Access to Fertiliser Subsidy among Food Crop Farmers in Osun State, Nigeria

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Abstract: The Nigeria fertiliser subsidy policy dates back to 1970s. However, it has invariably witnessed inconsistencies and instabilities given the trend of successive government / leadership in the country. The gains are also not widely spread among the targeted beneficiaries hence, a negative implication on the increased food production programme. The study examined access to fertiliser subsidy among food crop farmers in Osun State, Nigeria. Using a multistage sampling procedure, primary data collected from 84 food crop farmers included farm size, fertiliser usage, perception of benefits of the subsidy policy, characteristics of the other known beneficiaries among others. Analytical tools employed were mainly descriptive statistics. The study showed that an average farmer in the study area is a small holder and used 11.27kg per hectare of inorganic fertiliser. Majority (69 percent of the farmers) had low benefit from the policy. Important characteristic of a would-be beneficiary is to be influential / rich or political office holder other than being a farmer. It is recommended that stakeholders in agriculture should come together and fashion better method for the policy delivery.

Keywords: Fertiliser, Subsidy, Food crop, Osun State.

INTRODUCTION

Agriculture has traditionally been characterized as the 'mainstay' of the Nigerian economy with many assigned roles to perform in the course of the country's economic development; such roles were identified as:

(i) Providing adequate food for an increasing population;
(ii) Supplying adequate raw materials to a growing industrial sector;
(iii) Constituting the major source of employment
(iv) Constituting a major source of foreign exchange earnings; and
(v) Providing a market for the product of the industrial sector (Federal ministry of agriculture, water resources and rural development, 1988).

However, the extent to which the expected roles have been adequately played lies greatly in the agricultural productivity. Idachaba (1994) identified six central elements which constitute the pivot on which increases in productivity per unit of land must revolve: first, is high yielding seed varieties that are fertiliser-responsive and resistant to pest; second, is inorganic fertiliser that assists in realizing the full yield potential of the new seed varieties. Third is the capacity to domestically produce adequate quantities of the inorganic fertiliser or to import them. Fourth is the extension system to transmit knowledge on correct fertiliser application and related agronomic practices. Fifth, there is a need for an efficient fertiliser marketing and distribution system to deliver

fertiliser to farmer in the right quantities and at the time they need them. Finally, there is the need for appropriate national farm input policy covering production, imports, pricing, marketing and distribution.

The Nigerian fertiliser policy subsidy dates back to 1970s. However, it has invariably witnessed inconsistencies and instabilities given the trend of successive government/ leadership in the country. Certain features that amount to inefficiency characterized the fertiliser market in the pre-reform years shortly before 1986. These are among others, leakages, transit losses, inadequate and untimely supply, artificial scarcity, black marketing and smuggling, erratic importation pattern arising from untimely release of funds, transportation bottlenecks, including wrong delivery, non-delivery and under-delivery (Ayoola, 2001). However, reports after five years of deregulation and decontrol process indicate that measures of market inefficiencies still take on high values including the persistence late supplies, high transaction costs, non-agricultural use of fertiliser, inadequate supplies and artificial scarcities through hoarding and smuggling activities. The continuous presence of these features will always keep the benefits of the fertiliser subsidy policy away from the farmers who are the intended beneficiaries while unrecognized middlemen, transporters and other unintended beneficiaries have the gains.

Problem Statement

The attendant situation of land depletion, land tenure and teeming population that is always on the increase have all contributed immensely to the shortage of land available for food crop production. The traditional land use management adopted thus becomes a function of the available land, hence practices like shifting cultivation, bush fallowing, crop rotation are gradually fading away. This calls for increasing dependence on inorganic fertiliser in order to improve the fertility of the available land under use. Fertiliser subsidy policy is also seen as an income transfer and market promotion strategy toward the development of infant industry of agriculture. However, several literatures have shown that the policy implementation is still defective (Idachaba, 1992, 1994; Ogunfowora, 1993; Ayoola, 2001; Eboh *et al*, 2006; Yekinni, 2007 and Salimonu, 2007).

