Awareness and Uptake of the National Farm Inputs and Food Production Policy among Arable Crop Farmers in Ogun State, Nigeria

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Abstract

Many of the agricultural policies of the government have fallen short of the ends they were set up to attain, given that many of the policies were either not up-taken or their uptakes were relatively slow to match the rate of population growth and the consequential increase in food demand. Awareness and uptake of agricultural policy among arable crop farmers in Ogun state was therefore investigated.A total of 120 arable crop farmers were surveyed. Data were analyzed using frequency counts, percentages and mean. Majority (83.3%) were male while 60.8% had primary education and 9.2% had no formal education. Majority (75%) were aware of farm inputs policy of the government. While uptake of policies on credit facilities (89.2%) and farm machineries (79.2%) was low, it was low for uptake of extension services (73.3%), agrochemicals (66.7%) and improved seeds (65.8%) was high. Important constraints to the uptake of agricultural policies were inadequate funds, stiff bureaucracy of the government and inconsistent government policies. Respondents location (χ^2 = 4.837) and membership of group (χ^2 = 4.174) were significantly related to uptake of farm and inputs production policy of the government. There is high level of awareness but low uptake of farm input and food production policyof the government among arable farmers in the study area. Government should therefore provide adequate subsidy on production inputs and removal of bureaucratic procedures so as to ensure a better uptake of her agricultural policies.

Key words: Farminputs policy, Awareness, Constraints, Policy uptake, Arable crop

INTRODUCTION

Agriculture is one of the most important sectors of the Nigerian economy. This is because it contributes more than 30% of the total annual Gross Domestic Product (GDP), employs about 70% of the labour force, accounts for over 70% of the non-oil exports and most importantly, provides over 80% of the food needs of the country (Adegboye, 2004). Agriculture provided adequate food for the Nigerian populace both in quality and quantity during the era before the independence in 1960 (Adegboye, 2004).

Helleiner (1996) showed that in Nigeria, between 1950 and 1960, food production was at a subsistence but sufficient level. The economy was experiencing rapid growth of 45% annually, between 1958 and 1963; the driving force being a booming trade in agricultural commodities export, growing annually at 5.5%. The first decade of Nigerian independence (1960 – 1970) opened the way to food shortages as a result of declining agricultural production and increasing population growth rate. The increase in population at a rate considerably higher than the rates of increase in food production has continued to widen the gap between domestic food supply and domestic demand. This disparity has led to rising food prices (85% – 125% increases in many Nigerian cities) and declining foreign exchange earnings from agricultural exports.. The interaction of these factors has led to food insecurity and the idea of self-sufficiency is becoming more difficult to achieve due to declining agricultural production and inefficient food marketing system (Helleiner, 1996).

Arable crops are mainly food crops and are produced for home consumption. Prior to the civil war, the country was self-sufficient in food, but importation of food increased substantially after 1973. The most important food crops are yams and cassava in the south and sorghum (guinea corn) and millet in the north. In 1999, production of yam was 25.1million tons (67% of world production), cassava 33.1million tons (highest in the world and 20% of global production), cocoyam (taro), 3.3million tons, sweet potatoes, 1,560,000 tons. The 1999 production estimates for major crops were as follows (in thousands of tons); sorghum, 8,443; millet, 5,457; corn, 5,777; rice, 3999; peanuts, 2,783; palm oil, 842; sugar cane, 675; palm kernel, 565; soybeans, 405; and cotton lint, 57. Many fruits and vegetables are also grown by Nigerian farmers (Idachaba, 2006).

Sustainable agricultural development is propelled by agricultural policy. Nigeria's agricultural policy is the synthesis of the framework and action plans of government designed to achieve overall agricultural growth and development. According to ARCN (2008), the first national policy on agriculture was adopted in 1988 and was expected to remain valid for about fifteen years, that is, up to year 2000 The policy aims at the attainment of self-sustaining growth in all the sub-sectors of agriculture and the structural transformation necessary for the overall socio-economic development of the country as well as the improvement in the quality of life of Nigerians.

