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A Review of Fertilizer Policy Issues in Nigeria

Saweda Liverpool-Tasie, Babatunde Olaniyan, Sheu Salau and James Sackey

Low fertilizer use is one of the many reasons for low agricultural productivity in Nigeria. Fertilizer use estimated at 13 kg/ha in 2009 by the Federal Ministry of Agriculture and Rural Development (FMARD), is far lower than the 200 kg/ha recommended by the FAO as well as the 104 kg/ha in South Asia and 142 kg/ha in Southeast Asia. This brief reviews existing studies on the fertilizer sector in Nigeria and provides a summary of the results of recent surveys and analytic work conducted by IFPRI in Nigeria under the Global Food Security Response (GFSR) initiative of the USAID.

Introduction

Appropriate fertilizer levels played a significant role in the success of the green revolution in Latin America and Asia. It helped raise agricultural productivity and farm incomes, thus laying the foundation for broader economic growth. As much as 50 percent of yield growth in these regions could be attributed to increased fertilizer use. Despite the growing evidence that fertilizers can substantially increase yields in sub-Saharan Africa (SSA) as well as slow down environmental degradation, farmers in SSA still lag far behind other developing countries in fertilizer use.,

Nigeria's Fertilizer Policy Environment

Although low fertilizer use could be traced to demand and supply factors such as low farmer incomes and high market prices resulting from limited fertilizer availability, public policy responses to such issues have also contributed to this gap in usage. Several policy approaches have been used to promote increased use of fertilizer among smallholder farming systems. In Nigeria, these have included the promotion of a state monopoly for fertilizer import and distribution, institution of price controls and subsidies at the fertilizer retail markets, provision of credit to farmers for the purchase of fertilizer, institution of import tariffs, decentralization of procurement and distribution, and deregulation of markets. .

Regulatory Environment for Fertilizer Quality Control

Numerous fertilizer regulatory activities concurrently exist in Nigeria. The Standards Organization of Nigeria (SON), National Agency for Food and Drug Administration and Control (NAFDAC), Federal Fertilizer Department (FFD) of FMARD, States Ministries of Agriculture (SMAs) and agricultural research institutes under the national university system are key agencies mandated to participate in fertilizer regulation. Despite these numerous participants, fertilizer quality issues remain a challenge. To understand and assess the effectiveness of the fertilizer quality regulatory system in Nigeria, questionnaires were administered to desk officers in each SMAs and ADPs where appropriate. Questionnaires were also administered to the internal quality control officers of all 12 operational blending plants and 2 manufacturing plants in the country.

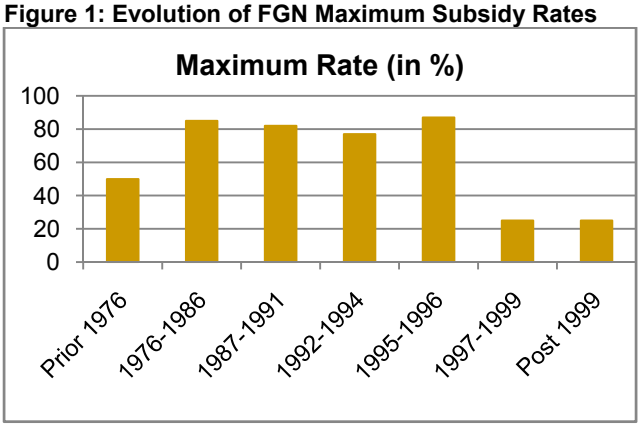
Results from the study on the fertilizer quality regulatory mechanism in Nigeria (Liverpool-Tasie, Auchan, A and Banful 2010) indicate that though there are bodies rendering some monitoring services on fertilizer quality, the regulatory system for fertilizer quality in Nigeria is not well developed. The report shows that adulteration and fake products are largely associated with fertilizer in the open market. Underweight bags and poor bagging appear to be common with FSMP fertilizer and wrongful chemical composition is largely associated with locally produced (largely blended) fertilizer. The study finds that the proper procedures to guarantee substandard fertilizer are well known but the effective execution and regulation of these remains wanting. While numerous activities exist to guarantee the quality of fertilizer imported into the country such as fertilizer sample tests at production and importation stages, the activity intensity dwindles as one move towards rural areas.

Fertilizer Procurement and Distribution

Fertilizer subsidy occupies a central role in the policy tool kits of the government and this explains why the federal, state, and local governments have all been involved in the procurement, distribution, and price determination of fertilizer at various times. The involvement of the federal government in the fertilizer distribution system dates back to 1976 when it adopted a national fertilizer policy to ensure national self–sufficiency through local production; supplemented through importation to ensure adequate and timely fertilizer supply to all Nigerian farmers; offer subsidy on the market price of fertilizer so as to make fertilizer affordable to smallholder farmers; and ensure that the right quality fertilizer is accessible to smallholder farmers at the right time in the right place.

