

# Identification of the Strategies for Transformation Funding and Start-Up Support for Family Farming in Delta State, Nigeria

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## ***Abstract***

*Family farming dominates agriculture in Nigeria ensuring Food and Nutrition Security (FNS) and providing employment to millions of people. Family farms are also essential in safeguarding agro-biodiversity and sustaining communities and cultures. However, family farming faces numerous challenges that make their productivity very low. There is need to revamp family farming so that the Farmers will increase their productivity, competitiveness and contribute greatly not only to addressing FNS challenges in the country but also sustainable national economic growth. The study made use of questionnaire using the 4-point likert scaling method which were analysed using the mean and ANOVA/F-Test statistics at .05 level of significance. Among the major findings were that family farmers were facing daunting challenges which includes climate change and global warming; insecurity/terrorism; limited access to finance; poor marketing; processing and storage facilities etc. Types of start-up support and assistance needed by farmers include; better technologies for producing and distributing food; Human Capacity Development (HCD) on the Most Impactful Practice (MIP) ; know-how and where to market package and brand agro products. Several sources of funds were available to the farmers both local sources and international agencies. Major strategies for transformation of Nigerian agriculture include: climate-start/resilient agricultural practices; subsidisation of inputs; investment in technology to drive mechanization etc. The study made some recommendations to help transform Nigerian agriculture which include that government should help farmers adopt the latest technology to increase their productivity; industrialisation can make a transformational difference; youth potentials and energy should be properly harnessed among others.*

**Keywords:** Agripreneurs; family farming; Food and Nutrition Security (FNS) and start-ups.

## **Introduction**

The Food and Agriculture Organization of the United Nations in Nigeria reported that in the first quarter of 2021, agriculture in Nigeria contributed 22.35 percent to the Gross Domestic Product (Ogundepo, 2022). This is despite this sector facing numerous challenges of low technology, high production cost, poor distribution of inputs, poor pricing and marketing system and recently terrorism which has forced many farmers to flee their farmlands. The challenges mentioned above had led to dwindling fortunes in our national development in that, it is a fact that agriculture accommodated for about 27 percent of GDP in 2020 (Akambi, 2021). The sector, the same year employs up to 36 percent of the country's working population, however, more than 80 percent of these people are smallholders.

Despite the favourable environment and conditions for agriculture in the country, the sector remains unattractive to young people, a development that explains why many young people move to the Urban areas in search of White-collar jobs.

Disturbingly, Anchor Borrowers' programme launched on November 17, 2015 by the president, Major-General Muhammadu Buhari (retd), to boost agriculture, enhance food security and stabilise the economy, create employment and trim down dependence on crude oil hasn't achieved its target goals. This is more so as some beneficiary farmers owed Central Bank of Nigeria CBN N463bn as at March 2021, according to data from the CBN Economic Report for April 2021.

The reality is that Nigerian farmers comprising mostly of small holder farmers practice substance farming, and to many, there are a lot of challenges and uncertainty that comes with farming, such

as climate change, lack of technology, illiteracy and lack of access to opportunities pose a great threat to their source of income and livelihood.

Agricultural extension services also known as Agricultural Advisory Services (AAS) which uses science and technology driven service plays a crucial role in boosting agricultural productivity, increase food security, improved farming method and also stem down rural-urban migration (Fikpo, 2022). Unfortunately the number AAS agent/workers are grossly disproportionate to farmers and farm families in the country.

Reiterating, Azubuike, (2022) reported that following the dearth of agricultural extension services in Gombe State, where a disproportionate ratio of one worker to 2,000 farmers (1:2,000) in the field exists, that the National Directorate of Employment (NDE) recently trained about 50 farmers to put an end to the wide gap, the idea for training the farmer is to use individual farmers to transfer knowledge to youths and to other farmers to make way for higher productivity, tackle food insecurity and by extension tackle poverty.

With the spate of insecurity, farmer herder conflicts and unfavourable weather conditions which have affected growth in the agricultural sector, there is need for the country to invest in technology to drive mechanized farming and output. Today's agriculture is practiced in developed countries, make use of sophisticated technologies such as robots, temperature and moisture sensors and GPS.

