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Perceived Effect of Agricultural Transformation Agenda on Livelihood of Cocoa Farmers in Osun State, Nigeria

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Abstract

This study assessed the perceived effect of Agricultural Transformation Agenda (ATA) on cocoa farmers' livelihood in Osun State. Multi stage sampling technique such as purposive and simple random techniques were used for the selection of 120 respondents. Questionnaire was used to collect data from the respondents and data analysis was carried out using descriptive and inferential statistics. Results showed that mean average farm size was 2 acres and the major source of labour used by the respondents (37.5%) was family labour. The study revealed that more than half (68.3%) of the respondents had high knowledge of ATA programme and many (61.7%) of the respondents utilized it. The mean perceived effect category of respondents on ATA was 18. There was a significant relationship between the respondents' farm size (r=0.387, p>0.000), years of farming experience (r=0.351, p>0.000), ATA inputs accessibility (r=0.734, p>0.000), utilization (r=0.720, p=0.000) and the perceived effect on their livelihood. The respondents had favorable perception towards ATA with high utilization of ATA programme. Farmers should further be encouraged to participate in the programme by regularly providing necessary inputs by the government. Continuous family farming is encouraged to boast labour and reduce cost.

Keywords: Cocoa farmers, Agricultural Transformation Agenda.

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Introduction

Cocoa was a major export crop for Nigeria as it fetched a sizeable percentage of the nation's foreign exchange earnings. The economy of the defunct Western Region of Nigeria was once based on the fund from cocoa. Cocoa which serves as a means for earning foreign exchange and income generation is becoming a thing of the past due to its daily reduction in term of productivity. Cocoa production which was predominant in the South-West and parts of South-South geo-political zones of the country created a setback in the agricultural sector, largely because of the emergence of oil as the nation's new major foreign exchange product. Successive governments knowing the importance of this cash crop to the economy, continued to roll out plans to restore the old glory of cocoa (Uwagbue, 2008). International Food Policy Research Institute, (2010) ascertained that Africa produces about 70 per cent of the world's cocoa. Cote D'Ivoire is the leading cocoa producing nation with 1.3 million tonnes annually, while Ghana is rated second with about 900,000 tonnes. Nigeria produces only about 350,000 tonnes annually. Meanwhile, the number of people who depend on cocoa worldwide for livelihood is estimated at 40-50 million, annual cocoa production is put at 3 million tonnes. The total number of cocoa farmers worldwide is calculated at over 6 million, comprising mostly Africans, Asians, Central Americans and South Americans. Africa is believed to have the greatest number of cocoa farmers but despite this, the majority of its regular cocoa farmers still wallow in poverty due to poor standard of living, and various economic and environmental problems (Oxfam, 2012).

Before crude oil was discovered in 1958, agriculture was contributing immensely to the gross domestic product. In fact, it was the mainstay of the Nigerian economy. But the leadership's neglect of the sector has ruined it over the years. Daramola (2004) observed that in 1970, agriculture contributed 48 per cent to the GDP, but it dropped to 20.6 per cent in 1980 and had fallen to 23.3 per cent by 2005. Nigeria is still the world's 4th producer of cocoa bean (Oluwatosin, 2014). Similarly, partly responsible for the decline in cocoa production was the sharp decrease in the world cocoa price from 1991 coupled with inadequate enabling environment for cocoa farmers in Nigeria from 1990. The problem was compounded by high cost of labour, inputs, supply of adulterated inputs, planting of yielding varieties of cocoa and inadequate funding by both state and federal governments. This in turn led to mass exit of cocoa farmers into more prosperous industrial sector.
In order to reverse this situation, the National Cocoa Rehabilitation Programme was set up by the Federal Government in 1999. The agency was saddled with various responsibilities including providing inputs such as pesticides, herbicides, fertilizers, cutlasses, harvesting hooks, jute bags, rain boots and coats to farmers; and organizing training on cocoa rehabilitation, cocoa fermentation and nursery management practices. The programme also

