

Food Stuff Available on Market Stalls and Restaurants in Rural Urban Centers; a Case of Kagadi Town, Uganda

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Abstract This study established the food types consumed, suppliers, and challenges faced in their trade in Kagadi Town Council (KTC), Uganda. Data was collected using questionnaires and key informant interviews and analyzed using Statistical Package for Social Sciences and Micro Soft Excel to get descriptive statistics. The results indicate that the main foods in KTC are; crops, and poultry, fish, beef, and goat meats. Foods items in short supply are; potato (*Solanum tuberosum*), pumpkin (*Cucurbita* spp.), local chicken (*Gallus gallus domesticus*), cocoyam (*Colocasia esculenta*), mangoes (*Mangifera indica*), apples (*Malus domestica*), sorghum (*Sorghum bicolor*) and chicken eggs. The suppliers of these foods are located in the neighboring districts; Kabarole, Kyenjojo, Hoima, Kibale, Kampala and Mubende districts, Uganda. KTC obtains most food from outside its boundaries. KTC has high potential for food market. There are items already on the market and others are not supplied though demanded. There is need to support local farmers and traders to overcome the challenges around the food value chain.

Keywords: food vendors, food market, consumption, food demand and supply

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1. Introduction

There is a rapid rate of urbanization globally [1]. Sixty percent (five billion) people and 67 percent of the population are predicted to be urban dwellers, world over, by 2030 and 2050 respectively [2,3]. The Ugandan population is currently growing at 3.3 percent yet the rate of urbanization is 13 percent per year [4]. The increasing urbanization may escalate the food demand in towns [3]. The demand and supply for food may fluctuate over time and space due to fluctuating weather conditions and changes in consumer preferences [5]. Currently, the urban poor obtains food from vendors and restaurants. The middlemen obtain food items expensively from places beyond their district borders. There is thus a need to produce more food for the growing urban population through sustainable urban agriculture [6]. Urban farming has potential to address food shortages and create wealth in towns if the farmers are empowered with information and skills [2,7]. The empowered farmers can overcome the urban farming challenges, notably, fluctuating prices, climatic changes and agronomic challenges [6]. Sustainable farming technologies for the urban setting need to be developed and disseminated to farming communities in urban areas [7,8].

For effective development and dissemination of these technologies, there is need to understand the current food market situation in urban areas. The objective of this study was to assess the market potential of food items in KTC, Kagadi district, Western Uganda.

1.1. Research Questions

- Which food items are available to the people in KTC?
- Which quantities of each item are consumed periodically?
- What is the location of suppliers of each item?
- Which challenges are faced by food traders?
- What factors are responsible for each identified challenge?
- What are the possible remedies to the challenges mentioned?

The purpose of this study was to generate information regarding the food market in KTC to stimulate farmers to grow more food and do farming as business. The significance of this study was to; improve food availability and quality in KTC through initiating and supporting suitable agricultural enterprises, improve food business conditions, support food suppliers in KTC by improving their accessibility to improved inputs and to improve on food actor's gains and provision of

solutions to challenges experienced by food suppliers and producers.

2. Methods and Materials

2.1. Study Area

The study was conducted in Kagadi town, the headquarters of Kagadi district, Uganda in the central ward of KTC. The central ward is one of the six wards in the KTC. The wards in KTC include; Kyomukama, Mambugu, Kiraba, Kibanga, Kitegwa and Kagadi Central Ward. The Central Ward houses the Central Business District (CBD) of KTC. The study was conducted in the CBD of KTC. The CBD include the following cells; Kigangaizi, Nakulabye, Kagadi Central, Taxi Park, Muhumbu, Kyengaju, and Hospital cells. The CBD has the biggest volume of business activities and a high day-time population. This puts it at high risk of food shortage but also presents huge market opportunities for food items to the farmers. There is currently one daily food market with scattered groceries (pers. com).

Agriculture is the main economic activity in Kagadi district [9]. The same author further reports that the population in Kagadi is mainly engaged in subsistence production of food crops such as maize (*Zea mays*), cassava (*Manihot esculenta*) and beans (*Phaseolus vulgaris*). The main market for these foods in the district is the Kagadi daily market located in KTC. However, most of the food products i.e. fruits, eggs and vegetables are brought into Kagadi from other neighboring districts.

2.2. Study Population

The study involved KTC Local Government staff and food traders. The food traders were selected from the daily food market food, butchers, groceries and eating places (hotels, restaurants, etc.). A list of these respondents were obtained from KTC township offices because they are involved in licensing of all food traders within KTC.