Fertilizer distribution systems in Nigeria operated virtually as a government monopoly, except when liberalized in 1997. The federal government of Nigeria (FGN) procured all locally produced as well as imported fertilizer and dispatched them to states of the federation and the federal capital territory. The policy evolution, when substantial changes were made, could be categorized into seven eras for the period covering 1960 till today. (Figure 1)

Figure 1: Evolution of FGN Maximum Subsidy Rates



Sources: Eboh et al (2006) and Banful et al (2010)

The period up to 1999 was characterized by frequent changes in fertilizer policies and the promotion of a dual fertilizer market. Problems with fertilizer quality, arbitrage, and timeliness of fertilizer distribution persisted. Government tenders for the targeted subsidized fertilizer were usually late as were the federal government's payments to fertilizer distributors and the remittances from the states to the federal government. Over-invoicing by fertilizer importers was prevalent and profiteering from the arbitrage situation that existed between the official and parallel exchange rate markets was widespread. Since 1999 (except in 2000), the federal government under the Federal Market Stabilization Program (FMSP) has procured fertilizer for sale to states at a subsidy rate of 25 percent. State governments further subsidized this fertilizer. Several states also procured fertilizer outside of the FMSP for sale to their farmers. In a study by Banful et al (2010), covering eight states namely Bayelsa, Edo, Jigawa, Plataeu, Sokoto, Taraba, Yobe and Zamfara, it is estimated that only 30 percent of subsidized fertilizer reached stallholder farmers at the 2008 subsidized price.

Fertilizer Prices in Nigeria

The FGN's fertilizer policy is based on the rationale that farmers do not have the ability to afford the high free fertilizer market price. Despite the government's huge budgetary expenditure on fertilizer subsidy, non-subsidized prices remain high and rising in Nigeria. The nominal prices of fertilizer (type unspecified) for a 50 kg bag rose from N50 in 1990 to N875 in 1996, N1200 in 1997, N1500 in

1999 and N1800 in 2000, with considerable price variation within states. The fertilizer price reached in 2001 of N2000 per 50 kg bag was much higher than the official subsidy retail price of N900 per 50 kg bag; suggesting that the federal and state government's subsidies are not fully transmitted to farmers. Recent price information by the Nigeria Agricultural Market Information Services suggests some price moderation for 2008/09.[1] Nagy and Edun (2002) noted that only 30 percent of subsidized fertilizer reaches smallholder farmers at the subsidized price. The parallel sales of "subsidized" and "market" fertilizer tend to create an avenue for the lower priced subsidized fertilizer to be diverted for sale at higher market prices. The recent survey and analysis of the market prices of fertilizer in some selected states provided further evidence to support the hypothesis that the arbitrage opportunities created by the presence of fertilizer from subsidized sources are exploited. The findings generally reveal that "unsubsidized" fertilizer is cheaper in states with high subsidy rates, despite other state factors that are expected to increase fertilizer costs.

Constraints to Fertilizer Use in Nigeria

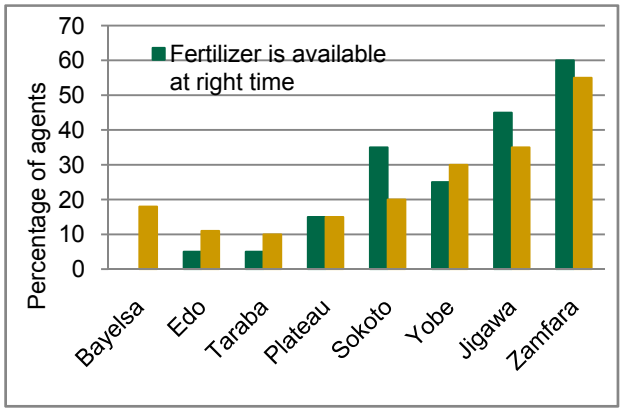
Low fertilizer use has been identified as a major challenge that must be overcome in order to increase Nigeria's agricultural productivity. However, there are several factors that contribute to low fertilizer use that are not addressed by direct price subsidies. First, the extension service system generally plays a critical role in driving demand for fertilizer through its transmission of information about fertilizer technology to farmers. In Nigeria, the extension service is also instrumental in providing farmers access to fertilizer. Based on interviews with extension agents, Banful et al (2010) found that the primary constraint to fertilizer use in Nigeria is the physical absence of the product at the time that it is needed, rather than problems of affordability or farmers' lack of knowledge about its importance. Second, the most often cited primary challenge for both male and female farmers is limited access to credit; cited by more than 55 percent of extension agents surveyed (Table 1). The other often-cited challenges are high prices of inputs other than fertilizer as well as an inadequate supply of fertilizer. However, it is notable that high prices of fertilizer are cited as the primary challenge to farming by only 3 to 5 percent of extension agents surveyed as shown in the Figure 2.

