mangrove swamp

The mangrove swamp ecology is the least important in terms of area, accounting for less than 1% of total rice area. Another 5% of the rice production area is generally estimated to fall in deepwater environment, although it is believed that this figure is most likely overestimated given the physical limits to area expansion within this environment and the reports that water control projects have reduced the potential suitable area. Irrigated systems (including large-scale irrigation schemes and small-scale irrigation schemes) account for 16% of total rice area; rain-fed upland systems, 30% and rain-fed lowland systems, the remaining 47%.

In general, of the estimated 3 million metric tons of annual rice production in Nigeria, three major rice production systems in Nigeria namely upland rain-fed, lowland rain-fed and irrigated production account for 97%. Consistently during the period from 2000-2003 Kaduna State is the largest producer of rice, accounting for about 22% of the country’s rice annual production followed by Niger State (16%), Benue State (10%) and Taraba State (7%). The annual domestic output of rice still hovers around 3.0 million metric tons, leaving the huge gap of about 2 million metric tons annually, a situation, which has continued to encourage dependence on importation. Some of the reasons for the gap are connected with the improper production methods, scarcity and high cost of inputs, rudimentary post - harvest and processing methods, inefficient milling techniques and poor marketing standards particularly in terms of polishing and packaging. Also poor or low mechanization on rice farms means heavy reliance on manual labor to carry out all farm operations. Labor costs on Nigerian farms are driven by opportunity costs of labor (hired) in alternative jobs in the cities like civil service, informal sector jobs e.g. motorcycle taxis riding, street hawking etc. Labor and financial constraints make it more difficult to expand farm size or increase production base.

Rice is a very important staple food in the diet of the estimated 120 million Nigerians. It is consumed in various forms but the most popular is as grains. The value of Nigeria's rice industry is estimated to be about US $ 5.86 billion (as at 2002) made up of US $ 2.2 billion of imports and US $ 3.66 billions of domestic production. The value of the industry is expected to rise to about US $ 7.98 billions by 2006 at the current growth rate of 10% per annum. Nigeria is West Africa's largest producer of rice, producing an average of 3.2 million tons1 of paddy rice (~ 2million tons of milled rice) for the past 7-years. Rice cultivation is widespread within the country extending from the northern to southern zones with most rice grown in the eastern (Enugu, Cross River and Ebonyi States) and middle belt (Benue, Kaduna, Niger and Taraba States) of the country. However, domestic supply has not kept pace with demand as imports have steadily increased faster than domestic supply by accounting for close to 60% of total supply.

The status of rice in the average diet has been transformed from being a luxury food item to that of a staple, taking the place of cassava and yam. Empirical evidence also suggests that the price elasticity of demand for rice is low at the urban market. This last point has been the driver of increasing tariffs in the recent past. The low elasticity means fiscal instrument like tariff can be increased without a corresponding decline in demand because rice is still considered a fast food in many urban centers and government can continue to use high tariff to protect domestic producers. At the farm-level, much can be done to improve the profitability of domestic rice production through increasing productivity and producing higher value paddy. Also, along the value-chain, much needs to be done in order to deliver rice that can be substitutes for imports by satisfying urban consumer preferences through improved processing, quality assurance and product branding while rewarding those responding to market signals.

Nigeria has the potential to increase her domestic share of the rice market in a medium- to long-term investment strategy that can develop into a self-sufficient industry locally over the next three years, with almost four fold increase in the industry's employment level. The potential benefits of rice production and processing will affect all the key players and stakeholders, including paddy farmers, paddy traders, rice millers, rice processors, de-stoners, rice traders, transporters, citizens, government and international donors. The overarching strategic goals within the Nigerian rice industry should include the following:

- To increase Nigeria's market share of the domestic consumption from the current 40% to over 100% within 3 years. This import substitution strategy means Nigeria should attain self-sufficiency in rice. Self-sufficiency in rice production is expected to contribute significantly to food security in Nigeria.
- To increase the number of jobs, particularly at the rural communities as a result of rice production and processing. Employment figures within the industry should increase with increase in productivity as well as lead to increases in incomes.
- As the nation moves from being a rice-deficit nation to a rice-surplus nation (with production out-stripping consumption), Nigeria should hopefully become a net exporter of rice.