2.3. Sampling Procedure

A sample of 179 respondents for the questionnaire survey was obtained randomly. This included 41 food vendors in the daily food market, 32 groceries attendants in the CBD, 23 butchers of cattle and goat meat, 21 butchers of pork, 29 eating rooms, hotels and restaurants, and 33 street vendors (Table 1). Key informant interviews included staff from KTC and representatives from the above respondents (n=11). The KII included; restaurant manager deputy chairman of butchers, chairperson of fish vendors in Kagadi daily market, beef and goat roasters representative, chicken roasters representative, fish roasters representative, chairman night street vendors, two groceries representatives, chairperson porkers, and KTC staff. Data collection started in June 2019. The researchers used English and local languages that is to say: Runyoro, Rutooro, Runyankole, Rukiga, during the interviews.

Table 1. Categories of Respondents and Numbers Sampled

Category	Approx. No.	Sample Size
Butcherers of beef (cattle and goat)	23	23
Butcherers of pork	23	21
Street vendors (cooked food, roasted chicken, beef, goat, fish)	98	33
Hotels and restaurants	42	29
Groceries	32	32
foods dealers in daily market dry and fresh foods, fish)	80	41
Population	271	179

2.4. The Characteristics of Respondents

The age of food traders ranged from 17 to 65 years with the average age being 33 years. These traders have an average household size of six persons and have been in the food business in KTC for an average of six years. The majority were Banyoro (64 percent) and were Catholics (45 percent), protestants (23 percent) and Pentecostals (13 percent). Most were primary and secondary school drop outs (22 and 21 percent respectively) and some had completed secondary education (20 percent).

2.5. Study Design

This study adopted a cross - sectional descriptive survey research design which involved collection of data from a random sample at one point of time. The survey was carried out in June and July 2019 in KTC to establish potential for food market in KTC.

2.6. Research Approach

The study involved both qualitative methods and quantitative methods. Data collection took a mixed methods approach comprising of key informant interviews, for qualitative data, and household questionnaires for the quantitative data [10].

2.7. Data Collection Techniques and Tools

Researcher-administered questionnaires and interview guides were used [11]. Tools were pretest on ten non-respondents. Six university undergraduates collected the data under the supervision of the researcher (the corresponding author). The data collectors were trained by the researcher prior to data collection. Using printed tools and a list of all respondent categories, data collectors enrolled randomly and interviewed respondents. Responses were recorded in the tools and later entered in SPSS and MS Excel for analysis.

2.8. Data Analysis

Qualitative data was analyzed thematically. This analysis involved providing understanding, explanation, and interpretation of patterns and themes in textual /narrative data [12]. The results were tabulated and presented narratively. Quantitative data analysis mainly involved descriptive statistics using SPSS [7] to get summaries of demographic data (e.g. age, sex etc.). Descriptive summaries

of main foods available/unavailable, the average quantities were generated using MS Excel.

3. Results

3.1. Common Foods on the KTC Market

The restaurants of KTC cook a variety of foods. The common foods include; Irish potatoes, rice, banana (*matooke*), cassava, and pumpkins. Animals are slaughtered in butcherers mainly located in the daily market. These supply different meats to restaurants and other consumers in homesteads. The common meats are beef and goat. There are street vendors who sell roasted chicken, beef, and goat meat. The fish mongers are located in the daily market and sell tilapia (*Oreochromis niloticus*), silver and bagrus fishes. In the daily market, there are also onions,

potatoes, tomatoes among others. The groceries sell 'matooke', Irish potatoes, sweet potatoes, tomatoes, cabbages, oranges, beans, cassava flour, rice, ground nuts, millet flour, and soybean flour. Most of these foods may also be found in the Kagadi daily market. The porkers handle business around pork meat accompanied with steamed potatoes, cassava and cabbages.

Most of these foods are available in sufficient quantities but others are not. The foods available in good quantities are; 'matooke', sweet potatoes, beef, cassava, beans, tomatoes, rice, ground nuts, cabbages, onions, fishes (synodontis, brycinus nurse, silver fish and tilapia), and maize. Table 2 presents a whole list of the most common foods (including their scientific names) available in the market of KTC.

