
**GINGER FARMING AND SOCIO-ECONOMIC DEVELOPMENT OF COMMUNITIES. A CASE STUDY
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Abstract: Countries are in a bid to enhance socio economic development among communities. The purpose of this study was to examine the influence of Ginger farming on the socio-economic development of communities in Uganda. The study was guided by the following objectives: to identify the types of ginger grown in Kibuga sub-county Butambala district, to examine the impact of ginger farming on the social economic development of Kibuga sub county Butambala district and to examine the challenges faced by ginger farmers of Kibuga sub county Butambala district. The study adopted Structural-change theory that deals with policies focused on changing the economic structures of developing countries from being composed primarily of subsistence agriculture to a —modern, urbanized, and industrially diverse manufacturing and service economy. The sampled population of the study included 12 Kibuga sub county administrators, 5 Kibuga sub county chiefs, 10 Kibuga sub county politicians, 31 village leaders and 78 Kibuga sub county Ginger farmer. Questionnaires were the main data collection instrument. Data collected was analyzed and recorded using statistical packages and reported in form of tables and indicated as frequencies and percentage. The study findings indicated that Small White ginger is widely grown in Kibuga sub county followed by (*Z. officinale* var. *officinale* Roscoe, *badak* or *gajah*)), (small red ginger, *merah* or *beureum*)), yellow ginger, Japanese ginger, peacock ginger, fellow ginger, shell ginger and ginger lily. The study found out that ginger farming leads to poverty alleviation, acquisition of land and labour, act as a primary material for agro industries. Among the challenges ginger famers faced included unreliable rainfall, marketing of their agro crops, traditional methods of farming among others. The study proposed some solutions to the problems which included acquiring of loans, modern farming technology, improved irrigation systems and use of farmers field support. The study recommends that interreligious council of Uganda should emphasize on gender balance among its officials and members. It was also recommended that peace reconciliations should not be based on only religious organizations but also to the individuals for effective promotion of peace. The findings will be of great importance to the ministry of defense and internal affairs in assuring peace and security in Uganda and it will enable the researcher in attaining her bachelor's degree since it is one of the requirements. The study recommends the government to build a ginger processing plant, using farmer's field groups and to equip the sub county agricultural officer with necessary equipment's.

Key words: ginger farming, socio-economic development and communities

Background of the study

Ginger (*Zingiberofficinale* Roscoe) belongs to the family Zingiberaceae (Wagner, 1980) and genus Zingiber. other names of ginger are African ginger, Black ginger, Cochin ginger, GanJiang, Gegibre, Ingwer, Jamaican ginger, and Race ginger. Turmeric, cardamom, and galangal are other terrific contributors of the ginger circle of relatives (Allan

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et al., 2023). The English botanist William Roscoe (1753-1831) gave the plant the name Zingiber, derived from a Sanskrit phrase singabera because of this horn-shaped because of the protrusions on the rhizome (Collins et al., 2023). The genus consists of approximately eighty-five species of fragrant herbs from East Asia and tropical Australia. Conservation agriculture ideas make use of natural approaches which could reply to local climatic conditions and soil features as well as technological factors. it's far one of the most concrete and promising methods of implementing sustainable agriculture and it relies on 3 fundamental principles. minimal soil disturbance, if possible, no tillage soil cover, everlasting and beneficial crop rotations and association (Nicholas et al., 2023). Conservation farming is viewed as one of the methods to mitigate the results of drought, in line with inside the case have a look at of conservation agriculture in Zambia. Kibuga Sub County is located in Butambala district within the crucial part of Uganda. Butambala district is bordered through Gomba district to the west and north –west, Mityana district to the northeast, Mpigi district to the east and south, and Kalungu district to the south-west (Polycarp et al., 2023). Butambala district has were given 5 sub-counties which encompass and 1 town council. these sub counties include Kalamaba, Kibibi, Budde, Ngando, Bulu, Kibuga and Gombe city council. Kibuga Sub County is bordered with Budde sub county within the south, Bulu inside the west, Kalamaba within the north, Kibi within the northeast and Ngando in the east sub counties. Kibuga farmers grow gingers for business and home use, they develop Mila, fish pond farming, maize growers at a small scale, beans and cassava. Kibuga Sub County has been given different social financial activities which encompass stone quarrying, sand mining, brick lying and ginger especially (Grace et al., 2023). Kibuga sub county is a ginger growers society primarily based economic hobby as ginger are exported after cultivation to the nearby centers and Kampala metropolis as the main consuming center (Samuel & Nelson, 2023).