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sees to the emergence of varieties of seedlings and pods from Cocoa Research Institute of Nigeria (CRIN) through the Cocoa Development Units (CDUs) or Tree Crop Units (TCUs) of all cocoa producing states (Akande, 2012). He asserted that the technologies introduced by Cocoa Rehabilitation Programme are promising and that they exist to address the problem of low yield, pests, diseases, weeds and declining soil fertility. Despite this programme, there is no improvement due to lack of trust in government by farmers as a result of corruption. Some farmers believe that they are just being deceived because most of the benefits accrued to these programmes do not get to them; as a result, wrong perception is being developed by some farmers against every programme that comes from the government. However, the adoption of several innovations promoted by the Cocoa Rehabilitation Programme depended largely on opinion and perception of the stakeholders especially cocoa farmers about the programme. The rehabilitation programme aims at increasing the quantity and quality of cocoa produced in Nigeria. In order to sustain and improve on these performances, the President of Nigeria launched a special programme tagged cocoa re-birth in 2005.The policy thrust of the programme was to promote the production of cocoa to meet the needs of an expanding industrial sector and export market. The programme also aimed at creating jobs and wealth in order to enhance farmers' income and reduce poverty in the country (Federal Government of Nigeria (FGN, 2006).The approach, though contributed to increase in agricultural production, also allowed for better connected farmers and relatively well-off farmers to benefit and advance in agricultural productivity. But the approach depends on continued government support, while it is also prone to inefficiency arising from high administrative cost, government monopolies and political manipulation (Banful and Branoah, 2010).

Gilbert (2000) opines that agriculture in Nigeria is being hampered by a number of problems including infrastructural deficiencies, technological constraints, high cost of labour, institutional constraints, ineffective pricing policy, marketing problem, lack of co-ordination, planning problem, environmental constraints, corruption and lack of viable development to rural areas as a package. Truly, these problems are evident in cocoa production. According to Opeke (2003), in an effort to achieve increase cocoa production in Nigeria, a number of initiatives were introduced toward increasing yields. Among such initiatives is the presidential initiative on cocoa rehabilitation and production sustainability pronounced by the Federal Government of Nigeria in 1999. The major aim of this initiative was to revive the old glory of cocoa and make it an engine of Nigerian economy. Alamu (2013) affirmed in his research work that cocoa production in Nigeria is undertaken mostly by poor, small scale and low technical capability farmers. These farmers therefore face difficulties in setting up of new cocoa farms and rehabilitation of old ones.

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Agricultural Transformation Agenda (ATA) which aims at transforming agriculture in terms of yield and income and consequently to improve the standard of living of farmers and their households. This recent initiative is transforming different sectors of agriculture. Therefore, there is the need to determine the effectiveness and efficient use of the ATA which is expected to increase yield, profit maximization, increase income and poverty reduction.

This study assessed the perceived effect of Agricultural Transformation Agenda (ATA) on cocoa farmers' livelihood in Osun State with the following specific objectives:

1. determine enterprise characteristics of the respondents;
2. examined respondents' knowledge on ATA;
3. ascertain the inputs accessible by the respondents from ATA;
4. ascertain level of utilization of ATA inputs by the respondents; and
5. examined perceived effect of ATA on farmer's livelihood

Research Hypotheses

The hypotheses for this study stated in null form are expressed below:

$H_0$1: There is no significant relationship between cocoa farmers' enterprise characteristics and the perceived effect of ATA programme on their livelihood.

$H_0$2: There is no relationship between the respondents' accessibility to ATA inputs, level of ATA utilization and the perceived effect on their livelihood

Methodology

This study was carried out in Osun State which is located in the western part of Nigeria and covers an area of approximately 14,875km^2 with its capital is Osogbo, Nigeria. The population of the study comprised all cocoa farmers in the State. A multi-stage sampling technique was used for the selection of the farmers**.** Two local government areas of the state (Irewole and Orolu) were purposively selected based on the fact that they have appreciable number of cocoa farmers. Irewole Local Government has 11 wards while Orolu Local Government Area has 10. Four wards were randomly selected from each of the two local government areas and 15 respondents were randomly selected from each of the wards out of about 50 registered farmers from each ward.