Most traders are involved in fish, beans, onions and cabbage, cassava and sweet potatoes. There are limited numbers of traders involved in goats and pineapples (Figure 1)

Table 2. Available foods on the Mmarket in KTC

Food Item	Traders sampled	Quantity sold per day	Units	Quantity sold/day/trader
African spinach (<i>Spinacia oleracea</i>)	1	100	Bundles	10.00
Banana (<i>Musa</i> spp.) (known as <i>matooke</i>)	22	113	Bunches	2.82
Banana (<i>Musa</i> spp.) Leaves	2	115	Leaves	11.50
Beans (<i>Phaseolus vulgaris</i>)	19	530	Kg	17.68
Beef (from cattle)	14	798	Kg	53.21
Cabbage (<i>Brassica oleracea</i>)	10	102	Heads	5.10
Carrots (<i>Daucus carota</i>)	6	3	Basin	0.14
Cassava (<i>Manihot esculenta</i>)	16	7	Sacks	0.34
Chicken (<i>Gallus gallus domesticus</i>),	3	11	Birds	5.33
Coco yams (<i>Colocasia esculenta</i>)	1	5	Sacks	1.00
Cow pea (<i>Vigna unguiculata</i>)	1	4	Kg	1.00
Dodo (<i>Amaranthus</i> spp.)	1	200	Bundles	20.00
Eggplants (<i>Solanum macrocarpon</i>)	4	20	Basins	1.00
Chicken eggs	4	700	Trays	100
Fishes (various types)	1	1000	Kg	20.00
Nile perch fish (<i>Lates niloticus</i>)	1	40	Pieces	8.00
Pea nuts (<i>Arachis hypogaea</i>)	13	340	Kg	34.04
Goats (<i>Capra</i> spp.)	4	25	Kg	12.50
Plantains/Gonja (<i>Musa</i> × <i>paradisiaca</i>)	1	5	Bunch	1.00
Green pepper (<i>Capsicum annuum</i>)	11	11	Basins	0.36
Irish potato (<i>Solanum tuberosum</i>)	23	143	Tins	9.50
Jack fruit (<i>Artocarpus heterophyllus</i>)	1	12	Fruits	6.00
Lemon (<i>Citrus</i> × <i>limon</i>)	1	50	Bundles	10.00
Mangoes (<i>Mangifera indica</i>)	1	7	Basin	1.00
Matooke (<i>Musa</i> spp.)	7	141	Bunches	7.86
Cow milk	4	167	Liters	9.25
Millet Flour (<i>Eleusine coracana</i>)	4	40	Kg	5.00
Nakati (<i>Solanum aethiopicum</i>)	1	600	Bundles	60.00
Onions (<i>Allium cepa</i>)	32	7	Basins	0.24
Oranges (<i>Citrus X sinensis</i>)	1	50	Bundles	5.00
Avocado (<i>Persea americana</i>)	5	104	Pieces	10.40
Passion fruit (<i>Passiflora edulis</i>)	6	12	Basins	1.17
Pineapples (<i>Ananas comosus</i>)	1	15	Pieces	5.00
Pork (meat from <i>Sus scrofa domesticus</i> - pigs)	19	68	Kg	11.37
Posho (from ground <i>Zea mays</i> grain)	11	23	Kg	4.50
Pumpkins (<i>Cucurbita</i> spp.)	1	10	Pieces	2.00
Rice (<i>Oryza sativa</i>)	26	92	Kg	6.12
Sweet potatoes (<i>Ipomoea batatas</i>)	7	17	Sacks	0.86
Tomatoes (<i>Solanum lycopersicum</i>)	56	2	Crates	0.07
Water melon (<i>Citrullus lanatus</i>)	2	55	Heads	5.50
Yellow banana (ripened <i>Musa</i> spp.)	6	4	Bunches	0.83

