

## **Green Alternative Policy and Rice Production in Ebonyi State: Matching Policy Ambition with Evidence**

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### **[0174] Abstract**

*This paper, focused on rice production, examined the Green Alternative Agricultural Promotion Policy of the Muhammadu Buhari administration (2015 – 2023), which goals were to make Nigeria not only self-sufficient in rice production but to become net exporter of rice by 2018, and to see the extent this policy ambition was realized, using evidences from Ebonyi State. The objectives being to ascertain annual rice output; rate of adoption of modern input by rice farmers; possible challenges; and how output was affected by absence of production incentives. Survey design was adopted to generate data from the sampled towns and villages. A multi-stage sampling technique was used to select 1,080 respondents from the three zones in the state. Guided by the Eastonian systems theoretical framework of analysis, the study revealed that despite observed steady rise in output during the period the Green Alternative Policy was implemented, there was still national shortfall that was made up with imports. It also showed that while adoption of modern inputs, such as new rice varieties and use of fertilizer was high, use of mechanical equipment was non-existent. Farmers were confronted with numerous challenges which constrained output. It was recommended that rice farming be made a priority sector and a profitable venture; support the small farmer with necessary incentives; provide plant hiring at cheap cost, and provide seamless access to credit facilities if food security must be achieved.*

**Keywords:** Demand, Food Security, Green Alternative, Imports, Inputs, Policy, Production, Rice, Self-sufficiency.

### **Introduction**

The achievement of food security or food self-sufficiency had been the ambition of Nigerian governments. This concern had heightened to the point that it became one of the priority areas of policy focus under the Buhari administration. This concern and focus was due to the fact that food security was one of the indices or measures of development which Nigeria could not ignore (Akinyetun, 2018; Igbinedion & Aihie, 2015).

Many past Nigerian administrations particularly since after the civil war, had attempted to re-create the buoyancy in food and other agricultural products reminiscent of the first republic. During that period agriculture contributed about 45 percent of the GDP which represented about 70 percent of total exports that yielded the foreign exchange that were used to import needed raw materials and capital goods (Akinyetun, 2018; Okereke, 2000, 2003, 2004). This scenario changed following the emergence of oil as a major revenue earner for Nigeria.

Contemporaneously, Nigeria is confronted by food security challenges inspite of the abundant agricultural resources and oil wealth. With shortages in food output, rising domestic food demands and rising domestic food prices, the Muhammadu Buhari administration inaugurated in 2015, was compelled to take serious steps to stem these trends. That administration gave renewed focus, emphasis and, indeed, a heightened impetus to the drive to achieve food security through making Nigeria self-sufficient in food and other agricultural products and surplus for export. The step taken towards realizing these policy ambition was the adoption of the *Green Alternative Agricultural Promotion Policy Strategy*. This policy whose goal was

to make Nigeria a net exporter of rice by 2018, among other things, galvanized and mobilized all the states in the federation, including Ebonyi, to activate their agricultural ministries and agencies to effectively drive the process towards the achievement of the national goals of food security generally, and the export of rice by 2018 (ERGP: 55). The Ebonyi State government at that time under David Umahi, enforced the implementation of the policy and even stopped the bringing of foreign rice into the state.

This paper which focused on the specific area of rice production in Ebonyi State is an interrogation or policy assessment of the extent to which the *Green Alternative Policy* advanced the achievement of the policy ambition of self-sufficiency and exportation of rice within the period 2015 – 2022 and even beyond, based on empirical evidences drawn from Ebonyi State of South East Nigeria. The focus on rice production sub-sector of the agricultural sector, is informed by the fact that rice had become a staple food item generally consumed by everyone and every family in Nigeria. The choice of Ebonyi State stems from the fact, among other things, that it is one of the foremost state known for rice production.

Ebonyi state was created in 1996 by the Abacha regime, from part of former Enugu and Abia States. It is bounded to the North by Benue State, to the South by Imo and Abia States, to the West by Enugu State, and to the East by Cross River State. Ebonyi State has a population estimated to be about 3,242,500, which is a projection based on the 2006 census which recorded a population of 2,176,947 for Ebonyi State. Majority of this population are generally farmers and particularly, rice farmers, as rice is grown by virtually every community in the state.