In some countries, scientists have also come up with an improved tractor to make farming easy. The equipment is a driverless tractor that can be remotely controlled with a smartphone. The

driverless tractor relies up on satellite and GPS signals built into a software programme which allows a farmer to order a tractor to till plant or spray crops mechanically (Ogundepo, 2022).

The areas of application of technology into agriculture have almost no limit. They include such areas as mechanization of cultivation, crops and animal biotechnological improvement, agro-chemicals, manufacturing, harvesting, processing and storage, climate and environmental smart adaptation, irrigation, use of ICT in information, marketing and agribusiness among others (Akambi, 2021).

For the country to be self-reliant on food production and achieve national Food and Nutritional Security (FNS), there should be the contribution and the combination of youth and cutting-edge technology in agriculture, which will make way for agro-industrialization and sustainable economic development.

### **Agriculture in Nigeria: State of the Art**

Nigerian agricultural is largely subsistence with large population of average poor illiterate farmers participating in family farming, backyard farming or subsistence farming. Subsistence farming is agriculture that mainly revolves around household consumption and a subsistence economy.

Output is aimed neither and agribusiness nor export markets. It is chiefly consumed by farmers themselves and their local community (Spore, 2011).

Family farming is a lifestyle; it is a lifestyle that currently account for an impressive 70% of the national food supply. This is smallholder farmers which are able to achieve, despite the challenges that face them today- poor seed, poor access to markets, insufficient access to finance

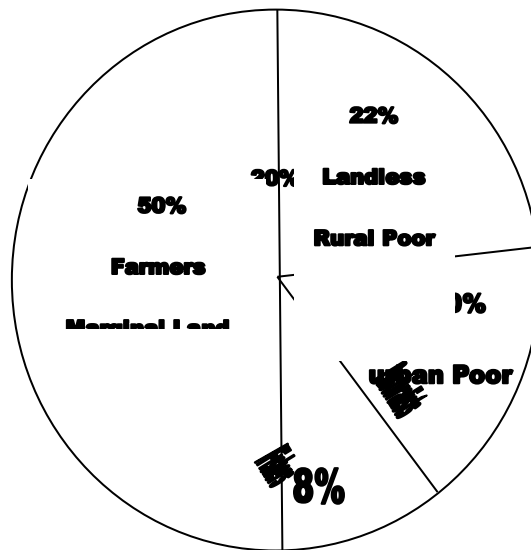
and credit and too little government support (Babatunde, 2014). In developed and industrialized countries, agriculture receives tremendous backing from government. But in Nigeria, funding has been a major hurdle faced agripreneurs and farmers, especially Smallholder farmers. The commercial banks are not helping out either and long-term lending in agribusinesses is virtually unavailable. These have culminated in only 2.5 percent of arable land in the country being cultivated.

According to the World Economic Forum (2021), a third of all food produced and the natural resources involved in its production are wasted. This is very true for the food system in Nigeria where there is a dearth of processing preservation and storage facilities. There is a disproportionate ratio of extension workers to farmers. In some States, the gap is as wide as one extension farmer to 2,000 farmers or more.

The average age of Nigerian farmers is put at 55-60 years. This means that the bulk of labour force in agriculture in the country is well above their prime-time and by implication of farming and food production is in the hands of old men and women. It is a major source of rural employment, curbing potential out migration to urban Centre by the youth. In many cases family farmers are not primarily concerned about preserving the environment, as they are too busy striving to feed their families on a daily basis. However, these farmers work in harmony with their environment because of their intimate knowledge of the habitat and survival instinct. So agriculture in Nigeria is a job and a way of life (Ojiako, 2012).

### **Statement of the Problem**

In spite of the significant roles and benefits of family farming in providing foods for their households and more, family farmers or Smallholder farmers continue to be associated with hunger and poverty, and for good reason. In Nigeria people affected by hunger are mainly living in rural areas. They are usually pastoralist, fishermen or farmers producing their own food, often on low potential land, or they are landless working on other's land. Ironically, many of those who are hungry are living in the rural areas depending on agriculture and are actually producing food as the figure below show:



Adapted from UN Millennium Project (2005)

From the figure above, it can be seen that they hungry are mostly the poor, they are largely living in rural areas and largely dependent on agriculture. These farmers often live with scant financial resources and little access to credit, while still hoping to enhance their living condition.