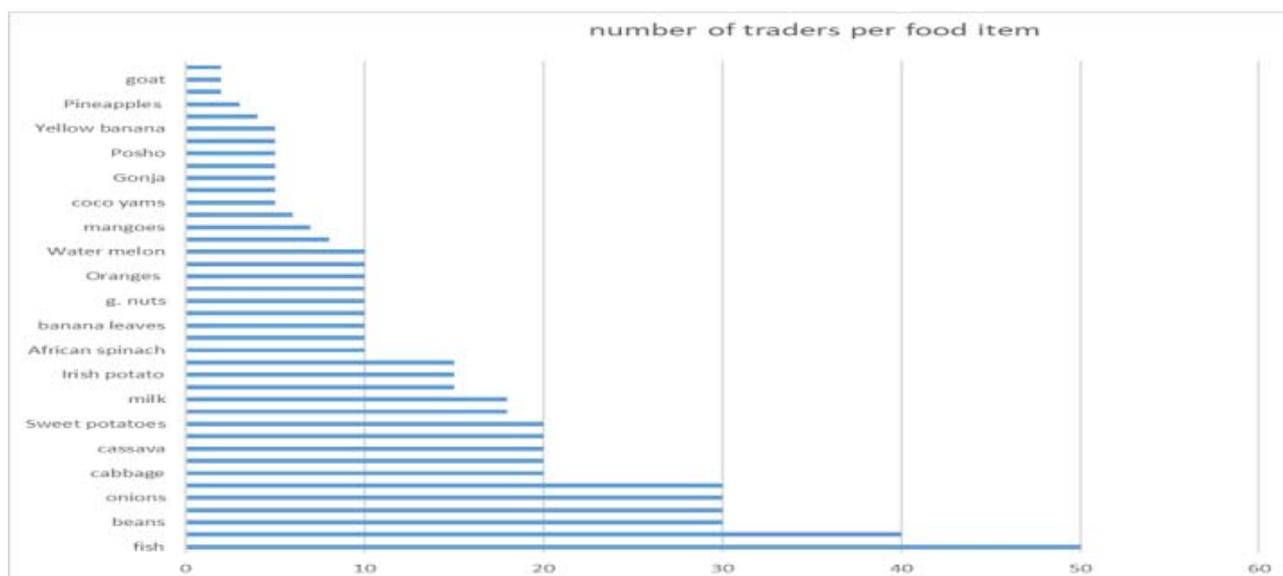


Figure 1. Food items and number of traders handling them

3.2. Scarce but Highly Demanded Foods in KTC

There are foods in KTC which customers demand for but are still inadequate within the town. The Key Informants (KI) said that Irish potato, pumpkin, goats, bagrus and cut fishes are scarce. For example, “bagrus fish is booked very early morning by the nurses and civil servants (KI, Fish monger, Kagadi daily market). Other foods are local chicken, coco yams, mangoes, apples, sorghum flour and chicken eggs. For example, “you find someone looking for Irish potato when they are unavailable; we look for cassava in vain yet its plentiful in the villages” (KI, Restaurant manager, Kagadi market street).

These foods are scarce because they are expensive. For example, “a tin of Irish potato is UGX 30,000 (USD \$ 8) in KTC” (KI, Restaurant manager, Kagadi market street). Goats are scarce owing to the high cost of transporting them from far villages to KTC. Goats are liked by street meat roasters, young women and civil servants. Most of the chicken roasted is of the exotic types. The local chicken is scarce because it’s relatively more expensive. Chicken is mainly bought by young women, civil servants and other ‘working class’ customers. Cut fish is scarce yet highly demanded. The cut fish is preferred by people in courtship because they have got no bones and they taste nice. Pumpkin are mainly demanded by people who come from outside KTC. Pumpkins are also wanted by the rich, civil servants, police men and market venders. Coco yams are hard to find since they are only available deep in the villages and thus not easily accessible due to the high cost of obtaining them. Sources of big mangoes, apples are far from town making transports high. The big mangoes and apples are liked by school going children, people in love, civil servants, the rich. Chicken eggs are still insufficient on the KTC market. The eggs need a lot of transport since traders get them from very far and they are so delicate. Eggs are highly demanded by street chapatti venders, and hotel operators. Sorghum is bought by those preparing mingled sorghum flour ‘karo’, meals, and ‘bushera’. The

KTC authorities say that the unavailable foods are due to laziness and lack of knowledge on their agronomy by the farmers.

From the questionnaire interviews, the scarce foods include; cabbage, coco yams, beet root, avocado fruits, Irish potato, dodo and cowpeas (Table 3, Figure 2). The cabbages are scarce owing to weather changes leading to low supply and high prices in some months of the year. Cabbage is also highly perishable and thus bumper harvests are put to waste. They are usually bought by the local people and bus drivers. The coco yams are expensive and only available seasonally. They are usually bought by local households, boda-boda riders and policemen. The suppliers of beet root are far and hard to find. The main customers of beet root are the sick (patients), pregnant women, and the ‘corporate’ workers. The cowpeas are scarce because they are not grown in the area. They (cowpeas) are mainly bought by restaurants and local people

3.4. Main Suppliers of Foods to the KTC Market

Most of the foods sold and consumed in KTC come from outside KTC and Kagadi district. The main suppliers are located in Kagadi, Kabarole, Kyenjojo, Hoima, Kibale, Kampala and Mubende districts of Uganda (Table 4 and Table 5).

3.5. Challenges Faced by Food Traders in KTC

From the key informants, challenges affecting the food business in KTC include; long distances and poor roads, fluctuating demand, theft, low supply of food items, poor market facilities, high taxes, and weather changes (Table 6) as illustrated below;

1) Long distances and poor roads when purchasing food items lead to high transport costs. Respondents suggest that government should to rehabilitate the existing roads.