Problem Statement

The presence of oxidative pressure in ginger is partner with numerous sicknesses and a common mechanism often placed forth to give an explanation for the movements and health benefits of ginger is associated with its antioxidant homes (Aeshbach et al., 1994; Ahmad, Katiyar, and Mukhtar 2001. Ginger was said to lower age-associated oxidative pressure markers (topic et al. 2002) and become suggested to shield in opposition to ethanol -brought on Hepatotoxicity through suppressing oxidative outcomes in rats dealt with ethanol (Niyonzima, 2023). However, it's miles hypothesized that, the low productiveness and occasional returns from ginger farming is probably due to lack of expertise on proper agronomical cultivation practices, the use of terrible pleasant seeds, loss of proper submit-harvest handling skills, centers and packaging, limit farmers productiveness and the exceptional of products, confined commercial enterprise understanding and get admission to market records save you farmers to optimize their revenues and no price addition in preferred (Kazaara & Christopher, 2023)

Comparing the Bioactivity of ginger is important for absolutely understanding it's mechanism of action and capability healing outcomes. despite the fact that many meals-derived dietary supplements are consumed these days with little information of their activity or safety, extra interest is needed to addressing those troubles. Therefore, most of literatures have been empirically indicate the benefit, constraints and the predominant determinants of ginger production activity. but it has proven that ginger farming is a capability possibility source of profits to the majority specifically those dwelling in rural regions (Polycarp et al., 2023). The empirical indicates that few research has been performed to evaluate the social economic improvement blessings after ginger farming (Francis et al., 2023). This study therefore, intends to make analysis of social economic elements after ginger farming in Uganda.

Specific objectives

1. To identify the types of ginger grown in Kibuga sub-county Butambala district.
2. To examine the impact of ginger farming on the social economic development of Kibuga sub county Butambala district.
3. To examine the challenges faced by ginger farmers of Kibuga sub county Butambala district.

Methodology

Research Design

A research design is a detailed plan which guides the study. Dalton L. R. and Todor, C (1979) defines it as the plan and structure of investigation so conceived as to obtain answers from research questions, the study used a descriptive research design in which both qualitative and quantitative techniques was utilized. Quantitative techniques were based on methodological principles of description, and use of statistical measurements as experienced by the researcher.

Quantitative data was presented by the use of graphs, pie charts and tables. The descriptive research design was chosen to establish the distribution of variables in the study population which helped in obtaining primary data.

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Study Population

The study population was 215 respondents with in the central division of Kampala capital city

Sample Size

The study population included 12 Kibuga sub county administrators, 10 Kibuga sub county politicians, 5 parish chiefs, 31 village leaders and 78 Kibuga sub county ginger farmers

Sampling Method

Sampling method is defined as a method used in order to obtain the required sample from the study population; during the process of data collection, stratified probability sampling technique was employed by using the following formulae.

$P = \frac{F}{N} \times n$. Where;

F= Number in the category

N Total population.

P Number of respondents in the category obtained from the group

n = Total number of the respondents

Data Collection Methods

The study incorporated the use of various methods in the process of data collection in a bid to come up with sound, concrete and credible research findings. The researcher therefore amalgamated the use of questionnaire, interviews and documentary analysis in the process of collecting primary data.