While improving efficiency at every point along the commodity chain, the policy interventions should be designed to work in concert with other national, international and donor initiatives currently intervening at all levels towards improving yields, quality and quantity of milled rice in Nigeria. The objective in this paper is to contextualize the reasons for lack of competitiveness of Nigerian rice and proffer recommendations on how the situation can be redressed.

ii. Nigerian Rice Supply

Rice can be cultivated in all the ecological zones of Nigeria, although with varying prospects from one location to the other. According to FAOSTAT, paddy rice production has been growing at a very slow rate relative to consumption in Nigeria within the last five years. The low growth rate of paddy production can be attributed to a combination of factors namely unimproved seed varieties, poor agronomic and post-harvest handling practices, The demand-supply gap has often been filled with imported rice from Asia. Instability of government policies has also made some rice farmers to switch to other crops with similar ecological requirements, especially the decision to import foreign rice into Nigeria, which depresses domestic price. Nigeria is currently the highest rice producer in West Africa. It is also the highest consuming nation because of the large population of Nigeria. Majority of the rice producers are smallholders with an average farm size of less than 2 ha and can be found grown in mixture on farmers' farms. These factors coupled with the use of low external inputs have been responsible for the low yields and productivity.

As the population increases, farmers must produce even more food than before in order to stem the rising rice import bills and become less dependent on rice importation. With the population increases today, people are being pushed to new lands and many into marginal lands. One of the enormous challenges in the drive to increase food to feed the growing population will be to raise productivity and efficiency in the agricultural sector. More so that Nigeria's rapid population growth has outstripped the nation's capacity to grow food. From 1980-1990, Nigeria's population grew by 3.1% a year, while agricultural production lagged far behind by growing at just 2.5% a year. This fact coupled with the inequitable income distribution has been responsible for the worsening poverty in Nigeria.

The biggest constraint to feeding the Nigerian people now and in the future will depend entirely on agricultural productivity and this is related to food security. Food security, at the household level, is defined in its most basic form as access by all people at all times to the food needed for a healthy life. Therefore, there is need to increase agriculture growth for such growth is the most efficient means of alleviating poverty, protecting the environment, and generating broad-based economic growth, Achieving food security therefore, requires that resources be used efficiently, with more attention paid to eliminating waste. With the rising income and population and consequent rising food demand, only efficient use of production resources will ensure food security.

Achieving sustainable economic development in Africa will confront three central challenges: alleviating wide spread poverty, meeting current and future food needs, and efficiently using the natural resource base to ensure sustainability. There are only two main ways to increase natural food availability - increase the land area planted; and increase the yield per unit of production resource (land, labour and capital). If food production is doubled by doubling the number of hectares of land under cultivation, or other production resources, this would create massive environmental damage - such as large scale destruction of forests, and with them, wild life habitat and biodiversity. Efficiency of resource use, which can be defined as the ability to derive maximum output per unit of resource, is the key to effectively addressing the challenges of achieving food security. Raising productivity in agriculture will certainly lead to availability of food and reduce the real price of food. Increased food production will have to come from increased yield.

Table 2: Nigeria's Trade Policy on Rice 1974-2003

Period	Policy Measures
Prior to April 1974	66.6% Tariff
April 1974 – April 1975	20%
April 1975 – April 1978	10%
April 1978 – June 1978	20%
June 1978 – October 1978	19%
October 1978 – April 1979	Imports in containers under 50kg were banned
April 1979	Imports under restricted license only; Government agencies
September 1979	6 months ban on all rice imports
January 1980	Import license issued for 200,000 tonnes of rice
October 1980	Rice under general import license with no quantitative restrictions
December 1980	Presidential Task Fore (PTF) on rice was created and it used the Nigerian National Supply Company to issue allocations to customers and traders
May 1982	PTF commenced issuing of allocations to customers and traders in addition to those issued by NNSC
January 1984	PTF disbanded. Rice importation placed under general licence restrictions
October 1985	Importation of rice (and maize) banned
July 1986	Introduction of SAP and the abolition of Commodity Boards to provide production incentives to farmers through increased producer prices
1995	100% Tariff
1996	50%
1998	50%
1999	50%
2000	50%
2001	85%
2003	100%

Sources: Federal Government Budgets, 1984 – 1986; 1995 – 2000;

iii. Why Nigerian Rice is Uncompetitive?