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The wards selected in Irewole were Oloowa, Odeyinka, Arowokole and Wasimi while those selected in Orolu were Ifon-Osun, Ikimo, Kajola and Eleesi wards. The total number of the respondents selected from the eight wards were 120. Interview schedule containing both open and closed ended questions was used for data collection from the respondents.

Results and Discussion

Enterprise Characteristics of Respondents

Analysis of the data obtained as shown in Table 1 explained that the mean farm size of respondents was 2 acres which indicated that majority of the respondents (70%) were small scale farmers. Major crops cultivated in the study area included Cassava (39.2%), Maize (33.3%), Kolanut (16.7%) and Oil palm (10.8%). The table also reveals that some of the respondents had just one cocoa farm location (42.5%), few (32.9%) had two cocoa farm locations while others (18.4%) had more than two cocoa farm locations. The mean years of farming experience was 23 years which indicated that more than half (55%) of the respondents are experienced in cocoa production. Moderate percentage (37.5%) of the respondents were found to be using family as their major source of labour. This result corroborates Agbongiarhuoyi, Abdulkarim, Fawole, Obatolu, Famuyiwa, and Oloyede (2013)'s claim that most cocoa farmers in Kwara State own small farm sizes with average farm size of 2.5 acres and that many of them have farming experience of over twenty years which indicated that long years of farming will facilitate better production practices.

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Table 1: Enterprise characteristics of the respondents

Enterprise Characteristics	Percentage	Mean
Farm size in acre		**2**
<2	70	
≥2	30	
Major crops cultivated		
Kolanut	16.7	
Oil palm	10.8	
Cassava	39.2	
Maize	33.3	
Number of cocoa farm location		
1	42.5	
2	39.2	
3	16.7	
4	1.7	
Years of farming experience		**23**
<23	55	
≥23	45	
Source of labour		
Self	12.5	
Family	37.5	
Friends	7.5	
Hired labour	31.5	
Association	10.8	

Source: Field Survey, 2014

Knowledge Level of Respondents on ATA Programme

Table 2 presents the respondents level of knowledge on Agricultural Transformation Agenda (ATA). The result reveals that the majority (79.2%) of the respondents knew that improving agricultural productivity is the major objective of ATA, many of them (75.8%) also agreed that the direct beneficiaries of ATA are rural crop farmers while 62.5% of the respondents knew that making Nigeria the largest exporter of some priority crops including Cocoa is also part of TA goal. Majority (72.5%) also agreed that another objective of ATA is to provide jobs for millions of Nigerians while 69.2% agreed that ATA has helped foster unity among crop farmers and government officials. Many (68.3%) of the respondents knew that Cassava, Cotton and Rice are also part of the crops ATA aims at enhancing its productivity while a little above average (54.2%) of the respondents knew that reduction of post-harvest losses is also captured in ATA objectives.
This result gives the evidence that the respondents truly have the first hand information about ATA programme. Information is the pivot to knowledge, according to Asenso-Okyere and Davis (2009) who defined knowledge as

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processed information. This implies that they already know their expectations from the programme.

Table 2: Knowledge level of the respondents on ATA

No	Knowledge on ATA	Yes (%)
1	Improving agricultural productivity is the major objective of ATA	79.2
2	Making Nigeria the largest exporter of some priority agricultural commodities which cocoa belong is part of ATA goal	62.5
3	An objective of ATA include to reduce post-harvest losses	54.2
4	Cassava, Cotton and Rice are also part of the crops ATA aims at enhancing its productivity	68.3
5	The direct beneficiary of ATA are rural crop farmers	75.8
6	ATA has helped foster unity among crop farmers and government officials	69.2
7	ATA also aims at increasing exportation of specified crops	79.2
8	Another objective of ATA is to provide jobs for millions of Nigerians	72.5