Self-administered questionnaire

An open, close ended questionnaire and self-administered questionnaires were administered to the illiterate farmers.

Interview guide:

An interview guide was drafted with a set of questions that the researcher asked the respondents during an interview and was open ended in nature. The researcher personally recorded the provided responses as per study respondents during the process of carrying out an interview. This tool used to collect information from respondents selected from Ginger farming on social economic development in Kiboga sub county Butambala District.

Data analysis.

The edited data was analyzed by both quantitatively and qualitatively as follows; Quantitative data was grouped and statistical description such as tables showing frequencies, percentages and pie- charts as well as graphs for better interpretation using SPSS (Nelson et al., 2022). However, qualitative data was analyzed in a way of identifying the responses from respondents that are relevant to the research problem. Mainly such data was analyzed by explaining the facts collected from the field under which the researcher was able to quote respondents' responses.

RESULTS

Table 1 leaders' and ginger farmer's response on the agreement of ginger types grown.

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Type of ginger	Strongly agree		Agree		Neither agree nor disagree		disagree		Strongly disagree		Total
	f	%	f	%	f	%	f	%	f	%	
big white ginger (<i>Z. officinale</i> var. <i>officinale</i> Roscoe (big white ginger or giant ginger, <i>badak</i> or <i>gajah</i>))	79	58	38	28	19	14					
Red ginger (<i>Z. officinale</i> var. <i>rubrum</i> (small red ginger, <i>merah</i> or <i>beureum</i>))	54	40	17	13	65	48					
<i>Z. officinale</i> var. <i>amarum</i> (small white ginger, <i>emprit</i>) small White ginger	124	91	12	9							

Source: primary source

Table 6 shows that *Z. officinale* var. *amarum* (small White ginger *emprit*), is mostly known and grown in the area at strongly agree rate of 124 (91%) responses while 12 (9%) still agreed to the type. Big white ginger (*Z. officinale* var. *officinale* Roscoe (big white ginger or giant ginger, *badak* or *gajah*)) was also mentioned at a strongly agree rate of 79(58%) and agree at 38 (28%) and it received 19 (14%) response of neither agree nor disagree. Red ginger (*Z. officinale* var. *rubrum* (small red ginger, *merah* or *beureum*)) got the third place where it had 54 (40%) at strongly agreed 17 (13%) at agree and 65 (48%) neither agreed nor disagreed. This gives red ginger to a question whether it is known or not.

Responses from open ended questionnaire

One respondent answered the question of other types of gingers and answered that there are others which include yellow ginger, Japanese ginger and peacock ginger which are grown though they are not grown at a large scale. This condition is caused by their applications that are mostly not suitable for food but rather for oils and perfume where there are no industries to process such types.

The second respondent answered that there is a type called culinary ginger and fellow ginger which are commonly grown in the Asian countries specifically in India and china. This type of ginger is used in the production of medicines and fish feeds.

The third respondent answered focusing on shell ginger and ginger lily which are commonly grown in the South American countries like Mexico and Cuba. This type is a multipurpose for food and medicine production because of its great proteins.

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Ginger farming on the social economic development**Table 2 showing the impact of ginger on the socio-economic development**

Factor	Strongly agree		Agree		Neither agree nor disagree		disagree		Strongly disagree		Total
	f	%	f	%	f	%	f	%	f	%	
Increase in industrial demand of raw materials	125	70	38	22	15	8					
Enhancing food security	78	44	51	29	32	18	17	9			
Increase the production of export crops	169	95	9	5							
Overall economic growth and modernization	111	62	63	35	1	0.5	3	1.5			
Enlarging markets for industrial out puts	160	90	17	9.6			1	0.4			
Provide export earnings	170	95.5	8	4.5							
Provide primary materials for agro processing industries	168	94	10	6							
Own land, labour and capital	123	69	55	31							
Poverty alleviation	178	100									