The Nigerian rice industry is currently not competitive because it faces the following constraints: The macroeconomic condition under which Nigerian rice is produced is partly responsible for the sector's lack of competitiveness. Some of the issues include high inputs costs like cost of credit, and imported equipments, agrochemicals due to taxes (legal and illegal), tariffs and duties. There is also the problem of policy instability (ban, unban, tariffs) that makes decision-making and planning highly uncertain and put investments at great risk. There had been the serious effect of the `Dutch disease' within the Nigerian economy dating back to the oil boom of the early 70s and the consequential `crowding out' of investments and `out-migration' of production factors from Nigerian agriculture. All these factors combine with discriminatory policies against agriculture to make the environment for agricultural production and agribusiness unfavorable and uncompetitive. Other unattractive conditions include low technology base (mechanization), decaying infrastructure, high interest rates, weak institutions (such as poorly-funded research institutes, public extension system, and seeds certification), and corruption-ridden fertilizer distribution system and low public sector investments in agriculture. 'Despite the increase in import duty, the Nigerian rice imports estimate increased from 1.25 million tons for 2000/01 to 1.8 million for 2001/02. The bulk of rice imports come from Southeast Asia, with about 80 percent coming from Thailand, and smaller amounts from India and Vietnam Meanwhile, the higher import duty on rice is encouraging importers to establish modern rice milling operations to process imported rice paddy. An inter-governmental committee visited the locations of several local investors who have shown interest in establishing rice milling facilities to process imported paddy rice. The GON may grant special concessions to a few investors in rice mills to import paddy rice, as a "raw material" at a duty rate of only 5 percent over a 5-year period. This foreseeable trend in the near future underscores the importance of domestic rice's need to be competitively produced.

One of the key problems facing the farmers in addition to lack of improved varieties is that of scarcity and high input costs. This has led to farmers not using inputs such as fertilizers and other agrochemicals and those who use them use sub - optimal proportions of the inputs resulting in low and poor quality yields. RIFAN (Rice Farmers Association of Nigeria) has the objectives of supporting their members on production, processing and marketing of rice as well as the possibility of supplying inputs at low prices. However, the ability of the association to undertake such activities is hazy. Moreover RIFAN is rather member – centered and given their capacity, may not be able to make significant impact except by collaborations as in the Rice Alliance.

Over the past two decades, inconsistency, shifting between open and protectionist trade policy have characterized Nigerian rice policy. Such changes hinder the ability of stakeholders to develop long-term strategies. While trade policy has been viewed as the only option for developing the rice sector, there has been a lack of policy to take advantage of the protection and enhance the domestic sector's efficiency. In addition, the import ban itself is difficult to enforce, which reduces its efficiency. Key issues for the domestic sector are the availability of inputs and credit, and processing, marketing and quality management. Farmers remain committed to producing rice, despite the lack of inputs, as it is the best crop for the flood-prone lowlands (fadama areas). In summary, the local rice has a very poor image in the marketplace compared to the imported rice.

Besides the external factors (macroeconomic) to the agricultural sector, there are other factors that are both sector-wide and rice-specific factors that also impede competitiveness. Such factors include genetically-inferior (unimproved) varieties of seeds that exhibit low productivity, high cost of land preparation, scarcity of labor due to alternative (and more remunerative) off-farm employment opportunities (e g construction sites and motor-bicycle riding). There are other issues like land tenure, non-availability of fertilizers, absence of extension advice, high transportation costs, .and expensive credit, when available. There are also marketing problems that result in middlemen not paying prices that are attractive enough to keep the farmers producing. Importation of cheaper and better-processed rice from more competitive countries like Thailand and other Asian countries (e g India) has to a large extent contributed to depress domestic rice cultivation

Beyond the farm gate, there are issues like the absence of standard measures in the marketing of farm produce including rice. Transportation is another serious constraint for the conveyance of paddy to the mills or markets. All these combine with on-farm constraints to make rice production in Nigeria uncompetitive. Another factor responsible for uncompetitiveness of Nigerian rice is the protection offered by the very high tariff of 110% slammed on imported rice. The twin effects of production behind high tariff walls are inefficiency and lack of competitiveness. This has resulted in very high cost of production for the Nigerian rice.

