Farmers Attitude towards the Adoption of Yellow Ginger Production in Jaba Local Government, Kaduna State, Nigeria

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Abstract. The attitude of farmers towards the adoption of yellow ginger production in Jaba Local Government Area of Kaduna State was examined using purposive sampling technique to select four wards out of the twelve wards in the local government area viz: Kwoi, Nok, Chori, and Daddu. Data were gathered through the administration of questionnaire to 20 randomly selected farmers from each of the four wards. Descriptive statistics such as frequency counts, percentage and Likert-Scale were used to describe the data. The result shows that the farmers are youth (38.8%), mostly male (63.8%), married (60%) and had tertiary (38.8%) education. Also, land acquisition was mainly through inheritance (43.8%). The level of adoption of yellow ginger farming shows that majority (80%) are adopters of the variety with favourable attitudes (≥3.0) and earned an average income of ₦252,500 per annum in the study area. However, the constraints of farmers in the adoption of yellow ginger shows that inadequate capital ranked 1st. The provision of adequate capital to facilitate yellow ginger farming in the study area; encouragement of farmers to join cooperative societies so that they can access fund among others were recommended.

Keywords: Farmers, attitude; adoption and yellow ginger

Introduction

Ginger (*Zingiber officinale*) is a rhizome that is most widely grown by all farming communities in the Jaba region. It consists of numerous short finger-like structures, born horizontally near the surface of the soil. Two commercial varieties are commonly cultivated in Jaba region viz: the yellow ginger variety locally called "Tafin Giwa" with a bold yellow rhizome flesh that is stout with short internodes; the black ginger variety locally called "Yatsun Biri" has a dull-grey colour rhizome. The yellow variety is more popular than the black variety apparently due to its high yielding capacity and pungency (Ibrahim, 2018).

Ginger is the main cash crop that all small holder farmers in Jaba are willing and deeply involved in cultivating due to high profit. This made some farmers in the area to devote all their farmlands to ginger production as against subsistence crops such as guinea corn or maize. However, it is the least in terms of local consumption among all the other cultivars. This is because over 95% of its produce is exported to various countries of the world as export commodity (Ibrahim, 2018).

Attitude refers to an individual's predisposed state of mind regarding a value and it is precipitated through a responsive expression towards a person, place, thing, or event (the attitude object) which in turn influences the individual's thought and action (Krosnick et al., 2005). It is an evaluation of an attitude object, ranging from extremely negative to extremely positive.

As a result of the outstanding opportunities in ginger production and its economy, it is expected that positive attitudes are developed towards its cultivation; just like that of the other crops grown in the area or elsewhere. Although, there are several studies in the area that have

attempted to describe the farming practice of ginger in Jaba such as Nandi (2011), Sati and Bala (2017), and Ibrahim (2018) among others, there exist no single attempt to describe the attitude of farmers towards ginger farming in the area. This is highly imperative, because it will help in revealing the nature of the farmers in production processes, potentials, challenges and constraints in ginger farming. It will also highlight areas and specific aspects that require intervention. Thus, the aim of this paper is to describe the attitude of farmers towards ginger farming in Jaba local government area of Southern Kaduna State, Nigeria, in order to fill this existing research gap.

Methodology

Study Area

The study was conducted in Jaba Local Government Area of Kaduna State. The study area is located in the Guinea Savannah Zone of Nigeria between latitude $9^0 5^{'}$ to $10^0 10^{'}$ North and longitude $7^0 16^{'}$ to $8^0 35^{'}$ East. The climate of the area is tropical continental with distinct seasonal regimes, oscillating between cool to hot dry and humid to wet (dry and wet seasons). The rainy season starts from April and ends in October with a mean annual rainfall of 2000mm. heavy rainfall is recorded between August and September and the annual average temperature ranges from 23^0c to 28°C. The months of November to March are the dry season periods. The primary occupation of over 75 percent of the active population is farming (Ibrahim, 2018), with ginger as the main cash crop. It was estimated that about 1,728.930 metric tons of ginger are produced annually in the Jaba region (Kaduna State Perspective (KSP), 2009; Ibrahim, 2018) and currently it has increased to about fourteen times; 68,000 metric tons.

It shares boundaries with Kachia Local Government to the Northwest, Kagarko Local Government Area to the Southwest, Zangon Kataf Local Government Area to the North, Jema'a Local Government Area to the East and Karu Local Government area of Nassarawa Sate to the South (KADP, 2000). Jaba has estimated land area of 531km^2 (KSP, 2009) and a projected population of 210,500 people in 2016 (NPC, 2006). The inhabitants are predominantly Christian. The major occupation is farming with ginger being the cash crop grown.