There is therefore need to transform and resuscitate the food system in the country and address concerns surrounding critical value chain activities in the agricultural sector. There should be an objective auditing of the entire agricultural ecosystem to ascertain areas of strength and

weaknesses. There must be concerted efforts to curtail the challenges of Smallholder farmers that results in low productivity, price variations, fluctuations and unfavorable trade realities, post-harvest loss, malnutrition, poverty and unemployment. Furthermore, our agriculture should be more technologically enabled, compatible with Smallholder challenges. It must also be affordable and sustainable. In sum total the condition and image of family farming must be rebuilt and transformed for sustainability. This study therefore aimed at identifying the strategies for transformation, funding and start-up support for family farming in Delta State, Nigeria.

### **Purpose of the Study**

The purpose of the study was to identify the strategies for transformation funding and start-up support for family farming in Delta State, Nigeria.

Specifically the study f Determine:

1. The significant challenges facing family farming
2. The types of start-up support and assistance needed by family farmers
3. The sources of funds available to family farmers
4. The strategies for transforming family farming into profitable sustainable and inclusive agribusiness

### **Research Questions**

The study answered the following research questions:

1. What are the significant challenges facing family farming?

2. What are the types of start-up support and assistance needed by family farmers?
3. What are the sources of funds available to family farmers?
4. What are the strategies for transforming family farming into profitable sustainable and inclusive agribusiness?

### **Working Hypothesis**

The hypothesis below was tested by the study

There is no significant difference in the mean responses of the agricultural experts (agricultural extension officers, Agricultural officers and teachers of Agriculture) on challenges facing the farmers; types of start-up support and assistance needed by family farmers; sources of funds to farmers and strategies for transforming family farming.

### **Review of Related Literature**

Family farming refers to a mini or micro landscape farm, usually within a person's neighborhood or backyard just for personal consumption. It can either be crop or livestock farm, with the main objective of producing food crops and rearing of animals for family/personal consumption and the extra for sale at the local market (Akinfenwa, 2019). Family farming is also known as small-scale/ Smallholder farming subsistence farming; pleasant farming; backyard farming etc.

More than 500 million family farms dominate agriculture around the world ensuring food security and providing employment to hundreds of millions of people. Five percent (5%) of family farmers are rich, modern, productive and generally based in developed countries (Hailu, 2014).

Agriculture is business. In Nigeria like in order parts of Africa and some emerging economies, it is largely small business-smallholder family. This is why they are agripreneurs. They are the food producers in the country. Over 70 percent of them live in the rural areas of the country and most of them till the land with crude implements, harvest their products (some process them) and sell. They are productivity hectare is very low, hence their poverty and poor living standards.

Reiterating, Hailu (2014) observed that 70 percent of the poorest in the world are family farmers or herders and so 95 percent of the family farms are less than five hectares (5ha).

World Bank Report of 2021 which stated that additional seven million Nigerians have plunged below poverty line in 2020 alone, because of high food prices in alarming and most disturbing. These people live in extreme poverty on less than \$1.90 per day.

According to Gimba (2021), both the private and public sector need to take agricultural business as a priority and inject funds substantially. Adequate capital will open tremendous opportunities to transform Smallholder agriculture into profitable, sustainable and inclusive business. This is because family farmers often live with scant financial resources and little access to credit, while hoping to enhance their living conditions.

The high living conditions of the rich family farmers in developed countries (5 percent) highlights that the model can be viable and it offers a real alternative to entrepreneurial agriculture. It is essential to revamp the image of Nigeria's agricultural sector to ensure consistent sustainable growth and jettison the often connoted concepts that are generally used for our agriculture such as: small-scale farming, subsistence farming, pleasant farming etc.

Nigeria is on the march again towards another transformation agenda of its agriculture. In simple term, to transform means moving from the old ways of doing things to more meaningful and productive ways in order to achieve a better result. Isemmede (2021) in line with the above, maintained that if government is saying that it is diversifying into agriculture, there ought to be substantial government interventions to move the farming community away from the old worn-out and archaic consistence farming to Commercial and large-scale modern agriculture.