However, the farmers' supply response for Nigerian rice has been extremely low because of the largely uncompetitive economic environment within which rice is being produced in Nigeria. Some of these problems include lack of improved seeds, low mechanization, complementary production inputs which have led to low productivities of Nigerian rice farms. There is poor access to markets, capacity underutilization of existing small-scale mills. Installed processing and milling capacity is currently in excess of paddy rice production in every part of the country. Obsolete and inefficient processing technology (especially parboiling) lead to smelling and unappealing products, presence of stones, uneven grains etc. There is also limited knowledge of consumers' preference and taste, especially the urban population for well processed rice. There is no uniformity in the variety of rice cultivated and processed hence the frequency of broken and uneven grains.

In order to address some of these constraints, especially those that are sector-wide and rice-specific, the present civilian regime in Nigeria has put in place a Presidential initiative on rice production, processing and export.

iii. Opportunities

Demand for rice will be sustained in Nigeria, as rice has remained the most popular staple food for the citizens. Besides the demand from households, which keeps rising, there is increase in the number of fast food joints that is also growing with increasing urbanization. More products like spaghetti and other industrial uses are constantly being developed for rice or are being expected and these will also drive up the demand for rice.

The present government policy on rice is an opportunity for the farmers to improve their fortunes through increased rice production. Tariff on rice is currently at 110% (according to recent newspaper reports). The effect is already evident with a declining volume of imported rice caused by attendant increase in price of rice. The trade summary of the Federal Office of Statistics (FOS) reveals this fact.

Table 3: Rice Importation By Volume And Value: 1996 – 2004 (Metric Tones in Naira)

TYPE	1996	1997	1998	1999	2000	2001	2002	2003	2004
PADDY: VOLUME VALUE	 50 3.3m	 19,078 385.32m	 17,043 387.98m	 172,353 513.59m	 279 382.62m	 8,037 239.78m	 3 0.242m	 137 1.58m	 5 0.405m
BROWN: VOLUME VALUE	 2,000 52.05m	 2,026 43.45m	 N.A.	 5,000 863.68m	 37 4.05m	 3 0.409m	 1 0.301m	 15 12.02m	 3,545 262.24m
MILLED: VOLUME VALUE	 179,500 4.944b	 489,316 17.702b	 392,636 10.892b	 198,718 4.85b	 2,953,361 9.847b	 1,036,259 21.635b	 1,232,406 28.056b	 2,447,332 29.722b	 836,389 30.037b
BROKEN: VOLUME VALUE	 450 14.99m	 35,998 688.65m	 56,155 1.842b	 131,081 3.497b	 45,527 1.959b	 55,732 1.005b	 379 99.06m	 9,081 115.93m	 158 13.086m
TOTAL: VOLUME VALUE	 182,00 5.014b	 546,418 18.819b	 465,834 13.122b	 507,152 9.725b	 2,999,204 12.193b	 1,100,031 22.880b	 1,232,789 28.155b	 2,456,565 29.851b	 840,097 30.312b

Source: Calculated from FOS Trade Summary

Volume of rice imported in 2003 was 2.5 million metric tons at the price of N29.85 billion. In 2004 volume imported was 0.84 million metric tons but the price was N30.31 billion. This position could be attributed to the high tariff wall of 150%. It is an opportunity for the farmers to produce behind this high wall. It is even a bigger opportunity for the high quality rice that OLAM or VEETEE Rice hope to bring into Nigeria for milling because it is of expected to be of very high quality that will enjoy premium pricing at the local market by displacing the imported rice.