### **The Problematicue**

The *Green Alternative Policy* of the Muhamadu Buhari administration (2015 – 2023), was adopted as the policy instrument to drive the process that will lead to the achievement of the regime and policy ambition of making Nigeria self-sufficient in food and other agricultural products and surplus for export. For the rice production sub-sector, the goal was clear and specific. The goal or target was not only to make Nigeria self-sufficient in rice production but also to be an exporter of rice by the year 2018. However, by 2018 and uptill 2023 when the two terms of the administration ended, Nigeria did not appear to have achieved the policy ambition of self-sufficiency in rice production and rice export because rising food prices and rising importation of rice continued unabated till the end of that administration.

There is, therefore, need to assess or determine the extent to which production evidence fell short of expectation and the factors in the rice production value chain that frustrated the achievement of the policy ambitions, using Ebonyi State as a study case. Consequent upon this, the specific objectives of this study include to; (a) Ascertain the annual rice output from official records of farmers and millers. (b) Ascertain the rate of adoption of modern input by rice farmers and how this affected output (c) Determine the possible challenges and constraints encountered by the rice farmers, and, (d) Determine the extent to which output was affected by absence of production incentives.

### **Methodology and Materials**

The survey design was employed to generate data from the selected towns and villages in Ebonyi state. A multi-stage sampling technique was used to select respondents from the three zones of the state. The first stage involved the selection of three towns in three local governments of the state (Afikpo in Afikpo North Local Government Area for Ebonyi South; Ikwo in Ikwo Local Government Area of Ebonyi Central; Ezamgbo in Ohaukwu LGA of Ebonyi North). These towns were selected due to the fact that they are well known rice production hubs. The second stage involved simple random selection of 3 villages from each of the 3 towns making 9 villages, while the third stage involved simple random sampling of 120 rice farmers from each of the 9 villages involved in this study, making a total of 1080 farmers. The Eastonian systems theory provided the theoretical orientation for this work. A structured questionnaire to assess the impact of the *Green Alternative* policy on their production practices and the challenges they encounter, was

administered on the respondents. The interview technique was also used to extract supplementary information. Data generated was statically analyzed using simple frequency and percentages.

## Result and Discussion

The Green Alternative is Federal Government's Agricultural promotion policy which aim is to work with key stakeholders to build an agribusiness economy that can deliver sustained prosperity by meeting domestic food goals, generating exports and supporting sustainable income and job growth (ERGP, 2020:56). Three main specific objectives of the policy were outlined, two of which defined / determined the focus of this study. These objectives were to: (a) significantly reduce food imports and become a net exporter of key agricultural products, e.g. rice, tomatoes, vegetable oil, cashew nuts, groundnuts, cassava, poultry, fish, livestock. (b) Become self-sufficient in tomato paste (by 2017), Rice (by 2018), and wheat (by 2019, 2020).

In keeping with this policy which was rightly coordinated by the Federal Ministry of Agriculture and Rural development, and the drive to achieve these policy ambitions, particularly as it related to rice, which had become a major staple food in Nigeria, state governments were required to direct their agricultural policies and strategies towards the realization of these national goals. Ebonyi state, being a major rice producer and, indeed, second most rice producing state in Nigeria after Kebbi state, the government activated its rice production policy strategies. Agricultural programmes such as the Fadama, National Programme for food security, Value added chain such as processing, etc.; China – Nigeria counterpart programmes (Rice Production), tractor hiring programme, New Rice programme which deals with introduction, multiplication and adoption of upland rice, the Agricultural Development Project (ADP) with its extension programmes, as well as the one hectare per civil servant policy of the Governor David Umahi Era. Majority of the beneficiaries engaged in rice farming.

We have examined here the extent to which these agricultural policy strategies, used to implement the *Green Alternative* in Ebonyi state enhanced rice production output and the possible constraints or hindrances faced by farmers and their effects on output. The first objective of this work is to ascertain the annual rice output from the official records of the millers and farmers associations. A visit to the Rice mills in Abakaliki, Ikwo and Afikpo, revealed that there was no centralized institutional platform either of the Rice millers or Rice farmers, where records were kept of outputs.