Finally, the new agricultural transformation agenda should place premium on efforts to increase farmers capacity and productivity, income, skills, attitude and Lifestyle.

## **Procedure**

### **Data Gathering Instrument**

The instrument used for gathering data for this study was questionnaire. A four point rating scale was provided to enable the respondents make their responses. The responses in the instrument were as follows: Strongly agree, Agree, Disagree and Strongly disagree.

### **Population for Study**

The population was comprised of teachers of Agriculture in secondary schools in Delta State, agricultural officers in Local Government Areas (LGAs) agricultural unit of Delta State and agricultural extension officers in Delta State.

### **Sample**

Delta state is made up of twenty five (25) LGAs. A manageable representative sample of the population were chosen from one third (1/3) LGAs of the state which made a total of eight (8) LGAs for the study.

A purposive random sampling of teachers of Agriculture, Agricultural officers and agricultural extension officers were chosen from eight (8) LGAs as the state, where farming is down on a meaningful level.

Ten (10) teachers of Agricultural were taken from ten (10) secondary schools in the LGAs that were part of the sample. This gave a total of eighty (80) Teachers of Agriculture (TA).

One agricultural officers was taken from each LGA of the study giving a total of eight (8) Agricultural Officers (AO).

One agricultural extension officer was taken from each LGA of the study giving a total of eight (8) Agricultural Extension Officers (AEO). On the whole the population of the study comprised of a total of ninety six (96) respondents.

### **Techniques of Data Analysis**

In analysing the data collected, the researchers made use of the mean and ANOVA/F-test statistics at 0.05 level of significance.

In order to determine the degree of agreement/disagreement in each of the scaling statement in the questionnaire, nominal values were assigned to the different scaling statement as below:

Strongly agree.	4
Agree	3
Disagree	2
Strongly disagree	<u>1</u>
	10

A cut-off point was determined by finding the mean of the nominal values assigned to the options, using the formula:

$$\bar{X} = \frac{X}{N}$$

= Sum of where

= Nominal value of option

$\bar{X}$  = Mean

N = Number of items

Mean of the nominal values  $\bar{X} = \frac{10}{4} = 2.5$

The cut-off point was determined by finding the mean of the value assigned to options using the interval scale of 0.05 the upper limit of the cut-off point is 2.55. The sample mean was calculated on each statement and any statement with a mean rating of 2.55 or above shows that group concerned agrees with the statement and item that had received a mean rating below 2.55 an indication they did not agree with the item.

To test the significant difference between the mean response of the three groups of respondents from the study, ANOVA/F-Test was employed.

## Results

**Table 1a):** Mean Ratings of responses by Teachers of Agriculture (A) agricultural officers (B) and agricultural extension officers (C) on the challenges facing family farming.

S/N	Challenges of Family Farming	$\bar{X}$	$\bar{X}$	$\bar{X}$	Remarks
		A	B	C	
1.	Climate change and global warming	3.01	3.14	3.18	Agree

2.	Rapid population growth	3.20	3.34	3.50	Agree
3.	Limited land access	3.00	3.16	3.18	Agree
4.	High cost of production	3.24	3.30	3.35	Agree
5.	Low adaptation of technologies and innovations	3.34	3.38	3.42	Agree
6.	Lack of support for Women in Agriculture (WIA)	3.04	3.11	3.20	Agree
7.	Disproportionate ratio of extension workers farmers (e.g 1:2,000 farmers)	3.01	3.14	3.18	Agree
8.	Limited access to finance	3.22	3.31	3.40	Agree
9.	Inadequate intervention and assistance e.g lack of subsidies	2.98	2.99	3.01	Agree
10.	Farmers/herders crisis	3.04	3.11	3.20	Agree
11.	Communal land crisis and land tenure system	2.10	2.20	2.34	Disagree
12.	Insecurity/terrorism e.g Banditry/ kidnapping etc	3.30	3.35	3.68	Agree
13.	Poor youth participation in agriculture	3.30	3.35	3.68	Agree
14.	HIV and AIDS scourge	2.19	2.33	2.40	Disagree
15.	Covid-19 pandemic	3.42	3.50	2.90	Agree
16.	Lack of training and education	3.01	3.22	3.26	Agree
17.	Limited access to farm inputs e.g improved seed fertilizers	2.56	2.68	2.75	Agree
18.	Lack of market information and facilities	3.04	3.11	3.20	Agree
19.	Inadequate processing preservation and storage facilities	2.85	2.89	3.00	Agree
20.	Inconsistent government policy on agriculture	2.66	2.70	2.80	Agree
<b>Totals</b>		<b>46.86</b>	<b>48.26</b>	<b>49.07</b>	`
<b>Mean and means</b>		<b>2.34</b>	<b>2.41</b>	<b>2.45</b>	