The study of Yekinni (2007) showed that majority (67.8 percent) of the farmers sampled in Oyo State still indicated fertiliser input as a felt need in which the government intervention is required. The problem becomes enlarged in that between 1990 and 1996, fertiliser subsidy expenditure consistently exceeded total capital on agriculture. It was 725 percent, 600 percent, 400 percent and 397 percent of total capital expenditure on agriculture in 1992, 1995, 1991 and 1993 respectively (Okoye, 2003; as cited in Eboh *et al* 2001). Despite these huge expenditure on fertiliser subsidies, farmers access to fertiliser remain as high as prices also remain high; total fertiliser use declined averaging 6.5 percent between 1989/90 and 1999/2001 and total fertiliser use as a percentage of potential demand averaged a mere 7.3 percent in the same period (Eboh *et al*, 2006). This defect has a lot of implications on agriculture and economic development. The achievement of the increased food programme becomes so much impaired if the laxities are allowed to linger.

Several programmes in the past and present staged to reduce the poverty of the rural poor would

not also be well facilitated given the roles of fertiliser in food crop production; a primary occupation of the rural poor. To this end, the following research questions were conceived in the study: Do food crop farmers use recommended fertiliser dose per hectare of farm land? To what extent do farmer benefit from the fertiliser subsidy policy? Who are the other beneficiaries of the policy? What are the alternatives to inorganic fertiliser use? Based on the above research questions, the objectives of the study are to:

1. determine the extent of benefit of the fertiliser subsidy policy by the farmers.
2. identify other known beneficiaries, and
3. identify alternative ways in place of inorganic fertiliser.

METHODOLOGY

The study was carried out in Osun State, Nigeria. The state was chosen because of its location in the rainforest and the availably of food crop farmers. A two stage sampling procedure was used in selecting 84 food crop farmers from 25 farming communities in the three agro-ecological zones in the state. Using structured questionnaire, primary data collected included farm specific characteristics (farm size and quantity of fertiliser used), perception of the benefit of the subsidy policy by the farmers, other known beneficiaries, alternative ways to inorganic fertiliser use. Data were analyzed through descriptive statistics and Likert scale. These include the use of tables, frequency counts, percentages, composite score, mean and standard deviation.

RESULTS AND DISCUSSION

Farm size and fertiliser use

The distribution of farm size and the fertiliser use status is presented in Table 1. It is shown from the Table that highest percentage of farmers (46.4percent) were cultivating between 1-1.99 hectares of farm land while the lowest percentage (2.4 percent) were cultivating farm size greater or equal to four hectares. However, the average farm size for the whole sample is 1.62 hectares. This implies that the farmers were operating on a small scale range (that is, a farm size less than 2 hectare) based on the categorisation by the agricultural development programme of the state. The fertiliser use status with respect to farm sizes is almost represented in a pattern of increasing fertiliser use with farm size. The Table also shows that the overall average fertiliser use for the sampled farmer is 11.27 kilograms per hectare, a quantity that is less than the required. Yayock (1980) as cited in Bamire and Amujoyegbe (2005) recommended 300 kg/ha NPK 12:12:17 + Mg on acid soils and 50 kg/ha N + 60 kg/ha K_2O on other soils in Southwestern Nigeria. According to Henao and Baanante (1999), fertiliser use ranges from nearly 234 kilograms per hectare in Egypt to 46 kilograms in Kenya to less than 10 kilograms in most countries in Sub-Saharan Africa.

Table 1. Distribution of Respondents by Farm Size and Fertiliser Use

Farm Size(ha)	No. of respondents	Percentage	Average farm size	Average fertiliser/hectare
< 1.00	25	29.8	0.61	8.20
1-1.99	39	46.4	1.51	11.50
2-2.99	13	15.5	2.29	14.60
3-3.99	5	5.9	3.71	13.90
≥ 4.00	2	2.4	6.5	16.80
Total	84	100.0	1.62	11.27

Benefits from Fertiliser Subsidy Policy

The farmers' responses, based on their benefits from the fertiliser subsidy policy, are presented in Table 2. The Table shows that the respondents have not benefited in terms of timely availability of subsidized fertiliser (90.4 percent), regular access (84.5 percent) adequate quantity (97.6 percent) and purchase of the fertiliser at the subsidised rate (61.9 percent). However, 67 percent have benefited from the technical training for the use of the fertiliser.