Source: Field Survey, 2014

Respondents' Rate of Access to ATA Inputs

Table 3 shows the rate at which the respondents access ATA inputs. The result indicates that 50% of the respondents often had access to seedling, 3.3% of them always had access to it while 46.7% did not have access to it at all. While 45.8% of the respondents often had access to fertilizer, 26.7% had access to it always and27.5% did not have access to it at all. About half (50.8%) of the respondents often had access to extension services, 14.2% had access to it always while 35% did not have access to it at all. Majority (67.5%) of the respondents did not have access to pesticides at all, 26.7% often had access to it while only 5.8% always had access to it. Majority (81.7%) of the respondents did not have access to farm implements, 17.5% often had access to it while the rest (0.8%) always had access to it. Exactly 40% of the respondents always had access to herbicides, 35.8% often had access to it while the rest (24.2%) did not have access to it at all. More than half (57.5%) of the respondents did not have access to fungicides, 34.2%

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often had access to it while 8.3% always had access to it. While only 1.7% of the respondents always had access to seeds, 40% often had access to it and 58.3% did not have access to it at all. This implies that the aim of ATA to achieve replacement of old cocoa trees in such area may not be possible if the necessary attention is not paid to such a situation. This is corroborated with Asenso-Okyere and Davis (2009) who claimed that for knowledge to lead to change, it must be shared and used. This means that the expected objectives of ATA programme in the study area may not be possible if the services and inputs of the programme are not accessible to the respondents.

Table 3: Respondents' rate of access to ATA inputs

Input and services	Always Freq. (%)	Often Freq. (%)	Never Freq. (%)
Seedling	4(3.3)	60(50.0)	56(46.7)
Fertilizer	32(26.7)	55(45.8)	33(27.5)
Extension services	17(14.2)	61(50.8)	42(35.0)
Pesticides	7(5.8)	32(26.7)	81(67.5)
Farm implements	1(0.8)	21(17.5)	98(81.7)
Herbicides	48(40.0)	43(35.8)	29(24.2)
Fungicides	10(8.3)	41(34.2)	69(57.5)
Seeds	2(1.7)	48(40.0)	70(58.3)

Source: Field Survey, 2014

Respondents' Accessibility Rate

Table 4 shows the overall rate of respondents' access to ATA inputs given the mean access score as 5. The result further shows that majority (60%) of the respondents had high level of access to ATA inputs while below average (40%) had low access to them which still supports the fact that majority of the respondents utilize ATA for their cocoa production.

Table 4: Respondents' accessibility rate

Level of accessibility	**Percentage**
Low (<5)	40.0
High (>or=5)	60.0

Source: Field Survey, 2014 Mean = 5

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Respondents' Utilization of ATA programme

Table 5 indicates that about half of the respondents, (50.8%) often utilize extension services as their input and services, fifty percent of respondents often utilize seedling while fertilizer was often being utilized by 47.5% of the respondents. A little below average (40%) always utilize herbicides as ATA inputs while 40% of respondents often utilize seed as inputs. Pesticide was often utilized by just few (27.5%) of the respondents and minority (18.3%) of the respondents often utilize farm implements while fungicide was often utilized by just few (34.2%) respondents. The table further reveals that the most utilized inputs and services are herbicides with mean of 38.4, fertilizers with mean of 36.3 and extension services with mean of 32.5. Other inputs being utilized by respondents for ATA includes seedling with mean of 26.7, fungicides with mean of 21.3 and seeds with mean of 20.9. This result indicates that more training should be done for the farmers on the usage of less utilized inputs like pesticides and farm implements.