Table 3. The scarce food items that are on high demand in KTC

Food Item	Reason	Potential Customers
Cow Ghee	There's little milk and low demand for ghee	Hotels and restaurants
Banana (<i>Musa</i> spp.)	It is expensive, demand and supply are both low	Hotels, travelers, Households, workers
Beans (<i>Phaseolus vulgaris</i>)	Beans fetch less profits	Hotels, students
Beef (from cattle)		
Beet root (<i>Beta vulgaris</i>)	Suppliers are far and hard to find	Sick, pregnant women, workers,
Fermented porridge (<i>bushera</i>)	There are less profits on the sale of <i>bushera</i> .	Bakiga people
Cabbage (<i>Brassica oleracea</i>)	Climate changes, low supply and demand, highly perishable and expensive	Local people, bus drivers
Carrots (<i>Daucus carota</i>)	Carrot is not commonly grown, seasonal production, difficult to grow,	Patients, household, restaurants
Cassava (<i>Manihot esculenta</i>)	High demand yet low supply, long maturity, available in deep villages and its very perishable.	household, students,
Cowpeas (<i>Vigna unguiculata</i>)	It is not grown in the area	Households, restaurants
Chicken (<i>Gallus gallus domesticus</i>)	Expensive, low supply,	Workers, locals
Cucumber (<i>Cucumis sativus</i>)	Expensive, not grown	Indians, old aged people
Coco yams (<i>Colocasia esculenta</i>)	Seasonal changes	Hotel and house hold
Cauliflower (<i>Brassica oleracea</i> var. botrytis)	Few people plant them	House hold
Dodo (<i>Amaranthus</i> spp.)	Low supply	Boda-boda riders
Fishes	Low supply, expensive,	Household, patients, workers, students,
Fresh beans (<i>Phaseolus vulgaris</i>)	Seasonal production	Hotels and families
Garlic (<i>Allium sativum</i>)	Few people plant them	Household, old aged, workers
Irish potatoes (<i>Solanum tuberosum</i>)	Expensive to buy in large quantities	Household
Black night shade (<i>Solanum nigrum</i>)	Low supply	Local people
Ginger (<i>Zingiber officinale</i>)	Not grown in the area	Households,
Lemons (<i>Citrus</i> spp.)	Few people plant them	patients, aged
Liver	Expensive to buy, high demand, low supply	Ladies, hotels, household
Macrons	High prices, less profits, low demand	Local people, workers, ladies,
Mangoes (<i>Mangifera indica</i>)	High prices, low supply	Travelers
Mutton (sheep meat)	Less customers	Local herbalists
Animal feet - <i>molokony</i>	Very high demand and yet supply is limited	Restaurants and households
Mushrooms (<i>Agaricus</i> spp.)	Seasonally produced	Parties
Onions (<i>Allium cepa</i>)	Scarce in dry season, expensive, got from outside KTC	Hotels, workers, patients,
Oranges (<i>Citrus sinensis</i>)	Difficult to grow, scarce in market, grown outside KTC	Ladies, workers, patients
Avocado (<i>Persea americana</i>)	Perishable,	Homes and families, school going children
Passion fruits (<i>Passiflora edulis</i>)	Few people plant them	household
Pawpaw (<i>Carica papaya</i>)	They are not grown within Kagadi	Hotels & restaurants, workers, patients
Pineapple (<i>Ananas comosus</i>)	Low supply, climate, competition	Workers, household, ladies
Pumpkins (<i>Cucurbita</i> spp.)	Climate, no supply,	Hotel and house hold, workers
Rice (<i>Oryza sativa</i>)	High prices, need a lot time	Workshop attendants, boda-boda riders, students
Soya bean (<i>Glycine max</i>)	Few people plant them, expensive, low demand,	Household, workers, children
Sweet potatoes (<i>Ipomea batatus</i>)	Seasonal changes, expensive, low supply	Hotel and house hold
Tomatoes (<i>Solanum lycopersicum</i>)	Because they are scarce, seasonality, far, expensive	Hotels, household,
Water melon (<i>Citrullus lanatus</i>)	Hard to transport, seasonality	Travelers, hotels, restaurants, workers
Yams (<i>Dioscorea</i> spp.)	No supply, seasonality, expensive	Household, boda-boda riders, policemen,
Yellow bananas (<i>Musa</i> spp.)	They are perishable	Travelers