Source: primary source

Information in table 7 Shows that 100% of the respondents felt that ginger farming leads to poverty alleviation, 100% of respondents also agreed that ginger farming increases the production of export crops, provide export earnings, leads to own land and labour capital and provide primary materials for agro processing industries. While 99% of the respondents agreed that Ginger farming enlarges markets for industrial outputs, 95% revealed that ginger farming leads to overall economic growth and modernization, 92% of respondents agreed to increase in industrial demand of raw materials and 73% of the respondents agreed that ginger farming enhances food security (Journal et al., 2023). 8% of the respondents neither agreed nor disagreed on the increase in industrial demand of raw materials, 4.5% still neither agreed nor disagreed on enhancing food security and 0.5% neither agreed nor disagreed on overall economic growth and modernization. However 1.5% disagreed on overall economic growth and modernization, 1% of the respondents disagreed on enhancing food security and 0.4% disagreed on enlarging markets for industrial outputs

Challenges faced by ginger farmers and solutions to the challenges faced by ginger farmers

Table 3 Showing response on the challenges faced by ginger farmers

Challenge	Strongly agree		Agree		Neither agree nor disagree		disagree		Strongly disagree		Total
	f	%	f	%	f	%	f	%	f	%	
Expensive technical mechanization acquisition	168	94.4	10	5.6							
Unreliable rainfall	178	100									
Use of traditional farming methods	124	70	31	17	23	13					
Increased importation of ginger from outside countries	67	39	79	44	24	13	6	3	2	1	
Excessive use of pesticides and fertilizers	53	30	62	35	43	24	14	8	6	3	
Marketing problems	121	68	53	30			4	2			
Storage facilities	95	53.4	70	39	12	7	1	0.6			

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Price instability	145	81.5	33	18.5							
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Source: primary source

Results from table 3 Show that 100% of the respondents felt that unreliable rainfall as the major challenges, 100% expensive technical mechanization acquisition and price instability. 98% agrees that they face a challenge of marketing, 92.4% responded that storage facilities, 83% felt that increased importation of ginger from outside countries and 83% still agreed that use of traditional farming methods and 65% agreed that excessive use of pesticides and fertilizers. However 24% neither disagreed nor agreed to excessive use of pesticides and fertilizers. 13% of the respondents neither agreed nor disagreed on the use of traditional farming methods and still 13% neither disagreed nor agreed on increased importation of gingers from outside countries and 7% of the respondents neither agreed nor disagreed on the storage facilities as the challenges. 11% of the respondents disagreed on the excessive use of pesticides and fertilizers, 4% disagreed on increased importation of ginger from outside countries, 2% disagreed to marketing problems and 0.6% disagreed on storage facilities.

Solutions to the challenges faced by ginger farmers in Kibuga sub county Butamabala district

Table 4 showing responses on the solutions to the challenges faced by ginger farmers

Type of ginger	Strongly agree		Agree		Neither agree nor disagree		disagree		Strongly disagree		Total
	f	%	f	%	f	%	f	%	f	%	
Loan acquisition to acquire new improved farming machines	161	90	17	10							
Use of best management practices such as pesticides, modified seeds	111	62	61	34	5	3	1	1			
Use of farmer's field group	151	85	27	15							
Use of	51	28	62	35	51	29			14	8	

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vermicompost instead of synthetic fertilizers											
Irrigation systems	141	79	37	21							
Modern mechanization technologies	121	68	56	31.4	1	0.6					

Source: primary source

From table 4, 100% of respondents agreed that loan acquisition to acquire new improved farming machines, 100% irrigation systems and still 100% use of farmer's field group as the major solution. More so 99.4% felt that use of modern technologies and 96% felt that use of best management practices such as pesticides and modified seeds. 63% respondents agreed that use of vermicomposite instead of synthetic fertilizers. However, 29% of respondents neither agreed nor disagreed on use of vermicompost instead of synthetic fertilizers, 3% still neither agreed nor disagreed on the use of best management practices such as pesticides and modified seeds and 0.6% neither agreed nor disagreed still on modern mechanization technology. However, 8% of respondents disagreed on the use of vermicompost instead of synthetic fertilizers and 1% still disagreed nor agreed on the use of best management practices such as pesticides, and modified seeds.