The government plans to ban the importation of polished rice in 2006. RIFAN has advised the government to exercise caution in banning importation. They pointed at the possibility of inducing scarcity as a result of a sudden ban. It is therefore not clear if the ban will be or not. If it happens, it should be an opportunity for companies like VEETEE and OLAM to increase their market share because there will be a serious gap for them to fill. Some other large companies are still streaming into the country to invest in the rice sector. Their presence should create opportunities at various levels of the chain. For example, companies like OLAM and VEETEE Rice are initiating out growers schemes with farmers. VEETEE is also hoping to establish supply through out-growers. These initiatives will boost domestic output. The big companies have facilities for polishing rice, this means higher quality of local rice.

iv. Threats

There are many constraints within the rice sub-sector. They are factors in the immediate business environment but having implications for the performance and outcomes of the players. The highlights of these constraints/threats are:

- At the production level, constraints include the methods of production, scarcity of labor, scarcity and high costs of inputs. These are the major constraints that face the small-scale rice farmers.
- There are challenges with importation of machinery into Nigeria as evidenced by some prospective processors. The customs tariffs/duty on paper being different from what is being implemented or demanded at the ports.
- Inconsistent government policies on rice import, rent-seeking attitude of government officials and their agents in the distribution/sale of fertilizers and other inputs (including improved seed). Any intervention or investment built around government policies may not be sustainable. The investors may succeed in influencing policies but the question is how long the policies will hold out before they are changed or ignored.
- There is a huge market for the local rice therefore there is a potentially high demand for quality seeds. At present there is serious supply-demand gap. However, this is being addressed by the WARDA's NERICA distribution strategy.
- The state of Nigeria's infrastructure is parlous especially roads and power (electricity). The farms are not serviced by good roads nor electricity..
- There is the problem of sourcing labor to work on the farms. The youth who are key labor providers have gone to the cities in search of white collar jobs or into the popular motorcycle transport business where they can make quick money.. That transport business has sucked away huge chunk of the labor force from the farms. This has created a serious challenge of labor shortage..
- The alternative to manual labor, which is mechanization, is expensive and farmers cannot afford it on their farms.. With scarcity of labor, it becomes difficult to push the production of large hectares of rice.

- The costs of inputs are high. This has made it difficult for the farmers to afford them. These inputs such as improved seeds, fertilizers and agrochemicals enhance productivity. The high costs exert limiting effects on the extent farmers can expand their farms. The lot therefore falls on processors to programmatically support the rice farmers if it is expecting to source rice paddy from them

v. Presidential Initiative on Increased Rice Production Processing and Export

The Presidential initiative on rice is new production strategy by the present administration for sustained increase in rice production for national self-sufficiency, food security and export promotion. As at 2002, the rice import bill had risen to ₦96.012 billion. This initiative has as its objective, the need to address the widening demand/supply gap and attain self-sufficiency in rice production by 2005 and have surplus for export by 2007. The desire to achieve this objective informed the setting up of the Presidential Committee on increased rice production and export on 17th August, 2002. The approval by the Federal Executive Council of the memorandum forwarded to Mr. President based on the recommendations of the above committee gave birth to the Presidential Initiative on Increased Rice Production, Processing and Export as well as the formation of the Rice Development Committee at both the Federal and State levels to oversee the implementation of the program.

The primary objective of the Presidential Initiative on Rice is to enhance household food security and income, eliminate imports and generate exportable surpluses. Behind the program is the conscious policy that Nigeria has tremendous potential and resources for sustainable rice production and export. The potentials and resources should be tapped through a private sector-led program on rice production, processing and export. Hence all stakeholders in the rice sub-sector are being mobilized nationwide to achieve the specific objective of the program which is to produce six (6) million tones of milled rice from 10.3 million tones of paddy by 2005. By year 2007, three (3) million hectares, would have been put under rice cultivation to produce about 15 million tones of paddy or 9.0 million tones of milled rice. In order to encourage local rice production a 100% import duty, as well as 10% levy (for rice development) is paid on imported rice. The 10% levy is solely for rice development.

The federal government is currently encouraging the entry of big private sector players with cognate experience in value chain management (e.g Olam and Veetee) into the rice processing business by granting them concession to import brown rice at 50% import duty tariff which they apply for and obtain through the presidency. The condition required for this concession is to prove that there is not enough rice paddy in Nigeria to feed the mills. This concession is for a period of about two years pending the time they would be able to organize farmers to produce enough paddy. There is also duty incentive of about 21/2% on agricultural equipment to encourage foreign direct investments either on-farm or processing.