**Table 1b): Summary of ANOVA table**

Sources of Variance	df	SS	MS	level of significance	F-ratio
<b>Between groups</b>	2	144.19	72.09	0.05	10.13
<b>Within groups</b>	57	405.97	7.12		
	<b>59</b>	<b>550.16</b>	<b>79.21</b>		

Table value at 0.05 level of significance = 3.15. Since calculated F of 10.13 > table F-ratio of 3.15, the  $H_0$  is therefore rejected at 0.05 level of significance.

Therefore there is significant mean difference between the three groups of agricultural experts on their agreements on the challenges of family farming in Nigeria.

**Verdict:** there are myriads of problems/challenges facing family in the country.

### **Discussion**

The table 1a above show revealed that eighteen out of the twenty items recorded means ranging from 2.56 - 3.68. The items were above the criterion level for acceptance of 2.55 and therefore were accepted as challenges of family farming in Nigeria. The other two items recorded means ranging from 2.10- 2.40 which fell below the cut-off point of 2.55 and were therefore not accepted as being some of the challenges of family farming in Nigeria.

The findings are in line with the United Nations warning that violence had compounded food production challenges arising from factors and climate change and the coronavirus pandemic that placed Nigerians at risk of famine (Oso, 2021). This is also in line with Ewepu (2022) who reported that Small-scale Women Farmers Organization in Nigeria - SWOFON, in the Northern states said its member cannot access their farm for farming due to bandits, Herdsmen, kidnappers

etc. He stated that during last seasons harvest, Herdsmen invades the farms with their cattle and ate their farm produce that was to be harvested. They also kidnapped and killed some of the farmers and to worsen the situation, the bandits gave the women farmers condition before they could access their farms.

Akinfenwa (2021) on his part stated that diverse challenges have been diversified as factors bedeviling massive cultivation of food crops in the country. These include lack of good seeds, lack of access to adequate facilities and lack of access to modern farming tools among others.

**Table 2a):** Mean ratings of the responses by the teachers of Agriculture, agricultural officers and agricultural extension officers on the types of start-up support and assistance need by farmers.

S/N	Start-up support and assistance needed by farmers	$\bar{X}$	$\bar{X}$	$\bar{X}$	Remarks
		A	B	C	
1.	Better technologies for producing and distributing food	3.04	3.11	3.20	Agree
2.	Facilitating access to market for targeted value chains e.g agriculture	2.20	2.31	2.40	Disagree
3.	Community-based extension services	2.91	2.84	3.07	Agree
4.	Know-how and where to market, package and brand agro products	2.65	2.70	2.81	Agree
5.	Marketing support	3.22	3.41	3.46	Agree
6.	Digital tech services and Innovations in agriculture	3.00	3.20	3.34	Agree
7.	Human Capacity Development (HCD) on the Most Impactful Practices (MIP)	3.10	3.25	3.25	Agree
8.	Knowledge and technical skills development in farming	2.75	2.80	2.95	Agree

9. Land and water conservation and management techniques	2.85	2.80	2.90	Agree
10. Crop and animal pests, diseases and parasites control and management practices	2.90	2.91	2.95	Agree
<b>Totals</b>	<b>28.42</b>	<b>29.33</b>	<b>30.58</b>	
<b>Mean and means</b>	<b>2.84</b>	<b>2.93</b>	<b>3.05</b>	

**Table 1b): Summary of ANOVA table**

Sources of Variance	df	SS	MS	level of significance	F-ratio
<b>Between groups</b>	2	88.33	44.17	0.05	4.53
<b>Within groups</b>	27	263.00	9.74		
	<b>29</b>	<b>351.33</b>	<b>53.91</b>		

Table value at .05 level of significance = 3.35. Since calculated F of 4.53 > F-ratio of 3.35, the  $H_0$  is therefore rejected at .05 level of significance.