The main features of the policy include the evolution of strategies that will ensure self-sufficiency and the improvement of the level of technical and economic efficiency in food production. This is to be achieved through the introduction and adoption of improved seeds and seed stock, husbandry and appropriate machinery and equipment etc. A number of agricultural development institutions were set up and special programmes and projects were launched in order to achieve these aims, some of them include: National Accelerated Food Production Programme, NAFPP (1973); Agricultural Development Programme, ADP (1975); Operation Feed the Nation, OFN (1976); River Basin Development Authorities, RBDA (1977); National Seed Service, NSS (1977); Green Revolution, GR (1979); Directorate of Food Road and Rural Infrastructure, DFRRI (1986); National Agricultural Land Development Authority, NALDA (1992); National Fadama Development Project, NFDP (1992); Nigerian Agricultural Cooperatives and Rural Development Bank, NACRDB (2000); National Agricultural Development Fund, NADF (2002); Commodity Marketing and Development Companies, CDMC (2003).

According to Ihimodu (2004), empirical records of many of these programmes and projects are not impressive enough to bring about the expected transformation of the sector. The food self-sufficiency ratio has fallen from 98% in early 1960s to less than 54% in 1986. In 1990, 18% of the population (14.4million) was estimated to be critically food insecure and this has increased to 36% (32.7millions) in 1992 and further increased to 40.7% in 1996. Idachaba (2004) argued that over 40% of Nigeria's estimated population of 133million people is food insecure. Food security has been described as an important aspect in consideration of the sustainability of the wealth of the Nation. This is in view of its role as a critical factor in economic development, peace and stability (Akanji, 1993, Adegboye 2004).

Despite the various efforts and deliberate actions by the Nigerian government through several policies to improve agricultural productivity and food security within the nation, there seems to be no significant change or improvement in food production and food sufficiency within the country. Idachaba (2006), argued that many of these programmes have failed to attain their objectives or have fallen short of the ends they were set up to attain given the fact that many of the agricultural policies were either not adopted or their adoptions were relatively slow to match the rate of population growth and the respective increase in food demand.

As a result of this problem, there has been stagnation in the development of agriculture and innovations; this has consequently failed to improve agricultural production among small scale farmers who are the major producers of food crops. The poor rate of uptake of agricultural policies among farmers has also led to insufficient food and income being generated among rural farmers thus affecting farmer's welfare. As a result of the afore-mentioned problems, the attainment of the Millennium Development Goals of poverty eradication and food security may be in serious threat if the trend is not reversed.

According to OECD (2005), a typical example of a successful agricultural policy implementation is the "Agricultural policy reforms in China". Agricultural reform has been a major pillar of the fundamental economic reforms undertaken by China since 1978, resulting in a gradual transition

from a centrally planned economy towards a socialist market economy. The commune system was replaced by one where individual families have access to land. Then, rural industries started to expand and absorbed a large part of farm labour. The reforms have achieved a sharp rise in agricultural production together with a dramatic fall in poverty and a significant improvement in the amount and quality of food available.

The foregoing therefore amplifies the inevitability of widespread practice of agricultural policies among our farmers for the rapid development of the agricultural sector. The understanding of the dimensions of policy uptake and the associated constraints would therefore contribute, to a great extent, towards policy development and the welfare of the teaming Nigeria rural population. It is against this background that this study was carried out.

The general objective of the study was to investigate the awareness and uptake of agricultural policies among arable crop farmers in Ogun State, Nigeria. Specific objectives include to:

1. determine the personal characteristics of the farmers,
2. ascertain the level of awareness of arable crop farmers of the agricultural policies of the government,
3. identify the extent of agricultural policies uptake among the arable crop farmers; and
4. investigate the constraints to policy uptake among arable crop farmers in the study area

METHODOLOGY

The study was carried out in Ogun State, Nigeria. Ogun State is a state in South-west Nigeria and has her capital in Abeokuta. Majority of the residents of Ogun state engage mainly in subsistence agriculture as a primary means of livelihood. The population of the study comprised of all arable crop farmers registered with the Agricultural Development Programme of Ogun State.