Table 5: Utilization level of ATA programme

Input and services	Mean
Seedling	26.7
Fertilizer	36.3
Extension services	32.5
Pesticides	17.1
Farm implements	9.55
Herbicides	38.4
Fungicides	21.3
Seeds	20.9

Source: Field Survey, 2014

Respondents' Perceived Effect of ATA on Their Livelihood

Table 6 shows that the majority (59.2%) of the respondents perceived ATA as a good programme and that its continuity should be encouraged, above average, (54.2%) of the respondents agreed that ATA has helped in improving their crop yield and more than half (54.2%) of the respondents agreed that ATA has raised their income. Very few (10%) of the respondents strongly agreed that ATA has helped in strengthening the relationship among cocoa farmers in the community. Few (36.7%) of the respondents agreed that ATA has raised their status in the community. About ten percent of the respondents strongly agreed that ATA has helped in improving the education of respondents' children. The most perceived effect statements of cocoa farmers' livelihood on ATA includes that ATA has raised farmers' income and It has helped in improving farmers' crop yield. The result therefore indicates that the utilization of ATA by the respondents had improved their productivity

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and livelihood status and that they are ready to ensure its continuity for cocoa production in order for other farmers to benefit from it.

Table 6: Respondents' perceived effect of ATA on their livelihood

Perception statements	Mean
It has helped in improving your crop yield	28.4
It has helped in reducing the pest attack on your crops	15.9
It has raised your income	30.0
ATA has helped in strengthening the relationship among cocoa farmers in your community	14.6
ATA has raised your status in the community	21.3
ATA has brought about improvement in your children education	13.8
It has helped in replacing some old cocoa trees in your farm with new cocoa seeds	21.3

Source: Field Survey, 2014

Relationship between Cocoa Farmers' Enterprise Characteristics and the Perceived Effect of ATA on their Livelihood.

Table 7 shows that there was significant relationship between some selected enterprise characteristics (farm size, number of cocoa farm location and year of farming experience) of the respondents and the perceived effect of ATA programme on their livelihood. The null hypothesis is therefore rejected. On the basis of this result, it can be deduced that enterprise characteristics of the respondents had influence on how they perceived ATA programme on their livelihood.

Table 7: Relationship between some selected enterprise characteristics of the respondents and the perceived effect of ATA on livelihood

Variable	r-value
Farm size	0.387*
No of cocoa farm location	0.323*
Year of farming experience	0.351*

*P≤0.05. Source: Field Survey, 2014

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Relationship between Respondents' Accessibility to ATA Inputs, Level of ATA Utilization and Perceived Effect on Livelihood

Table 8 shows a significant relationship between the accessibility of the respondents to ATA inputs and its perceived effect on their livelihood ($r=0.734$, $p\leq0.05$). The null hypothesis which states that there is no significant relationship between the respondents' accessibility to ATA inputs and its perceived effect on their livelihood is therefore rejected and the alternative hypothesis which states that there is significant relationship between the respondents' accessibility to ATA inputs and its perceived effect on their livelihood is accepted. The rejection of the null hypothesis implies that the more accessible ATA inputs are to the respondents, the more favourable they perceive it.

The table also shows a significant relationship between the respondents' level of utilizing ATA programme and its perceived effect on their livelihood ($r=0.720$, $p\leq0.05$). The null hypothesis which states that there is no significant relationship between the respondents' level of utilizing ATA programme and its perceived effect on their livelihood is therefore rejected and the alternative hypothesis which states that there is significant relationship between the respondents' level of utilizing ATA programme and its perceived effect on their livelihood is accepted.

Table 8: Relationship between the respondents' accessibility to ATA inputs and level of ATA utilization on livelihood in PPMC

Variable	r-value
Accessibility to ATA inputs	0.734*
Respondents' level of ATA utilization	0.720

*P≤ 0.05. Source: Field Survey, 2014

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Conclusion and Recommendations

The majority of the respondents are small scale farmers with high level of knowledge about ATA programmes. Their favorable perception towards ATA programme led to a positive effect on their livelihood due to high accessibility and utilization of ATA inputs. This should be encouraged by paying more attention to the needs of the respondents and providing more inputs for the respondents in the study area to encourage sustainability of the programme and initiation of other similar programmes for improved agricultural productivity. Farmers should further be encouraged to participate in the programme by regularly providing necessary inputs by the government. Sustainability of any programme depends on its accessibility and utilization by the end users. Family farming should further be encouraged in cocoa farming to reduce labour cost.

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