Table 2. Distribution of Respondents by Benefits from Fertiliser Subsidy Policy

Policy Benefits	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Timely Availability	1(1.2)	4(4.8)	3(3.6)	29(34.5)	47(55.9)
Regular Availability	4(4.8)	8(9.5)	1(1.2)	31(36.9)	40(47.6)
Adequately Available	1(1.2)	1(1.2)	0(0.0)	2(2.4)	80(95.2)
Available at Subsidised Rate	4(4.8)	20(23.8)	8(9.5)	24(28.6)	28(33.3)
Technical Training on fertiliser use	26(31)	30(36)	3(3.6)	18(21.4)	7(8.3)

Figures in parentheses are percentages

A composite score was estimated from the responses to the 5 statements. On 5-point scale, a respondent can score a maximum of 25 points and a minimum of 5 points. The mean score is 14.24 while the standard deviation (SD) is 3.05 and the respondents were categorised into three as follows.

Upper category = 25 to (mean + SD)

= 25 to 17.29

Medium category = between upper and lower category = 17.28 to 11.20

Lower category = (mean – SD) to lowest

= 11.19 to 5

The distribution of the respondents on the basis of the category of benefit is given in Table 3. It is shown in the Table that the modal category is the low benefit (69.0 percent). This is followed by medium benefit (22.6 percent) and high benefit 8.3 percent. The result implies that there is a flow of benefits from the intended beneficiary to other unintended beneficiaries. The result further corroborates the existing literatures on agricultural input delivery to farmers in Nigeria (Idachaba, 1994; Yekinni, 2007).

Table 3. Distribution of Respondents based on Category of Benefits

Categories of Benefit	Frequency	Percentage
High Benefit	7	8.3
Medium Benefit	19	22.6
Low Benefit	58	69.0
Total	84	100

Characteristics of Gainers of the Fertiliser Subsidy Policy

The sampled farmers were made to respond to questions describing their perception of the gainers from the fertiliser subsidy policy. Table 4 shows that the majority of the sampled farmers (83.3 percent) disagreed that "to be a farmer" is a factor for benefiting from the policy; this probably infers that farmers either do not have identity or are deliberately/carelessly neglected in the policy delivery. However, the farmers agreed that "to be a political office holder" (76.2 percent), "being rich or influential" (82.1 percent) and "being a member of the ruling political party" (88.1 percent) are the important characteristics of the gainers from the policy. The farmers' response to the characteristic of "being a regular buyer" was distributed almost equally between yes and no responses. The result can therefore permit us to report that small scale farmers that are responsible for the food production in the country and given their current unfavourable socio-economic environment still have to compete with non farmers before they could have access to fertilisers.

Table 4. Distribution of Respondents Responses by the Characteristics of Gainers of the Fertiliser Subsidy Policy

Characteristics of Gainers of the fertiliser Subsidy Policy	Yes	No
He must be a farmer	14 (16.7)	70 (83.3)
He should be a Political office holder	64 (76.2)	20 (23.8)
He should be rich and influential	69 (82.2)	15 (17.9)
He must be a regular beneficiary	44 (52.4)	40 (47.6)
He has to be a member of ruling political party	74 (88.1)	10 (11.9)

Figure in parentheses are percentage response

Alternatives in Place of Fertiliser or Coping Strategies in Absence of adequate Fertiliser

The distribution of farmers' responses on alternative ways or coping strategies at instance of fertiliser inadequacy is shown in Table 5. Most farmers (71.4 percent) were still ready to buy at extra cost if the subsidized ones could not be accessed. However, 28.6percnet of the farmers would rather not buy at extra cost if subsidised one is not available. This may primarily be due to lack of finance. Deforestation/bush fallow was the option of 25 percent while 75 percent were still on the same farm land over years. The extent of deforestation (in order to have access to new farm land) and bush fallow appeared very low (25 percent) due to existing problem of land shortage through land tenure and population increase. Other options, change of enterprise to less fertiliser demanding one accounted for 45.2 percent of the responses while 58.3 percent would align with influential individual in order to have the desired quantities.