A multistage sampling procedure was used to select respondents for this study. Two (2) of the four (4) ADP zones (Abeokuta and Ikenne) representing 50% of the total zones were selected using simple random sampling technique. In each of the selected zones, 50% of the blocks and 10% of the cells was selected using simple random sampling technique. A list of farmers was obtained from each of the selected cells and 10% of them were selected to give a total of 120 farmers (75 farmers from Abeokuta zone and 45 farmers from the Ikenne zone). Interview schedule containing open and close ended questions was used to collect the data for this study.

Respondents' awareness of agricultural policies was measured by asking them to respond to a list of awareness statements freely. Respondents who responded rightly were awarded score of 1 and wrong answers were scored 0. A total score was obtained for awareness based on the scale. Respondents who scored below the mean value had low level of awareness, while those whose awareness score equals or greater than the mean had a high level of awareness. Respondents reacted to the listed constraints on a three point scale of "severe constraint", "mild constraint" and "not a constraint", scores of 2, 1, and 0 were awarded to them respectively. The mean score for each constraint was calculated and this was used to rank them, so that the highest mean score means the most severe constraints. Uptake of agricultural policies was operationalised in terms of extent to which farmers access their inputs through government sources (which are vehicles of her policies). Respondents reacted by indicating their sources for a list of agricultural inputs for arable crop production as: government (3), open market (2) and other sources (1). Each source of agricultural inputs was also sub-divided into another 3 point scale of regularly (2), occasionally (1) and never (0). The mean score of each policy category was determined and respondents were categorized into high (for scores of mean and above) and low (for scores below mean) in terms of their uptake of agricultural policies. Frequency counts, percentages, mean, ranking and charts were used to summarise the data.

RESULTS AND DISCUSSION

Table 1 show that the mean age of the arable crop farmers was 42 years. Majority (62.4%) of the farmers were between 31 – 50 years of age, only 4.1% of respondents were above 60 years of age. This implies that many of these farmers were within active and productive age range. The implication could be that productivity would be high as farming activities are left in the hands of those who are more active. About 83.3% of the respondents were male, while 16.7 percent were female, implying that male participation in arable crop production in the study area is more pronounced than that of the female. This is consistent with several findings which revealed the prominence of the male folks in farming activities in Nigeria (Ogunlela and Mukhtar, 2009;

Eunice, 2012). Majority (77.5%) of the respondents were married which agrees with the findings of Soyebo (2005) that crop farming is very much practiced among married people to make ends meet and cater for their children.

The table also shows that 61.7% of the farmers were Christians, 34.2% were Muslims while only 4.2% were traditional worshippers. This suggests the predominance of Christianity in the study area when compared with other religions. Agricultural extension messages can be disseminated more effectively with the supports of Christian and Islamic religious leaders, being the two major religious groups in the study area. Religious beliefs have been identified to influence adoption of agricultural policies of the government (Morris and Hausman, 2007). About 60.8% of the farmers had primary education with about 90.8% having a minimum of primary education. This represents a fair literacy level in the rural area. Generally, high level of literacy is expected to encourage adoption of improved practices and policies. This is in consonance with the assertion of Adekoya, Fadairo and Ogunele (2011).

About 59.1% of the farmers had family size of more than five, while 40.8% had family size between 1 and 5 members. The average family size was 6 persons per household. This suggests that the farmers had more people to cater for or an adequate supply of family labour for agricultural practices. This agrees with the view of FAO (2005) that family labour is mostly used in agriculture in the developing countries. The family size is a crucial determinant of the available labour for the farming activities especially in the sub-Saharan Africa, which is predominantly family labour-dependent and labour-intensive at the subsistence level. This helps in reducing the cost of labour and consequently, cost of production as reported by Nsikak, Okon and Akpabio (2011).

The mean farm size of the respondents in the study area was 1.5 hectares with 81.6% of the farmers cultivating farm lands less than or equal to 2 hectares. Only 14.1% cultivated lands between 3 – 5 hectares and 2.5% cultivated farm size of 6 – 7 hectares. This result suggests that majority of farmers in the study area cultivate small land area. This finding agrees with that of Yusuf, Omokore, Akinola and Omolehin (2011) that small farm holdings constitute most of the farming activities in Nigeria.