Sampling Techniques

Purposive sampling technique was used to select four wards out of the twelve wards in the local government area due to their involvement in yellow ginger production. The wards are: Kwoi, Nok, Chori, and Daddu. Twenty ginger producers were randomly selected in each of these four gingers producing areas to give a sample size of 80 farmers.

Method of Data Collection

Primary data were collected through the administration of questionnaire. Secondary information were also sourced through the use of textbooks, journals and internet.

Analytical Tools

Descriptive statistics and mean score were used.

Results and Discussion

Age of Ginger Farmers

The age of farmers in table 1 shows that about 39% of the respondents were in the age range of 31- 40 years. This was followed by 35% who were between 41- 50 years, while 19% were 51years and above. Only 8% of the farmers were between 20 - 30 years. This means that ginger farmers in the study area are basically youth. This concurs with the findings by Ezra *et*

al. (2017) on socio-economic assessment of ginger production in Jaba local government area of Kaduna State, where it was opined that ginger farmers are in their youthful age. Age, as an important component of agriculture determines the physical strength of the farmer. This implies that the young farmers will be able to withstand stress and devote more time to various farm operations in ginger production than the older farmers. This will lead to increased ginger output in the study area.

Table 1. Distribution of farmers according to age

Age	Frequency	Percentage
20-30	6	7.5
31-40	31	38.75
41-50	28	35
51 and above	15	18.75
Total	80	100

Sex of the Farmers

The table below shows that majority (64%) of the farmers are male while female constituted only 36%, implying that ginger farming is being carried out by male. This may be due to the fact that women concentrate more on processing and marketing of farm produce. This is in line with the findings by Ganiyu *et al* (2017) where maize farmers practicing reduced tillage practices were predominantly male (66%).

Table 2. Distribution of farmers according to sex

Sex	Frequency	Percentage
Male	51	63.75
Female	29	36. 25
Total	80	100

Education Level of the Farmers

The farmers level of education in table 3 shows that 39% of the farmers' population had tertiary education. This is followed by those with secondary education (29%), non-formal education (20%) and primary education (13%). This conforms to the submission of Babasanya *et al.* (2013) where it was established that education of farmers influenced their attitudes towards adoption of new innovation in Kaduna State. Similarly, Ezra et al (2017) posited that ginger farmers in Jaba had tertiary education (68%).

Table 3. Distribution of farmers according to education level

Education level	Frequency	Percentage
Non-formal	16	20
Primary	10	12.5
Secondary	23	28.75
Tertiary	31	38.75
Total	80	100

Marital Status

Table 4 show that majority (60) of the yellow ginger farmers are married while 28% are single. Only 8% and 5% of the farmers population were divorced and widowed respectively. This means that there will be availability of family labour for yellow ginger production in the

study area. This is similar to the findings of Olagunju *et al.* (2021) where married women (82%) participated more in fish farming in Kaduna State.

Table 4. Distribution of farmers according to marital status

Marital status	Frequency	Percentage
Single	22	27.5
Married	48	60
Widow	4	5.
Divorce	6	7.5
Total	80	100

Mode of Land Acquisition of the Farmers

The table below shows that ginger farmers acquired farm land through inheritance (44%), purchase (28%), borrow (16%) and rent (13%). This means that the main source of land for yellow ginger farming in the study area is through inheritance of family land

Table 5. Distribution of farmers according to mode of land acquisition

Farm acquisition	Frequency	Percentage
Purchase	22	27.5
Rent	10	12.5
Borrow	13	16.25
Inheritance	35	43.75
Other	0	0
Total	80	100

Farming Experience

The distribution of farmers by farming experience shows that majority (69%) had 1- 10 years of experience in yellow ginger farming. Only 21% and 10% had 11 – 20 years and 21-30 years of experience in yellow ginger farming respectively. This is similar to the submission by Ezra *et al* (2017) where 1 – 10 years of experience constituted the highest (38%).

Table 6. Distribution of farmers according to farming experience

Farming experience	Frequency	Percentage
1 — 10 years	55	68.75
11 — 20 years	17	21.25
21 — 30 years	8	10
Total	80	100

Farmers Income

Table 8 shows the income of the farmers per annum. 24% of the farmers earned 101,000-200,000 and 301,000 - 400,000 each. This was followed by 16% who earned 401,000-500,000 per annum. However, 14%, 13% and 10% of the farmers earned 10,000 - 100,000, 201,000 - 300,000 and above 500,000 naira respectively in yellow ginger production in the Area. This means that the farmers are small holders who may engage in the production of other crops or income source. This negate the findings by Aasa *et al* (2019) where 45% of youth farmers earned between 700,000 – 999,000 naira per annum.

