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ANALYSIS OF GENDER ROLE IN GINGER VALUE CHAIN IN KADUNA STATE, NIGERIA

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ABSTRACT

Nigeria ranks first in area under ginger cultivation in the world. However, its contribution to world ginger trade is the fifth largest. This study focused on analysis of gender role in ginger value chain in Kaduna State. Multi-stage sampling techniques were used to select two Local Government, villages and farm household. Study used primary data which was obtained with the aid of structured questioner and personal interview. The statistical tools used to analyse the data were descriptive statistics, was used to achieve objective one, three. Gender-sensitive mapping was used to achieve objective two. The results of the socio-economic analysis shows that 88.9% of ginger input suppliers are men, 81.4% of ginger producer's a men, while 62.5% of ginger processors are female, 59% ginger marketers are men, 65.9% of ginger consumers are female in the study area. The result showed that (87.5%) most of ginger input suppliers encountered poor market access. While (60%) most of ginger processors faced with a problem of lack of ginger processing methods and most ginger marketers (93.3%) had poor access to local market and international market. This finding points to a good opportunity for ginger agribusiness. The finding recommend that actors should be encouraged to form and/or revive existing ginger marketing associations in order to benefit from group influence and take advantage of economies of scale. In addition, government should provide processing and storage infrastructure and facilitate linkage to finance and credit.

Keywords: Ginger, Ginger Value Chain, Value Chain Actors, Gender

INTRODUCTION

Gender inequalities in society are recognized as one of the critical challenges impacting the attainment of sustainable development in the world. Despite several efforts by governments and non-governmental organizations (NGOs), gender inequalities still exist in almost all the countries in the world (World Bank, 2024). According to USAID (2023), gender issues affect and shape the totality of production, distribution, and consumption within an economy. In the value chain, all activities from production, processing to disposal reflect gendered patterns of behavior that condition men's and women's jobs and tasks. Gender relations at the household level play a key role in determining the extent to which men and women interact within a value chain. The distribution of the outcomes of the value chain is gendered and varies from place to place (Coles and Mitchell 2011).

Agricultural value chains have a lot of potential for alleviating poverty and encouraging long-term economic growth, as well as providing income and jobs. One of the options for enhancing efficiency in the agricultural industry is to organize agriculture along a value-chain structure. In Nigeria particularly, women play a vital role in agricultural food value chain, making up to two- third of the global agricultural workforce (Ayoade, 2011), producing about 60-80 per cent of total output (Rahman et al., 2004) and contribute more than two-thirds of their produce towards household subsistence (Rahman, 2008). Creating and sustaining competitive and equitably-oriented value chains that help small-scale farmers, especially women, will require explicitly examining gender issues and proactively integrating gender components into value chain analysis and development strategies. There is the need to promote gender equitable opportunities in agricultural value chains. Gender integrated value chain analyses provide necessary insights on the roles of men, women and other stakeholder groups in value chains, the constraints they face and the opportunities that exist for

optimizing benefits from value chain development.

There have been few studies that look at all elements of ginger production, processing, and marketing, including the economic potentials that exist in each of the value chain activities. Some studies have evaluated ginger production efficiency (Nmadu, Marcus, 2013), or ginger agricultural methods (Ahmed, 2018), ginger value-chain and SWOT analysis, as well as the socio-economic analysis of the ginger value chain (Abah et al., 2018; Nwaekpe et al., 2019; Parajuli et al., 2021).

Ivie et al., (2022) examined the economic potential of ginger value chain in Kaduna state sought to estimate the net margins of the actors and compare their profitability. A total of 380 ginger producers, processors, and marketers were randomly selected from Jaba Local Government Area in Kaduna State. Data were collected using pretested semi-structured questionnaires. Partial budgeting techniques and the one-way analysis of variance were used. The study revealed a net margin of about 140,000 NGN/ha/annum for the producers, while the net marketing margin/bag for the ginger processors and marketers was 3,300 NGN and 3,470 NGN, respectively. Furthermore, the profitability indices showed that the producers, processors, and marketers earned about 37%, 70%, and 41% profit of invested funds in the ginger value chain. Comparative analysis revealed that the profitability of the processors, which was the highest, was statistically different from the other actors. It is concluded that there exist tremendous economic potentials in the ginger value chain.