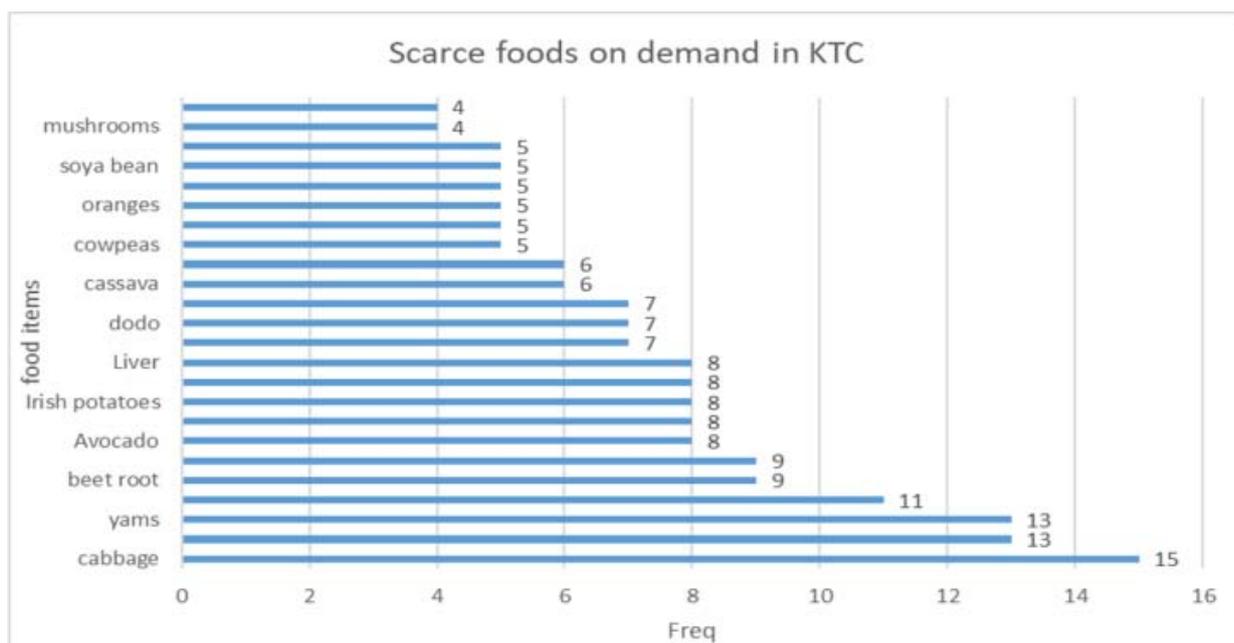


Figure 2. Scarce foods that are on demand in KTC

Table 4. Sources of food items sold and consumed in KTC

Food item	Location of suppliers
Bananas (<i>Musa</i> spp.)	Kyanaisoke, Kyaterekera, Muhoro, Rugashali, Mpeefu
Beans (<i>Phaseolus vulgaris</i>)	Mpeefu, KTC, Kampala, Muhoro, Ruteete, Kibale
Beef (from cattle)	Kahanda-Kyenjojo, Mukatengye, Mpeefu, Muhoro, Rwamwanja, Rwensasi-Mubende, Mparo-Kyegegwa, Hoima
Cabbage (<i>Brassica oleracea</i>)	Fort-Portal, Kabarole district
Carrot (<i>Daucus carota</i>)	Fort Portal, Kabarole district
Cassava (<i>Manihot esculenta</i>)	Ruteete
Chicken (<i>Gallus gallus domesticus</i>)	Isunga, Buronzi
Eggplants (<i>Solanum macrocarpon</i>)	Mpeefu
Chicken segs	Kampala
Groundnuts (<i>Arachis hypogaea</i>)	Muhooro
Fishes	Hoima, Kikube
Garlic (<i>Allium sativum</i>)	Fort-Portal
Goat meat	Muhooro,
Live goats (<i>Capra</i> spp.)	Mukatengye
Green pepper (<i>Capsicum annuum</i>)	Kyaterekera, Kasagati
Irish Potatoes (<i>Solanum tuberosum</i>)	Fort Portal, Kyanaisoke, Mabira- Kyenjojo
Lemons (<i>Citrus × limon</i>)	Fort-Portal
Maize (<i>Zea mays</i>)	Kyanoisopke
Matooke (<i>Musa</i> spp.)	Mabira, Mpeefu, Muhoro
Millet flour (<i>Eleusine coracana</i>)	Ruteete
Onions (<i>Allium cepa</i>)	Kabundaire_FTP, Kyakabadiima, Kyaterekera, Mpeefu, Muhoro
Oranges (<i>Citrus sinensis</i>)	Fort-Portal
Avocado (<i>Persea americana</i>)	Mpeefu
Passion fruit (<i>Passiflora edulis</i>)	Fort-Portal, Mpeefu, Mugarama
Pineapples (<i>Ananas comosus</i>)	Karuguza
Pork (pig meat)	Isunga, Kyakanagi
Posho (maize flour)	Kampala
Rice (<i>Oryza sativa</i>)	Kampala, Mpeefu, Ruteete, Hoima
Sweet potatoes (<i>Ipomea batatus</i>)	Katooke, Mabira, Mpeefu, Fort Portal, Ruteete
Tomatoes (<i>Solanum lycopersicum</i>)	Buyaga Katoma Kyenzige, Fort, Karuguza-Bubango, Kyaterekera, Kyenzige, Mabale, Mabira, Muhoro
Yellow banana (<i>Musa</i> spp.)	Mugarama, Fort, Kyaterekera, Muhoro, Rutete
Cabbages, Onions, Tomatoes, Pigs, Matooke	KTC