Therefore, there is significant difference between the three groups of agricultural expert on types of start-up support and assistance needed by farmers.

**Verdict:** The types of start-up support and assistance needed by family farmers varies depending on the prevailing circumstances. In some instances they need technical advisory on financial assistance which in some other circumstances they may need more than that.

## Discussion

**Table 2a)** that nine of ten items recorded mean ranging from 2.65 to 3.40. The items means were above the criterion level for acceptance of 2.55 and were accepted as the types of start-up support and assistance needed by family farmers. The remaining one item recorded means ranging from 2.20 - 2.40 which fell below the cut-off points (2.55) and was therefore not accepted as start-up support and assistance needed by farmers.

The above findings were in line with the disclosure of Alade (2021) that farmers should be able to know how and where to market, package and brand agro products for profitability. He maintained that there is need for training targeted at developing the capacity of these agripreneurs on sales is marketing because most farmers have difficulty in pushing their product out.

**Table 3a):** Mean ratings of the agreement of the three agricultural personnel on the sources of funds for family farming in Nigeria.

S/N	Sources of funds for family farming	$\bar{X}$	$\bar{X}$	$\bar{X}$	Remarks
		A	B	C	
<b>a. Local sources: Government and Non-Governmental Organization (NGOs)</b>					
1.	Nigeria Intensive-Based Risk Sharing System for Agricultural Lending (NIRSAL)	2.85	2.89	3.00	Agree
2.	Agro-Processing Productivity Enhancement and Livelihood Improvement Support (APPEALS)	2.66	2.70	2.80	Agree
3.	Livelihood Improvement Family Enterprises, Niger Delta (LIFE, ND)	3.04	3.11	3.20	Agree
4.	Nigerian Association of Chambers of Commerce, Industry Mines & Agriculture (NACCIMA)	2.10	2.20	2.34	Disagree

5.	Central Bank of Nigeria (CBN) Anchor Borrowers Programme (ABP) funding for rice production.	2.56	2.68	2.75	Agree
6.	Heifer Nigerian through its signature programme tagged "Naija Unlock"	3.01	3.22	3.26	Agree
7.	Mamamoni-Fin Tech Social Enterprises (that provide financial services to rural women)	3.42	3.50	2.90	Agree
8.	Government Agencies e.g Bank of Agriculture (BOA) Bank of Industry (BOI)	3.30	3.35	3.68	Agree
9.	Agric-Tech companies e.g FarmRowdy, Fair-trade etc	3.10	3.34	3.33	Agree
10.	Commercial Agricultural Credit Scheme (CACS)	3.04	3.11	3.20	Agree

**b) international Agencies**

11.	World Bank Commercial Agriculture Development Project (CADP)	2.98	2.99	3.01	Agree
12.	United Nations Industrial Development Organization (UNIDO)	3.22	3.31	3.40	Agree
13.	International Fund for Agricultural Development (IFAD)	3.01	3.14	3.18	Agree
14.	African Green Revolution Forum (AGRF)	3.04	3.11	3.20	Agree
15.	Alliance for a Green revolution in Africa(AGRF)	3.34	3.38	3.42	Disagree
16.	Organization for Technology Advancement of cold chain in West Africa (OFTACCWE)	3.24	3.30	3.35	Agree
17.	Food and Agriculture Organization (FAO)	3.00	3.16	3.18	Agree
18.	Global Alliance for improved nutrition (GAIN)	3.20	3.34	3.50	Agree
19.	Bill and Melinda Gates Foundation.	3.01	3.14	3.18	Agree
20.	United States agency for International Development (USAID)	2.19	2.33	2.40	Disagree

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<b>Totals</b>	<b>46.86</b>	<b>48.26</b>	<b>49.07</b>	`
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Mean and means	2.34	2.41	2.45		
<b>Table 1b): Summary of ANOVA table</b>					
Sources of Variance	Df	SS	MS	level of significance	F-ratio
Between groups	2	144.19	72.09	0.05	10.13
Within groups	57	405.97	7.12		
	<b>59</b>	<b>550.16</b>	<b>79.21</b>		

Table value at 0.05 level of significance = 3.15. Since calculated F of 10.13 > table F-ratio of 3.15, the  $H_0$  is therefore rejected at 0.05 level of significance.