In another study, Abah, (2019) analyse Ginger value chain in Kaduna state, a multistage sampling technique was used for the study while a questionnaire and personal interviews were used for data collection from 369 respondents. The UG1 ginger variety was predominantly grown. The mean farm size was 2.40 hectares and mean output was 29.4 MT/ hectare. The major processing activities were cleaning, slicing, drying, sorting and packing. The value-added activities were washing, leaning, and drying, grading, bulking, transportation, and storage, powder and drink production. Ginger Powder and drink had higher profit margins. Access to finance and credit was a major weakness among actors.

Studies on the ginger value chain in Nigeria are limited, Nwaekpe et al., (2019) reported a rapid value chain and SWOT analyses of ginger for alternative market creation in South-east Nigeria. The study area was Abia State, Nigeria. A purposive sampling technique was used to select 57 respondents. Data was collected using focus group discussions (FGDs) and semi-structured interviews. The following findings were: the actors in the ginger value chain in Abia State include input suppliers, farmers, processors, wholesalers, retailers and consumers; ginger seed was not sold in the study area; two seed varieties (UG1 and UG2) were being grown; ginger production and market in the study area were very low; production was inefficient and not profitable; marketing was not profitable; wholesalers buy from outside the study area; the linkage between farmers and processors ranged from very weak to nonexistent, while there was no linkage between either farmers and wholesalers or processors and wholesalers. This study was carried out in a non-ginger producing area using a very small sample size. The selection of respondents was purposive, and the applicability of the outcome to ginger-producing areas is doubtful, which affects the quality of the research. In addition, these studies did not report gender role in the

ginger value change suggesting that these are the gaps which this study tried to fill.

METHODOLOGY

Study Area: The study area is Kaduna State in Nigeria. The State is one of the North-western States and is situated between latitudes 902 N, 11035 N, and longitudes 7015 E, 906 E (Kaduna State Statistical Yearbook, 2001). Ginger is cultivated in the southern part of the State. The state's economy is mostly based on agriculture. Agriculture employs roughly four million people and generates around 56% of the state's GDP. About 606,007 farmer families make up the state's population (KADP, 2007). Yam, rice, maize, cowpea, millet, guinea corn, tomatoes, peppers, and melon are among the commercially grown food crops. Ginger, cotton, sugarcane, and groundnuts are the main income crops. The southern part of Kaduna is where ginger is grown. The highest ginger value chain operations are found in the Jaba local government area (LGA), (KADP, 2007; Folorunso, Adenuga, 2013). The LGA's soil is sandy loam, well-drained, and sloped gently. The rainy season is characterized by a unimodal rainfall pattern of around 1,000-1,500 mm per year. It has a temperature range of 28-36°C. Ginger harvesting begins in late October to November, with Production beginning in May/June. As soon as the product is harvested, processing and marketing activities begin.

Population of the Study: The target population of this study is male and female Ginger producers who are registered with Kaduna State Agricultural Development project (KADP) as actors/participants in the ginger value chain. This includes actors who are engage in the production, processing and marketing of ginger crop in the study area. The KADP desk officer identified one thousand three hundred and fifty (1350) value chain actors in the study area.