Table 5. Main sources of food items that are sold in KTC

Location (town, district)	Frequency	Percent
Fort Portal, Kabarole	11	15.3
Muhooro, Kagadi	10	13.9
Mpeefu, Kagadi	9	12.5
Kyenjojo	7	9.7
Kyaterekera, Kagadi	5	6.9
Ruteete, Kagadi	5	6.9
Kampala	4	5.6
Kyanaisoke, Kagadi	3	4.2
Isunga, Kagadi	2	2.8
Karuguzza, Kibale	2	2.8
Mukatengye, Kagadi	2	2.8
Buronzi, Kibale	1	1.4
Location	Frequency	Percent
Buyaga Katoma Kyenzige	1	1.4
Hoima	1	1.4
Kitebere, Hoima	1	1.4
Kyakabadiima, Kagadi	1	1.4
Kyakanagi	1	1.4
Kyenzige, Kagadi	1	1.4
Mparo, Kyegegwa	1	1.4
Mugarama, Kibale	1	1.4
Rugashali, Kagadi	1	1.4
Rwamwanja Kamwenge	1	1.4
Rwensasi, Mubende,	1	1.4
	72	100.0

2) Lack of capacity to estimate demand of cooked food and roasted meat. The traders have no clear solution to this challenge apart from increasing their working hours.

3) Theft of animals from the farms and slaughter holding pens is a serious challenge to the butchers. Theft may be dealt with by summoning and charging thieves in courts of law.

4) The fish mongers fail to get the required fish quantities from Lake Albert. The little fish they get is also highly perishable. It was reported that fish lasts only 24 hours. The use of fridges for fish preservation may extend the longevity of this fish. The fish mongers have also resorted to transporting fish with own motorcycles other than vehicles since the former work faster than the latter.

5) There is limited demand for 'matooke' and vegetables, in the groceries because big customers like schools are now going to the farmers directly where prices are lower. The other reason is that there are food vendors who avoid the daily market place and hawk food house-to-house at a lower price. Food traders are appealing KTC officials reprimand all illegal food hawkers.

6) Food traders in the Kagadi daily market face challenges of poor quality of the market stalls especially the dilapidated roofs and petition KTC to rehabilitate these market stalls.

7) The weather changes especially during the rainy season keep customers indoors and a few turn up to buy the foods e.g. street roasted chicken. Customers buy very late in the night especially when they are coming from bars, disco, and churches.

Table 6. Responses from household survey on challenges, causes and possible solutions

Category	Challenge	Root cause	Suggested solutions
Livestock products (meat)	Low demand for meat	High prices due to scarcity of animals	Reduce on taxes to reduce on prices; Diversify livestock farming
	Overpricing of animals by farmers	scarcity of animals	Boast livestock farming - give financial support to farmers
	Poor slaughter house facilities	Roof was dilapidated	The slaughter house needs to be rehabilitated
	Escaping of animals to their original owners		providing butcheries with holding pens (units)
	Scarcity of animals, poor quality of animals	Few livestock farmers; poor farming methods	Sensitization of farmers improving livestock production by farmers
	Long distances travelled to buy animals	Lack of cheaper animals locally, no animal market nearby	Improved local farms, start a local animal market
	Theft among butchers themselves	lack of cooperation	Formation of butcher's association
Food crops	Perishability of meat	Lack of proper meat preservation methods	Need for proper storage and preservation facilities
	Undermining the butcher job	Job is underestimated by community	Giving butchers a uniform
	Perishability	Foods staying for long, food not well treated/processed; low demand	Stocking few products that can be finished quickly before spoilage; proper treatment of food staffs; food hawkers should be stopped
	Low demand for food staffs	There are many groceries (competition) Hawking food in homesteads, ordinary shops selling food, market is poorly located, high prices of food items	Having good customer relations; food hawkers should be stopped or compelled to sell from daily market, relocate the market to a more central location
	some food items are seasonally available	Change in seasons	Selling what is available at that time Being patient with Gods plan
	High taxes from KTC	Poor leadership, poor government policies	KTC should be patient with traders as the town grows, taxes should be reduced, policy review
	Limited capital to invest in food business	Low profits from sold food	Loan schemes
Weather changes e.g. excess rain and sunshine	Market infrastructure is poorly built	Rehabilitate market infrastructure	
Theft of food crops and animals	Not implementing the laws; lack of food staffs; food is expensive	Strengthening security	

8) KTC trading license is also a big menace to food traders. The traders claim that different faces appear every day to collect licenses. KTC should revise the taxes on food but also provide adequate identification to tax collectors.