Therefore there is significant mean difference between the three groups of agricultural experts on their agreements on the sources of funds of family farming in Nigeria.

**Verdict:** there are various sources (both local and International) of funding family in the country.

## Discussion

**Table 3a** above mean revealed that eighteen out of the twenty items recorded means ranging from 2.56 - 3.68. The items were above the criterion level for acceptance of 2.55 and therefore were accepted as sources of funding family farming in Nigeria. The other two items recorded means ranging from 2.10 - 2.40 which fell below the cut-off point of 2.55 and were therefore not accepted as being sources of funding family farming in Nigeria.

The findings correlates with recent reports by the Central Bank of Nigeria (CBN) which stated that the bank target 10% increase in agricultural funding by 2024 (Alike, 2022). The report went on to reveal that about \$2billion out of about \$25 billion earmarked for key initiatives in the

manufacturing, mining and agricultural, services sector had been disbursed to over three million farmers cultivating over 47 million hectares of arable land in the 36 States and the Federal Capital Territory (FCT) under the Anchors Borrowers programme (ABP).

According to Akingboye, (2021), International Fund for Agricultural Development (IFAD) in conjunction the Federal Government of Nigeria reiterated the need to leverage food system to end poverty and achieve the Sustainable Development Goal (SDG) by 2030 through adequate funding and training.

Towards making Nigeria less dependent on food importation, fairtrade Nigeria has declared its readiness to address the lacuna in the country's agric system, by exposing farmers to new ways of preserving their produce through adequate funding provision of latest machines that would enhance high quality of production of farm produce and training (Babalola 2021).

**Table 4a):** Mean ratings of the agreement of the three agricultural personnel on the strategies for transformation of Nigeria agriculture.

S/N	Strategies for Transformation of Nigerian Agriculture	$\bar{X}$	$\bar{X}$	$\bar{X}$	Remarks
		A	B	C	
1.	Climate smart/resilient agricultural practices	3.61	3.37	3.80	Agree
2.	Subsidization of inputs such as fertilizers improved seeds	3.72	3.50	3.84	Agree
3.	Adequate infrastructure to support production, storage etc	2.56	2.60	2.80	Agree
4.	Rural development through good road networks etc	1.84	2.12	2.35	Disagree
5.	Tackling farmers/herders crisis through the National Livestock Transformation Plan (NLTP)	2.55	2.58	2.61	Agree

6.	Insurance for farmers and Amidst farmer/herder crisis	3.70	3.84	3.96	Agree
7.	More interventions in agriculture such as Anchor Borrowers programme	3.01	3.32	3.44	Agree
8.	Economic empowerment of Smallholder farmers/herders	3.72	3.80	3.88	Agree
9.	Adequate capital and support services	2.48	2.49	2.90	Agree
10.	Empowerment Programme for Women in Agriculture (WIA)	3.33	3.38	3.50	Agree
11.	Environmental Protection conservation programme e.g afforestation	1.55	1.84	1.61	Disagree
12.	Investment in tech to drive mechanized farming, output e.g Driverless Tractor	2.56	2.60	2.68	Agree
13.	Appropriate measures to end the disproportionate ratio of one extension worker to 2,000 farmers.	2.64	2.60	2.76	Agree
14.	Boosting youths interest participation in agricultural through capacity building	2.80	3.50	3.72	Agree
15.	Establishment of commodities exchange and marketing boards	2.30	2.21	2.10	Disagree
16.	Facilitating farmers access to finance in Farm input e.g seeds	1.70	1.81	1.88	Disagree
17.	Timely payment of compensation to victims of farmer/herders crashes	3.61	3.37	3.65	Agree
18.	Substantial government interventions to move the farming Communities away from their old system	2.58	2.56	2.61	Agree
19.	Agricultural education and training of farmers in innovation in agriculture through farm field schools	2.56	2.70	2.86	Agree
20.	Community-based Extension/ Agricultural Advisory Services (AAS)	3.08	3.11	3.30	Agree
<b>Totals</b>		<b>43.71</b>	<b>45.26</b>	<b>47.28</b>	^

