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Factors Influencing Youth Participation in Maize Production in Dutsin-Ma Local Government Area, Katsina State

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Lawan Abdulmumini[1*], Emmanuel Lemoro Irmiya[2], and Ibrahim Musab[3]

[1] Federal University Dutsin-Ma, Katsina State, Nigeria, [1,2,3] Department of Agricultural Extension and Rural Development, Federal University Dutsin-Ma, Katsina State, Nigeria
*Correspondence and presenting author:
lawalkkn@gmail.com; +2348037951426, https://orcid.org/0000-0003-4749-9497
[2]emmanuelirmiyalemoro@gmail.com, +2348058587475;
[3]musabibrahim15@yahoo.com; +2348064588296

Abstract

This study determined factors influencing youth participation in maize production in Dutsin-Ma Local Government Area of Katsina State, Nigeria. A two-stage sampling procedure (purposive and proportionate sampling procedure) was employed in selecting 78 farmers in the study area. The data collected were analyzed using percentage and ordinary least square regression model. The results revealed that access to credit (3.058), amount of credit received (1.695) and farming experience (- 4.161) significantly influence youth participation in maize production. There is need of provision of credit facilities and enough land to the youth for fully participation in maize production by the government in the study area.

Keywords: Maize farmers, production, youth participation in maize production

Introduction

Maize *(Zea mays L.)* is a member of the grass family (gramineae), most important cereal and one of the major food crops in Nigeria (Kamara, Kamai, Omoigui, Togola, Ekeleme &Onyibe, 2020). It originated from South and Central America and was introduced to West Africa by the Portuguese in the 10th century. It is the world's highest supplier of calories with the caloric supply of about 19.5%. It provides more calories than rice (16.5%) and wheat (15.0%) (Agricdemy, 2020). Maize is the most essential cereal crop in Sub-Sahara Africa (SSA), a vital staple food for more than 1.2 billion people in SSA and Latin America (International Institute of Tropical Agriculture [IITA], 2023). According to Price Waterhouse Coopers [PWC] (2023) Maize is one of the most planted crops in Nigeria and it accounts for the biggest share of the country's coarse grain production. It is carried out in almost all the geographical zones in Nigeria. However, the bulk of the country's maize production is concentrated in Borno, Niger, Plateau, Katsina, Gombe, Bauchi, Kogi, Kaduna, Oyo and Taraba states. These top ten maize producing states account for nearly two-thirds (64%) of maize produced in Nigeria (PWC, 2023).

All parts of the crop can be utilized for food and non-food products. Maize accounts for 30 – 50% of low household expenditures in Africa. Over 30% of the caloric intake of people in SSA comes from maize. On account of that, many African countries

depend on maize as a stable food crop. It is also consumed as a vegetable and rich in dietary fiber and other nutrients (IITA, 2023).

Nigeria is the Africa's second major maize producer after South Africa and the 14th highest producer worldwide. Maize production in Nigeria amounted to 12.75 Million Metric Tons (MMT) in 2021. This considerably increased from 2020, when size reached 12.4 MMT and highest within the observed period (Statista, 2023).
According to the World Youth Report (2020), there are 1.2 billion young people aged 15 to 24 years, accounting for 16% of the global population. The United Nations defines youth as a person aged between 15 and 24 years. However, this definition is not universal. As the experience of being young can differ substantially across the world, between countries and regions (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2023).

Youth are taken to be a group between childhood and adulthood but the actual age range is debatable. And yet data and policy necessitate defining youth within an age bracket. Regional and international organizations use varying age ranges to categorize young people and the same is true of national governments. Nigeria's population is projected at 205,856,089 people in 2020 (United Nations, 2019), and about half of its population is made up of youths between 14 and 34 years of age. Nigeria's National Youth Development Policy demarcated the youth as comprising all young persons aged 18 to 35 years. As the youth population increases, so does the unemployment rate. The unemployment rate of adults in developing countries is less when compared to that of youth (International Labour Organization [ILO], 2020). In sub-Saharan Africa the rate of youth unemployment is a major problem yet to be overcome (World Bank, 2020).

African Union (2023) stated that Africa has the youngest population in the world with more than 400 million young people aged between 15–35 years. This youthful population calls for an increase of investment in agriculture, and economic and social development in the development index of African nations. Youth in Nigeria according to National Youth Policy (2019) means citizens of the Federal Republic of Nigeria aged 18 – 35 years. However, enhancing youth development and participation in the context of sustainable

Youth is one of the highest assets that any nation can have. Not only are they legally viewed as the partners of today, but also the highest investment for a country's development. Young women and men are, in particular, recognized as an important resource whose scenarios are intimately tied to that of their country. They are the prized possession of any nation or region: without them, there can be no future. They are the centre of reconstruction and development. They serve as a good measure of the level to which a country can reproduce as well as stand itself. The level of their verve, responsible conduct and roles in society is positively linked with the development of their country. Programmes and policies that focus on the good development of young people and their active participation in various sectors of nation-building are increasingly being emphasised on a global level (National Youth Policy, 2019).