Sampling Procedure: Multi-stage sampling techniques were used to select the respondents interviewed for this study. In the first stage, Kachia and Jemaa Local Government Area was selected purposively based on intensity of ginger input suppliers, ginger production, processing, marketing and consumers (Nmadu and Marcus, 2012: Makarau et al., 2013: Folorunso and Adenuga, 2013). In the second stage, a total of 10 villages were selected randomly and proportionately from Kachia and Jama'a Local Governments Area (6 and 4 respectively). While in the last stage, proportionate sampling was used to randomly choose 309 actors (who include input suppliers, producers, processors, marketers and Consumers). The 309 actors were used based on the recommendation obtained from using the yamane formula. Proportionate sampling was used to select 18 Input Suppliers, 118 Producers, 40 processors, and 82 Consumers and two major ginger markets (Mararaban Walijo and Kasuwan Boda) in Kachia Local Government Area and Hassan –Yaro Market in Jema'a Local Government Area. Snowballing approach was used to select 51 marketers from the two markets for interview.

Sample Size Determination: Kumar (2013) emphasized that careful sample selection helps to a great deal in the determination of accuracy in research findings. The sample size for this study will follow Yamane, (1976).

Thus,

Where

n= the sample size to be determined;

N= Total number of units in the population i.e sample frame of ginger value chain actors (1350)

e= the error margin i.e 5% (0.05)

Hence, = 309

Method of Data Collection: The study used primary data which was obtained with the aid of the questionnaire and personal interviews. The local language was used for clarification where necessary, while questions was be limited to the last farming season. Three different sets of semi-structured questionnaires were designed to collect data from ginger producers, processors, and marketers, respectively. The questionnaires were used to harness the relevant data on input quantities and costs, output quantities, and prices. The survey was done between December 2023 to January, 2024 and data was collected for the 2023 production, processing and marketing season. This was achieved with support of KADP ginger desk officer, Researchers in the fields of Agricultural Economics and Agricultural Extension pretested the survey instrument for validity.

Method of Data Analysis: Descriptive statistics was used to achieve objective one, three, and SWOT analysis was use to achieved objective four. Gender-sensitive mapping was used to achieve objective two. In mapping a gender sensitive value chain, the following steps were taken;

In the first step the core processes of the value chain and main actors (men and women) were identified and mapped with their respective activities (input suppliers, production, processing and marketing). The second step involves the mapping of flows of products, information, knowledge and support services for the value chain actors at different stage. Finally, the mapping of the volume of products, number of actors and relationships and linkages between values chain actors because of the fact that some dimensions in value chain mapping can be quantified. Furthermore, the mapping of relationships and linkages between value chains actors was also conducted. This approach was used to achieve objective two of the study.

RESULTS AND DISCUSSION

Socio-Economic Characteristics of Respondent in the Study Area: The majority of the ginger input suppliers are male 88.9%), while remaining (11.1%) are female (Table 1). This implies that ginger input suppliers in the study area are dominated by men. Men generally have better access to financial resources, agricultural inputs, and land ownership compared to women, this disparity makes it more feasible for men to invest in ginger production (UN Women, 2021). About 50% of ginger input suppliers are well experiences this implies that with experiences, suppliers develop a deeper understanding of market dynamic, including pricing trends and consumer preferences. This insight enables them to make informed decisions about when to buy or sell input, helping farmers maximize their profits (Adebayo et al., 2020).

Socio-Economic Characteristics of Ginger Producers in the Study Area: The majority of the ginger producers are male 81.4%), while remaining (18.6%) are female (Table 2). This implies that ginger farming in the study area is dominated by men. This agrees with the findings of Shehu, et al., (2013) who opined that most of the ginger farm works are undertaken by men in the study area, as ginger production is labour demanding more so that most of the operations are manually done at this level. The finding also showed that most of the respondents (42.4%) were within 36-45years; this implies that ginger farmers in the study area were young. The implication of this result is that there is likelihood of high productivity among producers since majority of the producers is less than 50 years of age which shows that they are strong, active and flexible to farming

activities. This agrees with the findings of Yusuf et al., (2008), that age can influence the adoption of improved agricultural practices. Also, majority of respondents had secondary education (63.5%). According to Omofonmwan and Kadiri, (2011) reported that literacy level of farmers determined the rate of diffusion and responsiveness to innovation. They had fairly large household sizes (2-10 persons) and farm sizes of less than 2ha. Most respondents (51%) were well-experienced producers. The result indicates that the majority of the respondents were productive and knowledgeable; education can significantly impact gender involvement since an educated person may be more likely to participate in opportunities provided by ginger production, processing and marketing. About (66%) of the respondents had no contact with extension agents. The study also found out that majority (79%) of the respondents was married. This implies that ginger production in the study area was dominated by married people.