Government in a bid to support the rice sector has been applying the tool of tariff over the years, which culminated in a tariff of 110% since 2004 to enable the local producers produce behind the tariff wall. There is also the impending ban on the importation of foreign rice as from January 6, 2006, to pave the way for the development of the local rice. There is also a presidential rice initiative, which seeks to encourage increased local production of rice. The implementation of the initiative started in 2004. Under the initiative rice boxes containing 10 kg of rice seeds and some agrochemicals enough for .25 hectares, are sold to the farmers at N3500 per box. The aim is for farmers in each state to cultivate 250 hectares.

vi. National Rice Development Committee (NRDC)

A National Rice Development Committee was established at the Federal level to oversee the implementation of the rice development program in the country. The committee has the Honorable Minister of Agriculture and Rural Development as the Chairman, while the Honorable Minister of Water Resources and the Chairman of Rice Farmers Association of Nigeria (RIFAN), serves as the Vice-Chairman. The functions of the NRDC are policy formulation, project oversight functions, sourcing of funds, approvals for disbursement of funds and approvals for the work programs and budgets.

A National Technical Committee oversees the policy implementation at the national level and provides technical backstopping. The committee which is headed by the Permanent Secretary, Federal Ministry of Agriculture reviews the work-plan and budgets of implementing agencies for ratification of NRDC, monitors program implementation, provides technical back-stopping, evaluates program impact and evaluates technical and financial proposal of contractors/consultants for major contracts.

vii. State Rice Development Committee (SRDC)

The set up of the State Rice Development Committee is similar to that at the Federal level. The Deputy Governor chairs the committee, while the Commissioner for Agriculture and Natural Resources and the State Chairman of RIFAN, serves as the first and second Vice Chairmen, respectively. The Committee gives policy direction, oversees policy implementation, sources and disburses funds, carries out project oversight functions and approves work program and budget in the states.

The State Technical Implementation Committee has the Honorable Commissioner, Ministry of Agriculture and Natural Resources as Chairman and the Permanent Secretary as Vice Chairman. The committee conducts the registration and documentation of participating farmers, oversees project implementation, monitors and supervises the registration and authentication of inputs supply companies and distributors.

viii. Local Government Implementation Committee (LGIC)

The Local Government Chairman heads the committee which is saddled with the identification and documentation of farmers' groups/individuals who will participate in the project, collates and processes input requirements from the farmers and authenticates all application from participating farmers from the Local Government.

ix. Impact of Program

The major impact of Presidential Rice Initiative has been the increase in awareness, productivity per hectare and area under rice cultivation, through the introduction of high yielding varieties of rice and the R-Box technology. According to the Honorable Minister of Agriculture and Rural Development (2005) have given rise to increased national output of over 0.8 million metric tone, declining trend of import bills, conservation of foreign exchange, enhanced employment, income and living standard of farmers and stakeholders as well as increase in other down-steam business in the industry.