4. Discussion of Results

There are several types of foods supplied purchased, cooked and consumed by people in KTC. These range from crops (pulses, grains, vegetables, fruits, legumes, tubers), poultry, fish, beef, goat. They are available in the groceries, restaurants, hotels, streets and daily market. The foods in these different places are not mutually exclusive. The available food items could be those supported by the prices, agro-ecological conditions and / or highly acceptable culturally. For example, people in Kagadi grow maize [13] and most of it is sold to other districts. There are foods which exist on the market but in lower quantities. Other foods are not available on the market at all yet customers ask for them. Most of these are associated with high prices [14] and sometimes low profits mainly due to low supply and high marketing and production costs. The low supply may be due to variability in production due to seasonal changes and perishability [2,6,15,16]. The issue of low profits also is dependent upon the quality, perishability [3,6,14,15,17] of the product and the type of customers and their incomes. If the target customer for, say, fermented porridge “*bushera*” are people with high income jobs, the seller can reduce the unit quantity of the product and sell at the same price, or opt to increase the price per unit of the product sold. If the product is highly perishable, then, increasing the price per unit sold could be the answer.

Food items have a special category of customers e.g. civil servants, ladies, and the wealthy. The purchasing power by these customer groups is relatively higher. The tendency of food traders to focus on specific customer category is sometimes misleading [6]. For example, the data suggests that *bushera* sellers target Bakiga ethnic group as their biggest customers. This trend may have changed as all tribes are getting interested and buying this product (*bushera*) [13].

Most of the foods sold and consumed come from outside KTC and Kagadi district. The different foods are got from different places into KTC daily market as shown by Table 6 above. The main suppliers are located in Kagadi, Kabarole, Kyenjojo, Hoima, Kibale, Kampala and Mubende districts. These districts have a higher competitive advantage to produce these foods in the required quantities and quality [16,18,19,20,21,22]. This could be due to agro-ecological zoning where by each place has a different ecological conditions that favor different crops [23]. However, this is subject to test practically to ascertain whether all the foods consumed in KTC can be supported by the local conditions [23].

A study in Congo indicates that exchange rate of the local currency, armed conflicts, re-export trade, income and the domestic production index all represent the main factors that account for food imports in Congo [24].

From the key informants, the key challenges affecting the food business in KTC include; infrastructure (road,

markets place), business related skills, tax policies, security of their items, low supply and perishability, climate variability, fluctuating demand and supply. Most of these can be addressed by the traders themselves e.g. acquiring more skills in marketing and estimating right quantities to stock, acquiring better transportation and storage facilities e.g. cold rooms and refrigerators [14]. The government can come in to increase the resilience of the traders and farmers to climate changes [6] by providing better infrastructures for irrigation, preservation, transportation (roads), markets, and extension services [25]. It is envisaged that government investment decisions are informed by return on investment [17]. It is however incumbent on the food value chain actors to boost production and trade of food to attract the attention of government [1,5].

5. Conclusions

KTC has potential market for a diverse of food items. Some items i.e. crops, poultry, fish, beef are already available on the market but a few crops like Irish potato, pumpkin, coco yams, mangoes, apples, sorghum flour are still inadequate. The inadequate livestock products include; goats, some types of fish, local breeds of chicken, and chicken eggs. Most of these have capacity to be produced in KTC. The farmers within KTC have to wake up and produce these foods for its people.

Food comes from within and outside KTC and Kagadi district. Food consumers are heavily depending on producers in other locations. These mainly include; Kabarole, Kyenjojo, Hoima, Kibale, Kampala and Mubende districts. Most of them do not share borders with Kagadi district (where KTC is located). The farmers in KTC have to be helped to gain more competitive advantage to grow food for its growing population.

Like many other businesses, the food sector is not spared from challenges both structural and logistical. To most of these challenges, a solution has been suggested and these can be tested out over time through a multi-sectoral engagement.

There is need to build capacity of urban and rural farmers in KTC to produce enough food for the population. They need to be supported with training and farm inputs to increase their resilience against farming risks e.g. climatic changes. The food traders have to be supported with infrastructure and favorable policy framework to facilitate more distribution of food. These policies are related with taxation and food hawking.

There is need to conduct more studies to profile all food traders and urban farmers more accurately to quantify the food demand market situation.

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