Socio-Economic Characteristics of Ginger Processors in the Study Area: The majority of ginger processors presented in Table 3 are female (62.5%) and are at active age (65%), and had secondary education (85%). This implies that farmers in the study area were educated, with more education; they are expected to access information on innovations that will enhance productivity. They had fairly large household sizes (3-6persons) in line with the finding of Effiong (2005) reported that large family size enhances labour productivity. Most respondents (70%) were well-experienced processors. According to Onwunali et al., (2023) years of experiences indicated good average knowledge of ginger processing. Also about (75%) ginger processors used manual processing method in the study area.

Socio-Economic Characteristics of Ginger Marketers in the Study Area: Table 4 below indicate that, the majority of ginger marketers were male (59%) in line with the finding of Hassan et al., (2020) reported that male marketers dominated in ginger marketing and are at active age (58.8%), and had secondary education (78.4%). Most respondents (72.5%) were well-experienced marketers. About (78.4%) of ginger marketers source the ginger at market gate, also about (74.5%) of ginger marketers stored their ginger in warehouse in the study area. According to Ayodele and Sambo, (2014) it was established that age, marketing experiences and educational background increased technical efficiency, increased profit and socioeconomic livelihood of marketers in the study area.

Socio-Economic Characteristics of Ginger Consumers in the Study Area: The majority of ginger consumers presented in (Table 5) are female (65.9%) and are at active age (48.7%), and had secondary education (48.8%). The rising consumer concerns for good health, enhancement of life expectancy and desire for improved quality of life have necessitated renewed attention to consuming foods with some special medical or health benefits, generally known as functional foods such as ginger (Akerele et al., 2017).

Gender Sensitive Mapping of Ginger Value Chain: The gender-sensitive value chain mapping in the study area is presented in Figure 1, The Map involves creating a visual representation of the value chain, highlighting the roles and contributions of men and women at each stage. The result showed that 88.9% of input suppliers are men, 81.4% of ginger production a men, while most 62.5% of ginger processors are female and 59% men in ginger marketing.

Retailer

Packaging-65% female, male 35%

Sorting-30% male, female 70%

Wholesaler (Male 69%, female 31%)

Processing (Male 37.5%, Female 62.5%)

Cleaning -65% female, 35% male

Slicing- 59% female, 41% male

Sorting- 58% female, 42% male

Packing-67% female, 33% male

Grading -60% male, female 40%

Bulking 64% male, female 36

Production

Transportation 50% male, female 50%

(Male 81.4%, Female 18.6%)

Storage 59% male, female 41%

Land clearing-65% male, female 35%

Planting -69% female, male 41%

Weeding -52% female, male 48%

Fertilizer application-50% male, female 50%

Input suppliers source of local input-local (42%)

Metropolises (6%)

Open market (10)

Own farm (28%)

Follow farmers (14%)

Constraints in Ginger Value Chain in the Study area: In terms of constraints encountered 87.5%% of male ginger input suppliers encountered the problem of market access, also about 81.3% male ginger input suppliers encountered supply chain issue in the study area (Table 6) According to Hornum et al., (2021) belied that input suppliers faced problems on market access and information challenges. While 100% of female input ginger suppliers' encountered problem of market access, poor access to credit and cultural and social constraints in the study area it's in line with the finding of Nazifi et al., (2021) discuss various barriers including market access issue, particularly as they affect female input suppliers in the ginger sector.