Table 5. Distribution of Farmers by Response to Alternative ways or Coping Strategies in place adequate fertiliser Subsidy

Alternative Ways/Coping Strategies	Yes	No
Buy Fertiliser at an extra cost	60 (71.4)	24 (28.6)
I would rather not buy any if subsidised one is not available	24 (28.6)	60 (71.4)
Open new area (deforestation)/Bush fallowing	21 (25)	63 (75)
Change Enterprise to less fertiliser demanding one	38 (45.2)	46 (54.8)
I align with influential individuals	49 (58.3)	35 (41.7)

Figure in parentheses are percentages

SUMMARY AND CONCLUSION

The study established that an average food crop farmer in the study area is a small scale holder. The average fertiliser use per hectare (11.27 kg/hectare) was lower than the expected in sub-Saharan Africa. The study further shows that only 8.3 percent had high benefit from the fertiliser subsidy policy compare to low benefit of 69 percent. This implies that there are other beneficiaries some where other than the targeted farmers. It is revealed in the study that being a farmer is not an important characteristic to have access to fertiliser. The facilitating characteristics were being a political office holder, rich or influential or member of ruling party. In a way to cope with limited access to subsidized fertiliser, majority of the farmers still buy at extra cost or align with influential individual. On the other hand, the extent of bush fallow is low.

POLICY IMPLICATION AND RECOMMENDATIONS

Channelling the subsidised fertilisers to the targeted small scale farmers in Nigeria appears to be a perennial problem and an overall challenge. There is therefore the need for the stake holders in agriculture (policy makers, policy analysts, extension personnel, researchers and farmers themselves) to come together and agree on workable methods of fertiliser distribution in Nigeria. This will go a long way in reducing the complexities of un-timeliness, unavailability, diversion and high cost of fertiliser. The issue of indiscriminate sale of the input would not only frustrate the farmers but may also 'push' them either totally or partially into non-farming activities towards income sustainability; steps toward identifying farmers during sales are therefore necessary to be taken. This could be somewhat effectively achieved by the extension agents who deal directly with the farmers. It is also recommended that farmers' surveys should be carried out at intervals in order to have periodic feed back from the target beneficiaries. This will however provide a basis for the evaluation of the programme.

REFERENCES

Ayoola, G. B. (2001). Essays on the Agricultural Economy 1, A Book of Readings on Agricultural Development Policy and Administration in Nigeria ISBN 978-33454-3-5 TMA PUBLISHER, IBADAN.

Bamire, A.S. and Amujoyegbe, B.I. (2005). **"**Economic Analysis of Land Improvement Techniques in Smallholder Yam-Based Production Systems in the Agro-ecological Zones of Southwestern Nigeria**"**. Journal Human Ecology, 18(1): 1-12 (2005)

Eboh, E. C., Ujah O. C. and Amaechina E. C. (2006). "Do Government Fertiliser Subsidies Benefit Rural Poor Farmers in Nigeria? Making Sense and of Existing Data". A Paper Presented during the 5th PEP Research Network General Meeting June 18-22. Addis – Ababa, Ethiopia.

Federal Ministry of Agriculture, Water Resources and Rural Development (1988) Agricultural Policy for Nigeria, February, 1988.

Henao, J. and Baanante, C. (1999). Nutrient Depletion in the Agricultural Soils of Africa October 1999. "A 2020 Vision for Food,

Agriculture, and the Environment" *2020 Brief No. 62.* URL http://www.ifpri.org/2020/briefs/number62.htm

Idachaba, F.S. (1992). "Policy Options for African Agriculture". In Jeam Dreze and Amartya sen (eds). Wider studies in Development Economics. The political economy of hunger. Volume III. Endemic hunger. Clarendon press Oxford

Idachaba, F.S. (1994). "The Dilemma of Fertiliser Subsidies in African Agriculture". Invited Paper Delivered at the International Fertiliser Industry Association (IFA) Regional Conference for Africa, Dakar, Senegal 1-3 February.

Ogunfowora, B. (1993). "Analysis of Fertiliser Supply and Demand in Nigeria" Paper Presented at the Symposium on Alternative Pricing and Distribution Systems for Fertiliser in Nigeria Coordinating Unit, Nigeria.

Okoye, C. U. (2003). Analysis of Agricultural Input Subsidy Policies in Nigeria. Study Report Submitted to the World Bank Country Office, Abuja

Salimonu, K. K. (2007). Attitude to Risk in Resource Allocation among Food Crop Farmers in Osun State, Nigeria. PhD thesis, Agricultural Economics Department, University of Ibadan, Ibadan.

Yekinni, O. T. (2007). "Political Economy of Agricultural Policy Implementation in Nigeria: Oyo State as a case study". A Research Project Submitted to F. S. Idachaba Foundation for Research and Scholarship, Ibadan, 2007.