What we have here were extrapolated from different sources which included: (a) Individual's daily output of the millers from the official records of the National Commodity Exchange (NCX), Abakaliki. (b) Information obtained from rice farmers from the survey. (c) Data obtained from the rice mills in Abakaliki, Ikwo and Afikpo, among others. Even when these data may not be comprehensive and exhaustive, it provided a good idea and basis for evaluating policy for the period under review.

**Table 1:** EBONYI STATE ANNUAL RICE OUTPUT IN METRIC TONNES (2015 – 2023)

Year	Output
2015	17,276
2016	17,540
2017	20,393
2018	250,720
2019	329,263
2020	335,108
2021	337,112
2022	337,200
2023	337,225

Sources See (a) – (c) above.

The above extrapolated computation from different sources shows that Ebonyi State produced on the average, about 220, 197 million metric tons of rice annually between 2015 – 2023. There were no records of Ebonyi State annual domestic demands of rice for the specific years, (2015 – 2023) to enable us compare output with demand. However, given the fact that rice has become a major staple food consumed by virtually every family in Nigeria and Ebonyi being a major rice producing state, as well as the popularity of the “Ebonyi Rice” or the “Abakaliki Rice”, there was no doubt of an increasing domestic demand. Furthermore, with the *Green Alternative Agricultural Promotion Policy* of the Muhammadu Buhari administration as implemented in Ebonyi State through the many agricultural policy implementation strategies already mentioned, there was an observed steady rise in output as could be seen on table 1 above.

The general national domestic production in 2015 was 2 million metric tons, 2017 it increased to 2.7 million metric tons. In 2018, it rose significantly to 7.095, with 2.2 million metric tons of import. The year 2019 recorded production of 8.403 million metric tons and import of 2.4 million metric tons. Domestic production had increased to 8.435 million metric tons by the year 2020 and imports were 2.4 million metric tons. In 2021 domestic production was 9 million metric tons and import 2.160 million metric tons, while in 2022 domestic production was about 9.5 million metric tons and import 1,498.410 million metric tons (CBN, AI Overview, dataphite.com Retrieved 15/6/2025).

In spite of these steady increase in domestic production due to the *Green Alternative* agricultural promotion policy, and in spite Nigeria being the largest rice producer in West Africa and, indeed, Africa, Nigeria was yet to meet domestic demand for which reason Nigeria remains a major importer of rice to close the gap between domestic production and consumption (AI over view 2022)

From the available statistical evidence as presented above, it is clear that the policy ambition or goal of the Buhari government of achieving self-sufficiency in rice production and to possibly export rice by the year 2018 was never realized throughout the period of the administration, 2015 – 2023. In other words, notwithstanding the *Green Alternative Policy*, the banning of rice imports and closing of borders, in order to increase domestic output, under Buhari’s government, domestic production of rice to which Ebonyi State was one of the leading contributors, could not even meet domestic demand not to talk of export as envisaged (Okereke, 2021).

To determine the rate of adoption of modern inputs by the rice farmers in Ebonyi State, which is the second objective of this study, the respondents were requested to indicate which of mechanical equipment from among Tractor, Earth tiller and harvester, they use in their farming activities. Significantly, the responses showed that all the 360 respondents sampled per zone totaling 1,080 respondents for the three zones, none used Tractor, Earth Tiller, nor harvester. Conversely, all the respondents affirmed their use of hand tools made up of Hoe, cutlass, shovel, sickle, and Bucket. This was found to be the case in all the communities studied such as Ebonyi North, Ohaukwu Local Government Area – Umuaghara, Umuebe and, Nsuruakpa communities; Ebonyi Central, Ikwo Local Government Area – Agubia, Ekpa Omaka and Ikwo-Noyo Communities and, from Ebonyi South, Afikpo Local Government Area – Nkpogoro, Ohaisu and Amasiri communities. The adoption of new or modern rice varieties showed wide spread adoption of modern / new rice varieties