According to Ogunkunle, Olayniyi & Puseletso (2023) youth denote important agents of change towards success in the overall development process in any sector of the

economy, agriculture inclusive. Youth has been recognized as an important part as well as a key component of rural agrarian communities. Not like the aged, participation of youth in agriculture is a result of various potentials that they possess which consist of; high latent energy to work, propensity to learn innovation, risk takers and high tendency to source new technologies from many sources (Osabohien et al., 2021, FAO, 2021). Even though youth are being held up and relegated in agricultural programme and projects, they remain an important force in agriculture in Nigeria. Hence, they need to be supported along in the developmental and poverty reduction process to join their inherent potential fully in agricultural development and resource utilization.

The agricultural sector is troubled with some serious limitations such as inadequate input supply, high reliance on rainfall, land tenure (lack of land title), mistrust among farmers, pests and diseases, and inadequate access to finance. These limitations together with the negative perceptions of youth, who form about 60% of the population, about agriculture being less profitable, labour and capital intensive, and activity with low self-esteem make agriculture unattractive to the youth, hence their low participation in agriculture (IFAD, 2019; Yami et al., 2019).

Youth participation in agriculture is vital in replacing the old population in agriculture, declining imports of staple food, reducing the poor image of agriculture, reducing rural-urban migration and reducing youth unemployment and its associated social problems (Twumasi et al., 2019). The youth engaged in various activities of agriculture such as crop farming, livestock rearing, farm labour, fish farming, beekeeping, hunting of wild animals, gathering and selling of forest products, farm product processing, marketing of agricultural products, palm wine tapping, palm fruit harvesting among others (Dimelu, Umoren and Chah, 2020).

The involvement of youth in agricultural activities is therefore an important factor in agricultural development in Nigeria. This is because of their innovative behaviour, greater physical strength and a fast rate of learning.
Studies indicate that there is a low involvement of youth in maize production in the study area. Considering the importance of maize in the diet of Nigerians, this study aims to investigate the factors influencing youth participation in maize production. In view of this, the research attempts to answer the following questions: what are the socio-economic and institutional factors of respondents and what are the factors influencing youth participation on maize production in the study area: The objectives of the study were to describe the socio-economic and institutional factors of the respondents and determine the factors influencing youth participation on maize production in the study area.

Methodology

The study was carried out in Dutsin-Ma Local Government Area (LGA) of Katsina State. It lies between latitude 120 17.00ˈN to 120 17.84ˈN and longitude 0070 26' E. It has a land size of about 552.323km^2 with a projected population of 264, 588 people in 2021 at a growth rate of 3.2% with the people being predominantly farmers, cattle farmers and traders. The vegetation of the region is predominantly of savannah type having only about three months of rainfall annually.
A two-stage sampling procedure was used to select the sample size. First stage, five villages were purposively selected from five wards as a result of high involvement of

youth activities in maize production. The villages selected were Gande, Badole, Tabobi, Ruwan gandi and Takatsaba.The second stage, from 131 young farmers 78 maize farmers were proportionately selected from Gande (13), Badole (10), Tabobi (16), Ruwan Gandi (18), and Takatsaba (21) to give the study sample size. Primary data for the study was collected through the distribution of questionnaire with the help of trained enumerator under the monitoring of the researcher.
The data were analyzed using frequency, percentage and ordinary least square regression model and ranking were used to achieve socio-economic and institutional characteristics of the respondents and ordinary least square regression model was used to achieve factors that influence youth participation in maize production.

Table 1: Explanatory variables, measurement and expected sign

Variables	Measurement	Expectation Sign
Sex	Dummy, Male = 1 Female = 0	+
Age	Year	+/-
Educational status	Years in school	+/-
Household size	Number	+/-
Farming experience	Years	+/-
Farm size	Hectare	+
Access to credit	Dummy, Yes = 1 No = 0	+
Amount of credit	Naira	+
Extension contact	Number of contacts	+/-
Income	Naira	+
Participation	Participated = 1, Not Participated = 0	+

Results and Discussion

Institutional Characteristics

Table 2 shows that 53% had 0 – 5 persons with a mean of 6 persons per household. The respondent has a mean of 7 years and 1.5 hectares of farming experience and farm size respectively. This implies that the farmers in the study area have been in farming for several years and may be considered quite experienced.