Table 4: Rice Situation-Outlook

Situation	Outlook	Assumptions
• Diversity in rice production is the product of two major forces – the biophysical conditions and the agronomic management practices that are used.	• The overall constraint and future potential of most *fadama* systems is tied to increasing the level of water control and transplanting. • A new higher-yielding upland variety known as NERICA from WARDA has potentials of increasing productivity by about 65%	• Interventions must be geographically targeted (lowland, irrigated and upland) and strategically structured to respond to major management constraints of current practices, while concurrently assisting farmers to transit to higher levels of intensification. • There is the need to cultivate uniform variety to achieve uniform grains..
• Rain-fed lowlands are estimated to account for about 50% of the total rice growing areas in Nigeria, and are experiencing the fastest rate of expansion.	• The future of lowland systems is in their potential for evolving into (semi-) irrigated systems with considerable yield increases; until some degree of water control is gained, fertilizers cannot be used efficiently.	• Farmers will be able to gain some control over their use of water.
• Irrigated systems cover just 16% of the total rice producing areas but have the highest yields (3.7t/ha).	• The future of enhancing irrigated rice production over the short-term will be through the dissemination of improved varieties, the increased use of available integrated crop management practices, and the potential for inputs' costs reduction especially labor.	• Due to current growing patterns, fertilizer is best targeted at farmers in irrigated systems; as specific lowland areas are brought under greater degrees of water control, farmer groups in these areas might also become involved in bulk orders of fertilizers.
• Rain-fed upland systems are estimated to cover 30% of the total rice producing areas; yields are somewhat higher than for lowland systems (1.9 t/ha), with substantially higher labor inputs owing to the preference for dibble seeding, as opposed to broadcasting, and the lower use of herbicides and mechanization.	• The ability to introduce sustainable, sedentary farming practices will be a key factor in stabilizing upland production systems, particularly in areas of higher population density.	• Upland rice production is profitable under current duty levels for imported rice; any significant reduction in duties would require improvements in quantity (productivity increases) and quality of output (improved post-harvest handling and processing) and/or reduction in inputs' costs.
• At the farm level, rice varieties cultivated is not high quality nor uniform and it becomes even lower quality through poor use of technology and on-farm parboiling.	• Improved varietal purity and threshing, including low technology options such as hand threshing on a plastic tarp, can significantly improve the quality of paddy, as can improved parboiling and drying technologies.	• Farmers will be paid on the basis of the quality of rice that they produce in response to the introduction of improved grades and standards.
• The state of commercial rice processing in Nigeria has been characterized by its use of obsolete and inefficient processing technologies.	• Improving processing can be done through more efficient parboiling and milling technologies, and establishing clear market grades and standards that are effectively linked to price differentials for higher quality rice.	• Individual producers will be able to meet higher quality standards or can shift a greater percentage of the parboiling activity from the farm-level to more specialized producers' associations and/or commercial facilities.
• Market differentiation of higher quality domestic rice is not marketed as such.	• The creation of market grades and standards must be applied to both domestic and imported rice to help establish nation-wide quality benchmarks for the consumers, though alone will not create demand for high quality, domestically produced rice. This will gradually replace imported rice over time.	• Processors will be able to work with producers and buyers to successfully upgrade, brand and broadly market product at a level similar to that of imported rice.
• There are currently no known local brand that is acceptable to the urban consumers. In fact the local rice are not available in some urban markets because of low demand for it	• Processors need to establish modern facilities that can produce polished and branded local rice that can match the quality of imported Thailand rice.	• Consumers' survey reveals that the most important issue to majority is good quality rice that meets international standard. • Local rice will even attract a premium if well processed, because it is adjudged sweeter than imported rice.

x. Conclusion

In Nigeria, most of the previous policy interventions had been ineffective, largely because the political will to make them succeed had been lacking or they had been public sector-led. However, the current Presidential Initiative on rice promotes the policy of providing the enabling environment for private sector-led rice production. Rice farmers and processors receive government support through provision of inputs and services at affordable prices as private sector operators. The Presidential Initiative on Rice Production, Processing and Export is therefore laying a solid foundation for sustainable rice production and development in Nigeria. However, a lot still needs to be done in order to make rice production and processing in Nigeria to become internationally competitive especially under zero tariff regimes. There are a few areas that need closer investigation and attention by policy-makers in order to make the rice sub-sector more competitive.

The areas include; strengthening of the rice processors associations where they currently exist with a view to building their capacities through training on value addition, consumers' preference, packaging and other useful skills that enhance their efficiencies of operation. Still working with processors on the demand side for uniform rice paddy to be available in sufficient quantity, in order to complement the efforts of multilateral organizations like AfDB, WARDA, FAO/NSPFS, World Bank/FADAMA II in the dissemination and cultivation of NERICA and other productivity-enhancing initiatives at the farm level. In order to achieve success government policies on agricultural inputs especially with respect to fertilizers, credit, improved seeds, and equipment availability needs to be revisited.

There is also the need to conduct detailed analysis of the Nigerian rice industry in order to know where competitiveness can be easily achieved given the available conditions (especially with irrigation systems and using NERICA seeds). Secondly, determine the profitability and competitiveness of local rice under different tariff regimes through sensitivity analysis. It is also important to establish the profitability of every player along the rice market/value chain. Finally, it is important to evaluate the strength and weaknesses of possible BDS providers to facilitate the delivery of required services.

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