In terms of constraints encountered 95.8% of Male ginger producers encountered the problem of unavailability of fertilizer, herbicides and pesticide to farmer in the study area, also 72.9% of Male ginger farmers encountered high incidences of pests and diseases outbreak in the study area (Table: 7). While 91% of female ginger farmers faced the problem of access to land for ginger production in the study area, it's in line with the finding of Onwusiribe et al., (2018) reported that female ginger farmers challenged by inadequate land also, in line with finding of UN Women (2021) its more feasible for men to invest in ginger production, as women often face barriers such as lack of credit and ownership right. 86.4% of female ginger farmers in the study area faced with problem of unavailability of fertilizer, herbicides and pesticide to farmers. Generally, unavailability of fertilizer, herbicides and pesticide to farmers is a serious constraint in the study area faced by both men and female ginger farmers in the study area. According to Ayodele and Sambo, (2014), cost of external input was major needs of farmers.

Table 8 below indicated that most 86.6% of male ginger processors have inadequate knowledge of ginger processing techniques. On other hand, about 66.6% of male ginger processors face of insecurity in the study area.

While majority 88% of female ginger processors have inadequate knowledge of ginger processing techniques in the study area, also about 76% of female ginger processors complained of high-cost of transportation in the study area. In line with the finding of (NdaNmadu and Marcus, 2013; Onwusiribe et al., 2018) most of ginger processors were not disposed due to poor processing technique of parallel slicing of fresh ginger rhizomes with knife and drying due to lack of mechanical process.

Table 9 below indicated that, majority, 93.3% of male ginger marketers have poor access to market. While 66.7% of male ginger marketers faced with the problem of high cost of transportation in the study area. While most 85.7% of female ginger marketers faced serious problem of discrimination during sales in the study area, about 66.7% of female ginger marketers have Poor access to market in the study area. Previous studies showed that lack of direct access to international market was paramount problem of ginger marketers (Centre for the promotion of imports, 2020).

Strengths, Weaknesses, Opportunities, and Threats in Ginger Value Chain: The internal and external situations of the key actors of the ginger value chain were analyzed and classified into strengths, weaknesses, opportunities, and threats. The result is shown in (Table 10). The result shows that there is rising local demand for Nigerian ginger. This is due to the rising health consciousness in the country. This finding points to a good opportunity for ginger agribusiness. Poor access to credit was a uniform weakness for all actors. This is because most of the actors live in rural communities where access to financial services that are provided by formal financial institutions was lacking. In addition, ginger enterprises require huge capital which is beyond the capacity of most informal financial institutions. Furthermore, insecurity was a uniform threat. The security situation is an environmental factor which is not peculiar to ginger enterprises. Producers were unable to mechanize ginger farming because most land areas were not in tractor able condition.

CONCLUSION

This study focused on analysis of gender role in ginger value chain in Kachia and Jamaa Local Government Area Kaduna State. Multi-stage sampling techniques were used to select to Local Government, villages and farm household. The study used primary data which was obtained with the aid of questioner and personal interview. The statistical tools used to analyze the data were descriptive statistics, was used to achieve objective one, three. Gender-sensitive mapping was used to achieve objective two. The results of the socio-economic analysis shows that 88.9% of ginger input suppliers are men, 50% has year of experiences. About 81.4% of ginger producers are men, also most 63.5% has a secondary education. While 62, 5% of ginger processors are female about 66.7% has a secondary education. Majority of ginger marketers 59% are men,. Majority of ginger consumption 65.9% are females. Gender sensitive mapping result showed that 88.9% of ginger input suppliers are men, 81.4% of ginger production a men, while 62.5% of ginger processors a female, 59% ginger marketing a men and 65.9% of ginger consumption are female in the study area. The result showed that 87.5% ginger input suppliers encountered poor market access (95.8%) most of ginger producers has a serious problem of unavailability of fertilizer, herbicides and pesticide to farmers in the study area. While (60%) most of ginger processors faced with a problem of lack of ginger processing methods and most ginger marketers (93.3%) had poor access to local

market and international market. The result shows that there is rising local demand for Nigerian ginger. This finding points to a good opportunity for ginger agribusiness. Poor access to credit was a uniform weakness for all actors. This is because most of the actors live in rural communities where access to financial services that are provided by formal financial institutions was lacking. The key stages in the ginger value chain are input supply, production, processing, marketing, and consumption. The major opportunity in the ginger value chain was increasing demand while poor access to credit was a weakness.