**Table 2:** RESPONSE ON ADOPTION OF MODERN / NEW RICE VARIETIES

Area	ITA 306	Faro 51	Faro 44	Faro 52
<b>Ohaukwu LGA</b>				
Umuaghara	-	-	120(100%)	-
Umuebe	-	2(1.7%)	118(98.3%)	-
Nsuruakpa	-	-	120(100%)	-
<b>Ikwo LGA</b>				
Agubia	-	-	120(100%)	-
Ekpaomaka	-	-	120(100%)	-
Ikwonoyo	-	-	120(100%)	-
<b>Afikpo LGA</b>				
Nkpogoro	-	-	90(75%)	30(25%)
Ohaisu	-	-	120(100%)	-
Amasiri	-	90(75%)	15(12.5%)	15(12.5%)
<b>Total</b>	-	<b>90(8.33%)</b>	<b>943(87.37)</b>	<b>15(1.38%)</b>

Source: Survey Results

**Table 3:** FERTILIZER APPLICATION

Area	Yes	No
<b>Ohaukwu LGA</b>		
Umuaghara	120(100%)	-
Umuebe	120(100%)	-
Nsuruakpa	120(100%)	-
<b>Ikwo LGA</b>		
Agubia	120(100%)	-
Ikwonoyo	120(100%)	-
<b>Afikpo</b>		
Nkpogoro	90(75%)	30(25%)
Ohaisu	120(100%)	-
Amasiri	20(16.7%)	100(83.3%)
<b>Total</b>	<b>950(87.96%)</b>	<b>120(11.11%)</b>

Sources: Field Survey

The rate of adoption of modern inputs which in the context of this study included mechanical equipment (Tractor, Earth Tiller and harvester), modern or new rice varieties and fertilizer use as shown above, indicated that the rice farmers (who are largely small holder farmers) in their farming activities depended 100% on the use of hand tools made up of such traditional tools as hoe, cutlass, shovel, etc. This also showed that none of the respondents adopted nor used any mechanical equipment in their farming activities. However, the evidence above showed that while none of the farmers used or applied mechanical equipment, there was wide adoption of modern / new rice varieties as well as fertilizer application. Those who adopted Faro 51 variety were 90 representing 8.33%, while 943 of respondents, representing 87.32% adopted Faro 44 and 15 representing 1.38% adopted Faro 52. This indicated that during the period under study, rice farmers in Ebonyi state adopted modern / new rice varieties with majority (87.32%) adopting Faro 44 variety, which seemed to be the preferred choice for its high yield, among other considerations.

Fertilizer also enjoyed wide patronage among Ebonyi rice farmers as could be seen on Table 2. Out of the sampled population of 1,080, 950 of the respondents representing 87.96%, affirmed that they applied fertilizer to their rice fields, while only 130 respondents, representing 12.04% indicated non use of fertilizer. On the third objective, which is to determine the possible challenges and constraints encountered by farmers in Ebonyi state, the farmers were presented with a comprehensive list of the possible problems to choose from. The ones considered most important problems are summarized below:

**Table 4:** CHALLENGES FACING RICE FARMERS IN EBONYI STATE

Problems	Frequency	%
Inadequate capital	1080	100
High cost of input	1080	100
High cost of labour	1080	100
Poor marketing outlet	43	4
High cost of pesticide	86	5
Land tenure system	896	83
High cost of transportation	778	72
High cost of fertilizer	940	87
Lack of harvesting equipment	994	92
Lack of storage facilities	983	91
Lack of credit facilities	1,037	96
Pest and diseases	756	70
Education	667	62

Sources: Survey Results

From the above table, it was clear that the farmers face many serious challenges in their farm activities as Thanh and Singh (2006), would agree. The most critical of these, which affect their output and to which all the respondents strongly agreed or agreed to, are challenges of inadequate capital (100%), cost of input (100%), cost of labour (100%), followed by lack of access to credit facilities (96%), harvesting equipment (92%), storage facilities (91%), cost of fertilizer (87%), transportation cost (72%), education (62%), among others. There was, indeed, general low level of education among the farmers. For example, only 18% of the respondents had tertiary education, 30% secondary, 61% primary, and 45%, no education.