The table further reveals that majority (76.7%) of the respondents belonged to a group or cooperative society. This means that they can come together and pull resources to address problems they may not be able to as individuals. Membership of groups may influence the adoption behaviour of the farmers as argued by Adeyeye (1986) and Ladele (1990) who reported high level of adoption of agricultural innovation among co-operators.

Also, 84.2% of the respondents received extension services in their previous cropping season. This suggests that the public extension service in Nigeria is still effective in terms of farmers' coverage despite its numerous challenges and criticisms. The wide coverage is expected to impact positively on the farmer's awareness of the various agricultural policies of the government.

Table 1: Distribution of respondents based on their personal characteristics

Age (years)	**Frequency**	**%**	**Mean**
21 – 30	20	16.6	42
31 – 40	40	33.3	
41 – 50	35	29.1	
51 – 60	20	16.6	
61 – 70	5	4.1	
Sex			
Male	100	83.3	
Female	20	16.7	
Marital status			
Single	8	6.7	
Married	93	77.5	
Widowed	8	6.7	
Divorced	10	8.3	
Separated	1	0.8	
Religion			
Christianity	74	61.7	
Islam	41	34.2	
Traditional worshipper	5	4.2	
Educational status			
Non-formal educational	11	9.2	
Adult literacy	1	0.8	
Primary education	73	60.8	
Secondary education	24	20.0	
Tertiary education	11	9.2	
Family size			
1 – 5	49	40.8	6
6 – 10	69	57.5	
11 – 15	2	1.6	
Farm size (ha)			
< 1	27	21.7	1.5
1 – 2	73	60.9	
3 – 5	17	14.1	
6 – 7	3	2.5	
Membership of farm group/ cooperative	92	76.7	
Received extension/advisory service	101	84.2	

Respondents' awareness of the government's farm inputs and production policy

Table 2a shows that majority of the arable crop farmers were aware of most of the government's policies on farm input and food production. For instance, most of the farmers indicated awareness of the government's policies on fertilizers (93.3%), credit (92.5%), agrochemicals (91.7%), improved seeds (90.0), tractor services (65.0) and promoting farmers' organization (55.8%). The result suggests that government's policies are not too ambiguous in interpretation as to be easily understood by the rural populace. It is also an indication of the effectiveness of the agricultural extension services being delivered to the farmers in the study area. The finding however is against the argument of Osemeobo (1992) who opined that the past policy summersault witnessed in Nigeria is underlined by a disconnect in terms of policy understanding and awareness between the policy formulators and the intended beneficiaries. On the other hand, majority of respondents were not aware of policies aimed at stabilizing price of agricultural commodities (25.0%) and to reduce conflict between crop and livestock farmers (20.8%). The foregoing suggests that farmers are more interested in policies that are more related to their production such as fertilizers and credits compared to others such as price stability and conflict resolution. It is however an indication of poor understanding of the roles marketing plays in the value chain of agricultural production. This perhaps explains the reason why the middlemen in Nigeria have continued to succeed in ripping off the largest chunk of reward that should go to the farmers. Low awareness of government policies on farmers-agro-pastoralist conflict resolution suggests that this policy has not translated into implementation in the study area.

On the overall, Table 2b shows that there is high level of awareness of agricultural policies of the government among the respondents. This is expected to influence their uptake of these policies positively other things being equal.

Table 2a: Distribution of respondents based on their awareness of farm input and production policy of the government

Awareness	Frequency	%
I am aware of what government is doing to promote access of farmers to fertilizers	112	93.3
I am aware of what government is doing to promote access of farmers to improve seeds	108	90.0
I am aware of government is doing to promote access of farmers to agrochemicals	110	91.7
I am aware of what government is doing to promote access of farmers to credit	111	92.5
I am aware of what government is doing to promote access of farmers to tractors services	78	65.0
Are you aware of what government is doing to stabilize price of agricultural commodities	30	25.0
Are you aware of what government is doing to promote farmer's organization	67	55.8
Do you know what government is doing to reduce conflict between crop and livestock farmers	25	20.8
Are you aware of what government is doing to disseminate information to farmers	108	90.0

*Multiple responses

Table 2b:Categorization of respondents based on their level of awareness of farm inputs and production policies