The study makes the following recommendations: 1. The study found that the seedlings used by producers were usually reserved from the harvest of the preceding season. There is a need for research into high-yielding varieties. Ginger is one of the mandate crops of the NRCRI. There is the need for the Kaduna State government and the private sector to partner with the NRCRI to make available improved and high-yielding varieties of ginger to farmers at subsidized rates. 2. The study found that there is an increasing demand for ginger. However, there is limited access to credit. The actors should be encouraged to form and/or revive existing ginger marketing associations in order to benefit from group influence and take advantage of economies of scale. In addition, government should provide processing and storage infrastructure and facilitate linkage to finance and credit. 3. Majority of the farmers financed their production through personal savings which are mostly not adequate for appreciable production. Agricultural loan facilities should be made accessible to ginger producers to ensure timely and adequate utilization of agricultural inputs for improvement in farm production by involving the private sector. 4. Rural households should be educated on the need to diversify their source of income from agriculture by the available extension personnel. This will ensure regular incomes for the households in the study area.

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TABLES

Table 1: Distribution of Ginger Input Suppliers According to Socio-Economic Characteristics in the Study area (n=18)

Variable	Categories	Frequency	Percentage	Mean
Gender	Male Female	16 2	88.9% 11.1%	
Age	28-35 36-43 44-51 52-59	2 9 4 3	11.1% 50% 22.2% 16.6%	43.5
Marital Status	Single Married Divorced	4 14 -	22.2% 77.8%	
Level of Education	Primary Secondary Tertiary No Formal	- 10 8 -	55.5% 44.4%	
Years of Experiences	7-12 13-18 19-24	4 9 5	22.2% 50% 27.8%	15.5

Table 2: Distribution of Ginger Producers According to Socio-Economic Characteristics in the Study area (n=118)

Variable	Categories	Frequency	Percentage	Mean
Gender	Male Female	96 22	81.4% 18.6%	
Age	25-35 36-46 47-57 58-68	35 50 23 10	29.6% 42.4% 19.5% 8.5%	46.5
Education level	Primary Secondary Tertiary No formal	13 75 20 10	11% 63.5% 16.9% 8.5%	
Household size	2-5 6-9	99 19	83.9% 16.1%	5.5
Farm size	1-2 3-4	85 33	72% 28%	2.5
Year of farming experiences	4-10 11-17 18-24	40 60 18	34% 51% 15%	14
Contact with extension agent	Yes No	40 78	34% 66%	

Table 3: Distribution of Ginger Processors According to Socio-Economic Characteristic in the Study Area (n=40)

Variables	Categories	Frequency	Percentage	Mean
Gender	Male Female	15 25	37.5% 62.5%	
Age	32-39 40-47 48-55	3 26 11	7.5% 65% 27.5%	43.5
Education level	Primary Secondary Tertiary No formal	- 34 6 -	- 85% 15% -	
Marital status	Single Married Divorced	- 40 -	- 100% -	
Years of experiences	8-15 16-23	34 6	70% 30%	15.5
Household size	3-4 5-6	26 14	65% 32.5%	4.5
Processing methods	Manual Mechanized	30 10	75% 25%	

Table 4: Distribution of Ginger Marketers According to their Socio-Economic Characteristics in the Study Area (n=51)