The fourth and final objective of this research is to determine the extent to which output was affected by absence of production incentives. By incentive in this context is meant, what is given or provided to motivate, encourage or stimulate farmers toward greater output such as seamless access to agricultural loan or credit facilities availability, and access to simple farm equipment, for hiring at reduced cost, reduced cost of inputs such as fertilizer and improved rice varieties, among others.

As already noted before, inadequate capital was one of the challenges all the respondents cited as one of the problems they encounter. This was supported or compounded by the fact that none of the farmers sampled in all the zones received loan or credit from government or bank. Similarly, none of them were incentivized to apply mechanical equipment on their farms, probably for lack of availability or lack of financial capacity. Notwithstanding these, increased demand and prices for Ebonyi rice was an important production incentive that increased interest in rice farming in Ebonyi state.

## Conclusion

Rising food prices, food importation and increasing food demands, particularly of rice, which incidentally had become not only generally consumed but has also become government preferred food intervention item during emergencies, has been of great concern to Nigerian government and to Nigerian people. It was perhaps for this reasons and in keeping with its philosophical responsibility of guaranteeing the good life for the citizens, as postulated by Jeremy Bentham (1748 – 1832) and John Stuart Mills (1806-73), that the Muhammadu Buhari administration embarked on an Economic Recovery and Growth plan (ERGP). One of the key focus of this plan was the Agricultural sector. It was in this plan and under this sector that the administration adopted the *Green Alternative Agricultural Promotion Policy* in its determination to achieve food security, generally, and to particularly be in a position to export rice possibly by 2018, thus reversing the worrisome trend of rising food prices and food importation.

The study examined this policy ambitions with specific focus on rice production in Ebonyi State against the backdrop of the four objectives of the study. The first involved ascertaining the annual rice output in Ebonyi State and it was discovered that during the period of the Muhammadu Buhari administration (2015 – 2023) and following the implementation of the Green Alternative Agricultural promotion policy in Ebonyi State, rice production output increased steadily annually (see table 1). However, inspite of these observed rising annual output in Ebonyi State, Nigeria was yet to meet domestic demands and remained net importer rather than net exporter of rice between 2015 – 2023. Consequently, the evidences presented in this study showed that the ambition of self-sufficiency in rice production and possible export of rice by the year 2018 was not realized at the termination of that administration in 2023.

The adoption rate of modern input among Ebonyi state rice farmers, as ascertained under the second objective, was some what impressive. However, while there was general adoption of modern rice varieties and use of fertilizers, there was non adoption of mechanical equipment such as tractor, earth tiller and harvester, which could have enhanced output. Beside these, the farmers were confronted with many critical problems and or challenges. These included inadequate capital, cost of inputs, labour cost, lack of harvesting equipment, storage facilities and most importantly, lack of credit facilities, to mention just some of them, a situation Merem, *et al*, (2017) had also observed in Niger State.

Finally, absence of production incentives, such as access to credit facilities, harvesters, inadequate capital, among others, served as disincentives that affected production. However, higher prices and availability of market (buyers) was an important incentive that encouraged and motivated some of the farmers to even expand their fields squeezing from their personal savings to fund their production process in the absence of access to credit facility, an observation shared by Iwuchukwu, *et al*, (2017).

### Recommendations

The efforts of Ebonyi State government as well as the national drive to achieve food security and to export rice will be enhanced with the following recommendations: (a) There is need to make rice production a priority sector and also a profitable venture with appropriate policy that will compel the participation of majority of the Nigerian population. (b) While encouraging large scale investment in this sector, the government should not ignore the small farmers whose efforts have been producing the rice we depend upon. As much as possible they should be provided with necessary incentives including seamless access to credit facilities. As John and Fielding (2014) would say, supporting small holders promotes food security. Indeed, Otaha (2013:35), contends that “In Nigeria most of the food is produced by peasant farmers ... and not multinational companies who produces on large scale for profit.” (c) Plant hiring at very cheap cost or subsidized rate should be made available to rice farmers. (d) Extension programmes should be intensified. (e) The rice farmer, especially, the small holder farmers need be encourage through incentives such as interest free loans. These and other constraining challenges when removed will likely boost rice production.

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