Awareness categories	Scores	Frequency	Mean
Low	9 – 14	30 (25.0)	15
High	15 – 18	90 (75.0)	

*Figures in parentheses are percentages

Extent of uptake of selected farm inputs and food production policies among respondents

Figure 1 shows that uptake of policies on innovation dissemination through public extension services (73.3%), agrochemicals such as fertilizers and pesticides (66.7%), and improved seeds (65.8%) were high among majority of the respondents. Only policies on farm machineries (79.2%) and credit (89.2%) were poorly uptaken by majority of respondents. Given the high level of awareness recorded for

these policy instruments on Table 2a, the poor uptake of credit policy by the farmers suggests that they have poor access to this opportunity. This is further corroborated by the findings on Table 3 which reveals that bureaucracy involved in benefiting from government's policy ranks high among the constraints faced by the farmers. Also, the low uptake of policy on farm machineries suggests that farming activities among the respondents are on the low scale, since large scale farming relies on use of farm machineries. Furthermore, the high uptake of policies on innovation dissemination, agrochemicals and improved seeds among the farmers implies the relevance of these policies among the small scale peasant farmers in the study area. It is also an indication that the benefits of these policies trickled down to the intended beneficiaries. This finding is contrary to the argument of Idachaba (2006) that the seemingly well-articulated and well designed policies in Nigeria ended up producing policy mistakes, unintended policy consequences and unintended beneficiaries.

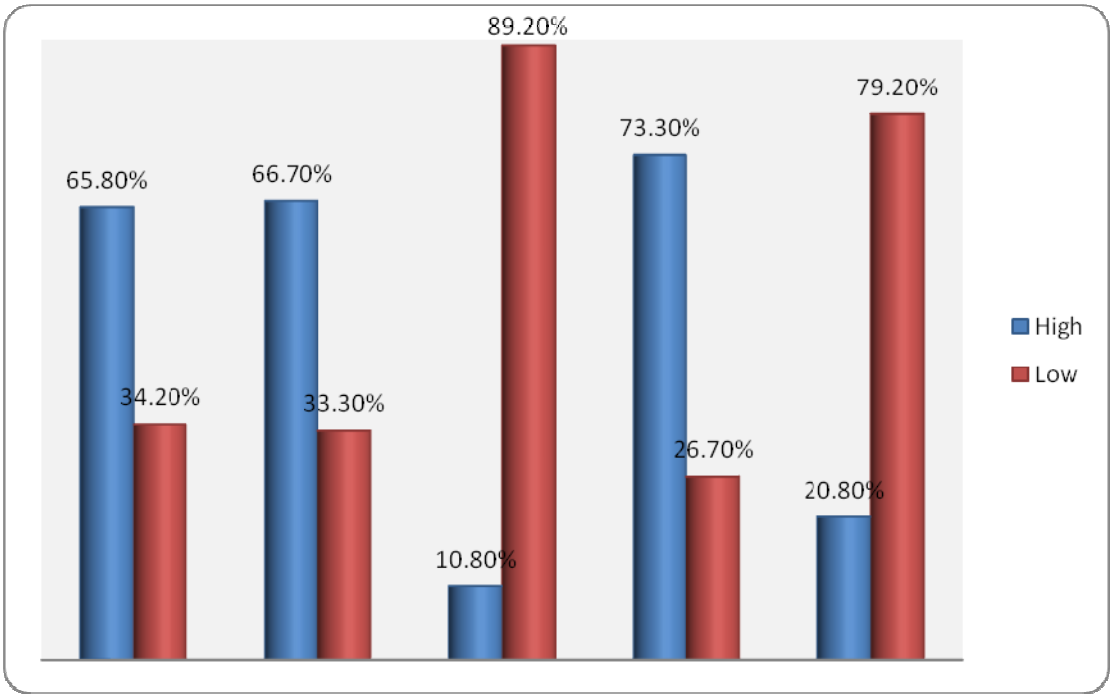

Figure 1: Level of Policy Uptake among Respondents

Constraints to Uptake of farm inputs and production policy

Table 3 presents the constraints faced by respondents in the uptake of agricultural policies. The weighted mean scores of the constraints presents them in order of severity. The table shows that inadequate funds (mean=2.88) stiff bureaucracy of the government (mean=2.82) and inconsistency of government policy (mean=2.70) were the most severe of the constraints faced by the arable crop farmers in enjoying the benefits offered by the government's food production policy. On the other hand, lack of adequate extension workers (mean=1.90) and poor technical know-how as it relates to practice of technologically inclined policies (mean=1.72) ranked as less severe constraints among majority of the respondents.