Table 7. Distribution of farmers shows the income per annum

Income per annum	Frequency	Percentage
10,000-100,000	11	13.75
101,000-200,000	19	23.75
201,000-300,000	10	12.5
301,000-400,000	19	23.75
401,000-500,000	13	16.25
Above 500.000	8	10
Total	80	100

Method of Cultivation

Table 8 shows that 38% of the farmers cultivate yellow ginger manually while 31% make use of animal traction and tractorization each. This implied that farm labour is readily available in the area because of the large percentage of youth population.

Table 8. Distribution of farmers according to method of cultivation

Method of cultivation	Frequency	Percentage
Tractorization	25	31.25
Animal traction	25	31.25
Manual	30	37.5
Total	80	100

Level of Adoption of Yellow Ginger

Farmers level of adoption of yellow ginger as shown in table 9 revealed that majority (80%) were adopters of yellow ginger in the study area. Only 20% of the respondents were non-adopters of yellow ginger. This implied that yellow ginger is the widely adopted and cultivated variety in the area.

Table 9. Distribution of farmers by level of adoption of yellow ginger

Level of adoption	Frequency	Percentage
Adopters	64	80
Non-adopters	16	20
Total	80	100

Farmers Attitude towards Yellow Ginger Production

The farmers attitude towards yellow ginger adoption was captured using a five-point Likert type scale of strongly agreed, agreed, undecided, disagreed and strongly disagreed with a nominal value of 5, 4, 3, 2 and l. An index score of 3.0 was used as the means score. Any point from 3.0 was considered as favorable attitude while point below 3.0 was considered unfavorable attitude. The result in table 10 revealed that farmers had highly favorable attitude towards yellow ginger production because of its ease of storage (4.5), ease of processing (4.2), cost saving (4.1), high market value (4.1)., ease of cultivation (4.0), and low perishability (4.0). Similarly, it production involves little input (3.5) necessitated favourable attitude toward intercropping yellow ginger with cereals (2.9) in the study area. This means that farmers generally have favourable attitude (3.0) towards the adoption of yellow ginger in the study area.

Table 10. Farmers attitude towards adoption of yellow ginger

Statement	5	4	3	2	1	(N=80)	Mean (X)	Remark
It is easy to cultivate	34	22	16	6	2	324	4.0	F
It involves little input	27	18	11	15	9	279	3.5	F
It saves cost and yield more	31	32	9	8	-	326	4.1	F
It is mostly intercropped with cereals	5	13	34	22	6	229	2.9	NF
It has high market value	41	20	12	-	7	328	4.1	F
It has low perishability	38	19	8	12	3	317	4.0	F
It is easy to process	39	25	10	6	-	337	4.2	F
It is easy to store	51	19	6	4	-	357	4.5	F

Constraints Faced in Adoption of Yellow Ginger

Table 11 shows the constraints faced by farmers in the adoption of yellow ginger production in the study area. In the table, inadequate capital ranked 1st in the farmers constraint. This was followed by theft (2nd) and youth restiveness (3rd). Also, inadequate incentives and climate change effect ranked 4th each while lack of policy and inadequate storage facilities was ranked 6th each. However, inadequate processing technologies, inadequate marketing information, incessant community crises and kidnapping ranked 8th, 9th and 10th and 11th respectively in the list of farmers constraints in yellow ginger production in the study area. this agrees with Babasanya *et al*. (2013) on Farmers Perception and Knowledge Need for Adoption of New Cultivars of Cassava in Igabi LGA, Kaduna State.

Table 11. Distribution of respondents based on the constraints faced in adoption of yellow ginger

Constraints	Frequency	Percentage	Rank
Youth restiveness	45	10.59	3rd
Kidnapping	15	3.53	11th
Lack of adequate incentives	40	9.41	4th
Effect of climate change	40	9.41	4th
Lack of policy	35	8.24	6th
Inadequate capital	70	16.47	1st
Inadequate process technologies	30	7.06	8th
Inadequate storage facilities	35	8.24	6th
Inadequate marketing information	28	6.59	9th
Incessant community crises	27	6.35	10th
Theft	60	14.12	2nd
Total	425	100	

Conclusion

The findings from the research shows that yellow ginger farmers in Jaba Local Government Area of Kaduna state are mainly male (63.8%), married (60%), and had tertiary education (38.8%). The study also established that the farmers are between 31 – 40 years (38.8%) and chiefly (80%) adopt yellow ginger farming with favourable attitude.

Recommendations

Since inadequate capital ranked 1st in the list of constraints faced by farmers in yellow ginger farming, government at all levels should assist farmers through provision of adequate capital to facilitate yellow ginger farming in the study area. Similarly, farmers should be

enlightened to join cooperative societies so that they can access fund from financial institutions for farming. Since most (43.8%) of the farmers acquire land through inheritance, government should help in formulation and implementation of land polices in the study area that will make land to be accessible for the farmers to boost the production of ginger.

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