Table 2: Institutional characteristics of respondents

Variables	Percentage	Mean
Household Size (Numbers)		06
0 – 5	53	
6 – 11	44	
12 – 17	03	
Farm Size (Hectares)		1.5
0.5 – 1.5	54	
1.6 – 2.5	31	
2.6 – 3.5	10	
3.6 – 4.5	05	
Farming Experience (Years)		7
1 – 5	44	
6 – 10	33	
11 – 15	12	
16 – 20	06	
21 – 25	05	
Income (Naira ₦)		310,384.00
100,000 – 199,000	38	
200,000 – 299,000	27	
300,000 – 399,000	17	
400,000 – 499,000	8	
> 499,000	10	

Source: Field Survey, 2021

This result is similar with finding of Nwaobiala, Igwe, Kalu and Akwada (2022) which revealed that the mean farm size of the farmers was 1.3 ha. The result also showed that the average income of the respondents was ₦ 310,384.00. This implies that total income per annum in maize production is relatively high and points to the fact that maize production may have improved the financial status of its participants in the study area.

Socio-economic Characteristics

The results in Table 3 reveal that the majority (86%) of respondents were male, while the remaining 14% were female.

Table 3: Socio-economic characteristics of respondents

Variables	Percentage
Sex	
Male	86
Female	14
Marital Status	
Single	28
Married	69
Widower	3
Education Qualification	
Primary	15
Secondary	22
Tertiary	3
Non-Formal	60
Access to Extension Service	
Yes	37
Credit Access	
Yes	24

Source: Field Survey, 2021

This finding is also in line with Nwabueze, Simon, Christian, Chidi, Ann and Nwangele (2023) findings that males make more agripreneurial choice than females on agriprenuerial choice of youth. The results further revealed that 69% of the respondents were married, 28% were single and 3% were widowers. This is in agreement with the findings of Nwabueze et al. (2023) who found that married people make more choices to invest in agriprenuership sector than single one. The finding also found that the majority of the respondents 60% have non-formal education, 3% (2) have tertiary education, 22% have secondary school education and 15% have primary school education.

In terms of access to an extension agent a majority of the respondent 62.8% has no access to an extension agent; only 24.4% have access to an extension agent.

The factors influencing Youth participation in maize production

Ordinary least square regression (OLS) was used to determine factors influencing youth participation in maize production. The OLS result in Table 4 shows that two explanatory variables significantly and positively influenced the participation of youth in maize production and one explanatory variable was significant but with a negative relationship with youth participation.

Table 4: Factors Influencing Youth Participation in Maize Production

Variables	Coefficient	Standard Error	Beta	t-Value
Constant	4.604	1.066	0.362	4.317
Age	0.18	0.034	0.68	0.535
Educational Level	- 0.43	0.031	- 0.148	- 1.403
Household Size	0.65	0.074	0.094	0.877
Farming Experience	- 0.168	0.040	- 0.496	- 4.161*
Access to credit	1.606	0.525	0.462	3.058*
Amount of credit received	8.968E-006	0.000	0.249	1.695*
Extension Contact	0.449	0.333	0.145	1.346
Income	-1.161E-007	0.000	- 0.040	- 0.395
R-Square	0.333			
Adjusted R-Square	0.253			

*** 1% and *10%

Source: Field survey 2021

These variables were access to credit (3.058), amount of credit received (1.695) and farming experience (- 4.161). The study found out that access to credit was positively associated with youth participation in maize production at 1% probability level. The positive effect of access to credit on youth participation in maize production which is contrary with the finding of James et al. (2022) indicated that access to credit decreases the livelihood of youth deciding to engage in agriculture intensively and it is in line with the findings of Attamah, Aguh & Agwu (2023) which revealed that lack of access to credit increases the chances of youth's involvement in rice production. In the same vein amount of credit, had positive relationship with participation of youth in maize production, amount of credit is another motivating factor for youth's participation in maize production as it boosts access to inputs, its availability could determine the extent of youths' production capacity. The positive effect of amount of credit to youth participation implies that level of participation in maize production increases as amount of credit increased.

However, the regression coefficient for farming experience was negative and significant at 1% as it relates to the level of participation of the respondents in maize production. This indicated an inverse relationship between participation and farming experience of the respondents. This implies that increase in years of farming experience reduces the level of participation of the youth in maize production. This is due to the fact that increase in years of farming experience increases with the age of the farmers and as they grow older due to the increase in age their level of participation decreases. This is contrary to the findings of James et al. (2022) which found years of farming experience were positive and significantly influenced the decision to participate in agriculture.

Conclusion and Recommendations

Farming experience, access to credit and the amount of credit received were the socio-economic factors that influenced youth participation in maize production in the study area. There is a need for the provision of credit facilities and enough land to the youth for full participation in maize production by the government in the study area.

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