Variables	Categories	Frequency	Percentage	Mean
Gender	Male Female	30 21	59% 41%	
Age	28-35 36-43 44-51 52-59	7 30 11 3	13.7% 58.8% 21.5% 5.8%	43.5
Marital status	Single Married Divorced	5 43 3	9.8% 84.3% 5.9%	
Education level Year of marketing experience	Primary Secondary Tertiary No formal 7-12 13-18 19-24	4 40 7 - 10 37 4	7.8% 78.4% 13.7% - 19.6% 72.5% 7.8%	15.5
Source of ginger	Market arena Farm gate	40 11	78.4% 21.6%	
Storage structure used	Silos Warehouse	13 38	25.5% 74.5%	

Table 5: Distribution of Ginger Consumers According to their Socio-Economic Characteristics in the Study Area (n=82)

Variable	Categories	Frequency	Percentage	Mean
Gender	Male Female	28 54	34.1% 65.9%	
Age	25-35 36-46 47-57 58-68	12 40 15 15	14.6% 48.7% 18.3% 18.3%	46.5
Marital Status	Single Married Divorced	18 60 4	21.9% 73.1% 4.8%	
Level of Education	Primary Secondary Tertiary No Formal	14 40 18 10	17.1% 48.8% 21.9% 12.2%	
House hold Size	2-5 6-9	40 42	48.8% 51.2%	5.5

Table 6: Constraint Encountered by Input Suppliers in Ginger Value Chain

Constraints	Frequency	Percentage
Male		
Supply Chain Issues	13*	81.3%
Quality Control	8*	50%
Poor Access to Credit	12*	75%
Market Access	14*	87.5%
Female		
Market Access	2*	100%
Poor Access to Credit	2*	100%
Cultural and Social Constraints	2*	100%

Table 7: Constraint Encountered by Producers in Ginger Value Chain

Constraint	Frequency	Percentages
Male		
Unavailability of fertilizer, herbicides and pesticide to farmers	92*	95.8%
High incidences of pests and diseases outbreak	70*	72.9%
High cost of labour	66*	68.7%
Inadequate Access to credit	50*	52.1%
Female Inadequate Access to land	20*	91%
Unavailability of fertilizer, herbicides and pesticide to farmers	19*	86.4%
Inadequate Access to credit	15*	68.2%

Table 8: Constraint Encountered by Ginger Processors in Ginger Value Chain

Constraints	Frequency	Percentages
Male		
Inadequate knowledge of Ginger processing techniques	13*	86.6%
Insecurity	10*	66.6%
High-cost of transportation Inadequate Access to credit	8* 6*	53.3% 40%
Female		
Insecurity	22*	88%
Inadequate knowledge of Ginger processing techniques	19*	76%
High-cost of transportation Inadequate Access to credit	10* 8*	40% 32%

Table 9: Constraint Encountered by Ginger Marketers in Ginger Value Chain

Constraints	Frequency	Percentages
Male		
High cost of transportation	20*	66.7%
Poor access to market Inadequate Access to credit	28* 16*	93.3% 53.3%
Female		
Discriminating during sales	14*	66.7%
Poor access to market	18*	85.7%
Weak market information	12*	57.1%
Inadequate Access to credit	11*	52.4%

Table 10: SWOT Analysis of the Actors in the Ginger Value Chain

Variables	Producers	Processors	Marketers
Strength	Experience Access to land Availability of seedlings	Experience Access to ginger Availability of labour	Experience Access to ginger Availability of cheap labour
Weakness	Lack of mechanization Poor access to credit No improved variety Distance to market Bad roads, Limited research and development capability	Poor access to credit Lack of storage facilities International standard Lack of access to modern processing facilities	Poor access to credit Poor quality control The upsurge of unethical practices among actors Lack of storage facilities, Rejection of ginger powder for export Low integrity
Opportunities	Increasing demand Raising prices	Higher profit for processed ginger Increased uses Increasing local acceptance/demand	Increasing local demand Multiple uses Increasing consumption
Threat	Falling value of Naira Climate change Insecurity	Spoilage Theft Insecurity Pest and disease Fall in the exchange rate	Pest and disease Theft Fall in the exchange rate Insecurity