The finding that inadequate fund was the major barrier faced by the respondents in uptaking agricultural policies agrees with the assertion of Drost *et al.* (1996) that farmers experience financial barriers to the use of sustainable agricultural practices, hence are not able to adopt most modern production technologies because they are relatively poor. Therefore, provision of adequate subsidy on production inputs and removal of bureaucratic procedures that hinders farmers' access to credit from government sources should be ensured by the government in order to ensure a better uptake of her policies.

Table 3: Distribution of respondents based on the constraints faced in uptakingagricultural policies

Constraints	Mean	Rank
Stiff bureaucracy of the government	2.82	2
Inadequate funds	2.88	1
Inadequate extension agents	1.90	7
Low technical know-how on the part of the extension agents	1.72	8
Inconsistency of the government policies	2.70	3
Lack of credible sources of information on agricultural policies	2.00	6
Fraud	2.10	5
Theft	2.60	4

Relationship between respondents' personal characteristics and their uptake of farm inputs and production policy

Table 4 shows that respondents location (p=0.036) and membership of group (p=0.050) were significantly related to their uptake of farm and inputs production policy of the government while, sex, marital status, religion, education, age, family size and farm size (p>0.05) were not significantly related to policy uptake among the farmers. This finding suggests that the geographical location of respondents and their participation in group affects their extent of uptake of agricultural policies. One can therefore infer that the extent of policy uptake observed in this study may not be a true picture of uptake among farming communities in some other areas of the country. In this vein, the argument of Idachaba (2006) that well-articulated and well-designed policies in Nigeria ended up producing policy mistakes, unintended policy consequences and unintended beneficiaries may not be totally debunked. Furthermore, the findings suggest that farmers who do not belong to groups and associations may not benefit from the farm inputs policy of the government. This finding is consistent with several similar studies that established a positive relationship between adoption of innovation and membership of group/cooperatives (Ladele, 1990; Adekoya, Ogunele and Fadairo, 2009).

On the other hand, the finding is contrary to a priori expectation that education would affect uptake of policy. The result is inconsistent with the findings of Rahman (2007) and Okoedo-Okojie and Onemolease (2009) which showed that variables such as age and farm size influence the adoption behavior of farmers. The result however agrees with the argument of Friesen and Palmer (2002) and Angba (2000) that increasing farm size does not necessarily result in increased adoption of technology.

Table 4a: Chi – square analysis of farmers' personal characteristics and policy uptake

Variables	d.f	χ^2 value	p-value
Location	1	4.837	0.036*
Sex	1	0.175	0.801
Marital status	4	3.155	0.532
Religion	2	3.833	0.147
Membership of farm group/ cooperative	1	4.174	0.050*
Educational status	4	6.661	0.155
Received extension/advisory service	1	2.189	0.205

*Significant at $p \leq 0.05$

Table 4b: PPMC analysis of farmers' personal characteristics and policy uptake

Variables	N	r – value	p-value
Age	120	0.133	0.147
Family size	120	0.121	0.189
Farm size	120	0.036	0.696

CONCLUSION AND RECOMMENDATIONS

The study concluded that there is high level of awareness of farm inputs and food production policyof the government among arable farmers in the study area. In addition, uptake of policies on innovation dissemination through public extension

services, agrochemicals such as fertilizers and pesticides, and improved seeds were high among majority of the respondents. Only policies on farm machineries and credit were poorly uptaken. The study recommended that:

1. Efforts should be made by the government and the extension workers to create better awareness on the roles that market plays in the value chain of agricultural production among arable crop farmers.
2. Provision of adequate subsidy on production inputs and removal of bureaucratic procedures that hinders farmers' access to credit from government sources should be ensured by the government in order to ensure a better uptake of her policies.

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