Conclusions of the study

Most of the respondents indicated that they are benefiting from ginger farming through providing export earnings, increasing export of crops, acquire land and labor capital, stimulate revenue, providing primary materials for agro industries, enlarges markets for industrial outputs and poverty alleviation.

The researcher also notes that ginger farming is not always easy to practice as there are challenges along the way. Such challenges include unreliable rainfall, expensive technical mechanization, price instability, marketing and use of traditional farming. For successful implementation of ginger farming, such challenges ought to be resolved soon. Finally, the study notes that several strategies can be used to improve the growing of gingers in

Recommendations

The study recommends the government to build a ginger processing plant in Butambala district to help improve on the quality of gingers produced and to promote international market to their products.

The study recommends using farmer's field groups and developing methods such as government support and loans with a low interest rate to help farmers acquire modern technological farming equipment's.

References

Allan, K., Charles, N., Moses, N., Kazaara, A. G., & Nelson, K. (2023). *The Effect of Operation Wealth Creation on*

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- Youth Farmers Development : A Case Study of Labongo Layamo Sub County , Kitgum District.* 7(2), 50–63.
- Collins, A., Kazaara, A. G., & Kazaara, A. I. (2023). *Agricultural Loans and Farmer ' s Livelihood in Uganda a Case Study of Nyakayojo Sub County in Mbarara District.* 7(3), 40–46.
- Francis, A., Richard, K., Kazaara, A. G., Moses, N., & Nelson, K. (2023). *Study On the Contribution of Bee Farming On the Socio- Economic Transformation of Communities in Rural Areas in Arua District a Case Study of Pajulu Sub-County.* 7(2), 1–12.
- Grace, M., Kazaara, A. G., & Kazaara, A. I. (2023). *Factors Associated With Potato Yields ' Variations In South Western Of Uganda . Case Study : Kanungu and Kisoro Districts.* 7(3), 198–205.
- Journal, I., Phiona, A., & Muhammed, M. (2023). *The Effect Of Weather Changing Pattern On Farming Activities In Uganda , A Case Study Of Bulamagi Sub County , Iganga DISTRICT.* 7(3), 10–16.
- Kazaara, A. G., & Christopher, F. (2023). *Impact of Micro Credit Financing on Agricultural Production A case Study of Bundibugyo District In The Western Region Of.* 7(3), 56–62.
- Nelson, K., Christopher, F., & Milton, N. (2022). *Teach Yourself Spss and Stata.* 6(7), 84–122.
- Nicholas, K., Nelson, K., Kazaara, A. G., Deus, T., & Moses, N. (2023). *Examining the Influence of Climatic Change Patterns on Tourism Activities in Uganda . A Case Study of Bududa District .* 7(2), 72–79.
- Niyonzima, E. (2023). *Assessing the Impacts of Rural-Urban Migration on Agriculture Production in Rwanda : A Case Study of Huye District , in Southern Province.* 7(4), 1–15.
- Polycarp, K., Kazaara, A. G., Kazaara, A. I., Prudence, K., & Nicholas, K. (2023). *The effect of loan defaults on profitability of financial institutions in Uganda : a case study of post bank , Anaka branch , Nwoya district.* 7(3), 172–178.
- Samuel, L., & Nelson, K. (2023). *METROPOLITAN JOURNAL OF BUSINESS & ECONOMICS (MJBE) ISSN 1813-4238 Corresponding : Author : samuellingumba@gmail.com JOURNAL OF BUSINESS & ECONOMICS (MJBE) Vol . 2 Issue 6 , September - 2023 , Pages : 709-717 Corresponding : Author : samuellingumba@gmail.com.* 2(6), 709–717.