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<b>Mean and means</b>	<b>2.18</b>	<b>2.26</b>	<b>2.36</b>
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**Table 4b**

Analysis of variance (ANOVA) table on the mean ratings of the agreement of the three agricultural personnel on the strategies for transformation of Nigerian agriculture

Sources of Variance	df	SS	MS	level of significance	F-ratio
<b>Between groups</b>	2	136.15	68.08	0.05	10.16
<b>Within groups</b>	57	381.70	6.70		
<b>Totals</b>	<b>59</b>	<b>517.85</b>	<b>74.78</b>		

**Table value** at 0.05 level of significance = 3.15. Since calculated F of 10.16 > table F-ratio of 3.15 the Ho is therefore rejected at 0.05 level of significance.

Therefore there is significant mean difference between the three groups of agricultural personals on their agreement on the strategies for transformation of Nigerian agricultural

**Verdict:** Nigeria agricultural systems and productivity can be transformed into profitable business ventures through multi-sectional approaches or strategies.

**Discussion:**

**Table 4a** above reveals that fifteen out of the twenty items recorded means ranging from 2.55 - 3.96. The items were above the criterion level of acceptance of 2.55 and therefore were accepted as strategies for transformation of Nigerian agricultural. The other five items recorded means ranging from 1.55 - 2.45 which fell below the cut-off point of 2.55 and therefore not accepted as being strategic to transforming Nigerian agriculture.

These findings are consistent with those of Ogundepo (2022); Oso (2022) and Akinfenwa (2021); that the country should implement climate change policies in order to move Nigerian agriculture to smart/resilient agriculture. Again, the country should invest in technology e.g Driverless tractor to drive mechanized farming, output and that there should be timely payment of compensation of victims of farmer/Herder clashes.

Nigerian women who supply 70 percent of agricultural labour have limited access to other factors of production such as land and capital and this limitation is against prosperity of women farmers. Akinfenwa (2022) maintained that women in agriculture should be empowered to have more access to production factors.

The finding are also in line with Adebayo (2022) that there is a need to build the capacities of farmers through education and training to ensure that they can see beyond the perceptive of Agriculture not just for consumption, but as a business that will help them in sustainable Livelihood.

## **Conclusion**

Agriculture would remain the Mainstay of rural dwellers for a long time to come, the bedrock of our Nation's food security and so must look towards mechanised/modern farming. Government must create an enabling environment for agricultural activities to thrive. Farmers must be empowered to know their skills on how to make farming profitable, general employment, strengthen the food system and improve agricultural practices. Smallholder farmers should be exposed to explore ways of leveraging Information Technology (IT) to build a resilient Agricultural and food system. In addition, credit facilities subsidization of inputs such as fertilizers, improved seeds should be readily available. Market infrastructure for the produces

should be facilitated, storage facilities provided. The government should also intensify the support and encouragement to farmers like it does through the Anchor-Borrowers scheme which of course has commendable re-jigged farming in Nigeria.

Finally, to improve family farming, the twin challenges of mechanized farming and insecurity must be squarely addressed.

### **Recommendations**

Based on the finds and conclusion drawn, the following recommendations were made:

1. Government should help farmers adopt the latest technology to increase profitability, environmental sustainability and strengthen the value chain and food system.
2. Programmes like the Technologies for African Agricultural Transformation (TAAT) one of the flagships of the feed Africa should be floated in Nigeria to encourage Youth In Agriculture (YIA)
3. Industrialization can make transformational differences. In the 21st century, farmers should not rely on Stone Age practices and produce and process food.
4. Youth potentials and energy should be harnessed by giving them opportunity to participate in Programmes like they are AgricPitch competition of the African Development Bank.
5. Conscious and huge investment in mechanized agriculture remains the panacea to the rising insecurity in many parts of the country.
6. To cushion the effects of damages caused by and herders and bandits on farms, federal and state governments should promote insurance policies for Smallholder/family farmers.

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