Table 1. Extension agents' perceptions of challenges to farming (In %)

	Female farmers	Male farmers
Limited access to credit	55	59
High prices of inputs other than fertilizer and seeds	11	10
Inadequate supply of fertilizer	8	8
Lack of access to seeds and other planting material	3	5
High fertilizer prices	5	5

Source: Banful et al (2010)

Figure 2. State level variation in extension agents' perceptions of access to fertilizer (%)



Source: Banful et al (2010)

[1] Price changes for urea are estimated at 2.2 percent for Abia, 1.6 percent for Rivers and 16.7 percent for Kaduna during September 2008 and 2009. For the same period, the price changes for NPK (15:15:15) were 1.0 percent, 8.3 percent and 6.3 percent for Abia, Rivers and Kaduna respectively (NAMIS).

In another related study of stakeholders' perspectives on constraints to farming and fertilizer use, it was found that fertilizer quality and availability are the main constraints. While farmers will use more fertilizer if prices are lowered, farmers would use much more fertilizer at prevailing market prices if the quality was good and if fertilizer was available when needed. A further impediment to fertilizer use is the non-availability and high cost of credit. All the stakeholders sampled indicated that acquiring credit for fertilizer purchases was a significant problem but put quality and timeliness constraints ahead of credit problems.

Furthermore, despite subsidy rates reaching as high as 87 percent (Figure 1), fertilizer consumption rates in Nigeria have remained low. Findings from a recent survey of the perspectives of selected stakeholders in the Nigerian fertilizer sector on different aspects of the federal and state government fertilizer subsidy programs reveal that fertilizer is highly demanded by farmers, many of whom will be willing to pay market price as long as the product is available. Specifically, one hundred percent of the 44 interviewed stakeholders indicated that there is a high demand for fertilizer and that demand for fertilizer far outstrips the supply each year. However, there is a persistent shortage of fertilizer supply from both public and private sources. The subsidy programs have been plagued by the pervasive problem of late delivery. Rent-seeking activities and political manipulation have also resulted in diversion of subsidized fertilizer from the proclaimed beneficiaries.

The Voucher System

The promotion of voucher use in Nigeria stems from the challenges associated with wastage and diversion inherent in the government's agricultural inputs procurement and distribution. The International Center for Soil Fertility and Development (IFDC) project for developing agricultural inputs markets in Nigeria (DAIMINA) piloted the use of fertilizer vouchers in three states in 2004 (Kano, Bauchi and the Federal Capital Territory). The objectives of the project were to facilitate farmers to procure fertilizers with a 25 percent subsidy from private dealers, complement the government distribution channel and increase the density of the outlet network. The pilot aimed to demonstrate the potential for an efficient private sector management system of the state and federal government fertilizer subsidy to targeted beneficiary farmers. A second pilot was undertaken in 2008 (Kano and Bauchi) and another one in 2009 (Kano and Taraba states). A review of the 2009 voucher program in Kano and Taraba states showed positive outcomes for participants. Participating in the program significantly increased the likelihood of receiving fertilizer and increased the quantity of subsidized fertilizer received compared to non-participants. Program participants paid higher prices for subsidized fertilizer received through the program compared to their counterparts who received subsidized fertilizer from other sources outside the program. However, they paid significantly lower prices compared to those who purchased directly from the market. Where significant, program participation increased the likelihood that the product was received late. Similarly, participating in the voucher program did not provide farmers with better quality fertilizer; again where significant, program participants were more likely to complain about fertilizer quality problems than non-participants.

Conclusions and Recommendations

The review concludes that frequent changes in fertilizer policies and the promotion of a dual fertilizer market (subsidized and free-market) have hampered private sector development, in contrast to policy pronouncements of various past governments.

The most important first step of the government should be to seek to eliminate the existence of the dual fertilizer markets by establishing the primal role of the private sector in fertilizer production, procurement, and distribution. Similarly, the review suggests that although the low usage of fertilizer in Nigeria could be traced to demand and supply factors such as low farmer incomes and high market prices due to limited availability of fertilizer, public policy responses to issues related to fertilizer have a great deal to do in explaining why there has been a continuing gap in usage. Promoting policy stability by reducing the frequency of government intervention in preference to building capacity in the

private sector to handle all levels of the fertilizer value chain activities would send the right signals to the private sector on government commitment to reform. Finally, the review indicates that addressing fertilizer quality challenges in Nigeria requires a holistic approach to the regulation of fertilizer production and distribution in the country. A clear assignment of monitoring and regulatory roles is needed at every stage of fertilizer production (blending) and distribution with a broader reach to peri-urban and rural markets.

This Policy Note is excerpted from the Nigeria Strategy Support Program (NSSP) Working Paper "A Review of Fertilizer Policy Issues in Nigeria." It is intended to promote discussion; it has not been formally peer reviewed, but its content has been reviewed by at least one internal and/or external reviewer.

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For more information:

IFPRI-Abuja
International Food Policy Research Institute
c/o International Center for Soil Fertility and Agriculture Development
No.6/ Plot 1413 Ogbagi Street
Off Oro-Ago Crescent
Cadastral Zone 11, Garki, Abuja
Nigeria
E-mail: ifpri-nigeria@cgiar.org
www.ifpri.org