

Cassava and Poultry Business: Peri-Urban Trend in Assembling, Processing and Marketing Trade Offs in Kiryateete Village, Hoima Oil City Uganda

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Abstract:

Supply chains are changing rapidly, with transactions increasingly based on chains that involve coordinated links between farmers, traders, processors and retailers. It is against this background that this paper is made and synthesized after a field report analysis of how marketing of cassava and chicken is done at various stages in the supply chain. Emphasis is placed on markets chosen for linkages, on the capacity of the linking traders and consumers, and on the relationship between them. The paper tries to describe and explain the different marketing stages of assembling, transportation, processing and preparation for consumption of cassava and chicken by different smallholder individuals involved. It outlines the challenges and opportunities involved in marketing of these products.

Keywords:

cassava; chicken; poultry; marketing; food marketing

I. Introduction

Uganda is a rapidly developing country in East-Africa, experiencing a fast population growth and increasing incomes, though statistical report by World Bank showed that 41.7% of the Ugandan population lives under the poverty line (World Bank, 2019). The Ugandan population is projected to reach 100 Million in 2050, with 60% of the increase taking place in urban areas (World Bank, 2019). According to the World Bank, economic growth remains strong, with an estimated growth rate of 6.3% in 2019, largely driven by service and industrial growth. However, the agricultural and livestock sector remains the backbone of the economy.

II. Review of Literature

Up to 70% of Ugandan households fully or partially derive their income from livestock (Embassy of the Kingdom of the Netherlands in Uganda, 2020) while over 80% of income is obtained from growing something and selling it, such as crops (Cassava inclusive), fruits, or vegetables (Anderson, Learch, & Gardner, 2016). The cassava and poultry sectors are paramount in providing Ugandans with carbohydrates, proteins and food security. In recent years, Chicken consumption has reportedly increased significantly in the country, with it now being estimated to be the second most consumed protein product in the country. Similarly, consumption of poultry products is increasing, with an increasing demand for poultry cuts and other value added products

Cassava is the second main staple food in Uganda and has been identified to have potential of improving livelihood and grown as a famine reserve crop of smallholder farmers

in Uganda. Cassava was introduced in Uganda between 1862 and 1875, up-to now the crop is known to have a high yielding capability, very easy to grow and good source of food, alcohol and industrial starch. Recently, a number of cassava varieties are on the market in Uganda. The crop is recognized as a major agricultural commodity for poverty eradication, ensuring food and nutrition security, and as an industrial raw material (Collison et al., 2003)

Poultry Birds interchangeably referred to as ‘Chicken’ locally in Uganda, on the other hand is a sector that is growing fast and presents great opportunities for both small and large operators to build successful businesses. The increasing demand for chicken (call it chicken meat) resulting from the growing population and urban development across the country provides an opportunity for new and existing farmers to cash in on this enterprise.

III. Research Methods

A systematic scoping review collected all available literature on food assembling, food processing and food marketing with the term “cassava” or “poultry” or “chicken” from different databases, as well as Google Scholar for grey literature, and from relevant institutional websites. Included were all peer-reviewed journal articles, book chapters, and grey literature in which food marketing among local farmers and small traders was the central topic of the article, of any review and discovery research type. Direct observation method in the field was employed, including the use of pictures and photos on the way cassava and poultry products are assembled, processed and marketed.

IV. Results and Discussion

4.1 Results on how Poultry Birds (Chicken) is assembled

Poultry birds (Chicken) are assembled in cages normally made of metals and sometimes wood in Hoima and Uganda at large. These cages are owned by sellers/traders in well gazzeted markets like Duhaga Round-About food market and Hoima Central market of which all these are daily food markets. Some traders assemble these chicken birds on the roadside awaitin g for customers who are by-passing to come and buy.

Poultry birds are differently assembled depending on an individual(s) trader or dealer. Some have their structured Kiosks on the roadside where they assemble or display their birds for customers to view and buy.



Figure 1. Chicken/Poultry Assembled in Cage



Figure 2. Cages with Chicken Birds

4.2 Results on how Cassava is assembled

Most of the energy giving foods sold and consumed including cassava and cassava products around Hoima town come from outside the town (Charles L. T et al., 2020). The main suppliers of Cassava and cassava products are found or it's got from Kagadi, Kabarole, Kyenjojo, Hoima villages, Kibaale, Kakumiro and Kikuube districts of Uganda. The major players in cassava and cassava product marketing in Hoima are traders who consist of retailers, village assemblers/brokers, transporters/travelling traders, wholesalers, and exporters. Assembling of Cassava and cassava products is done in different forms by different value chain actors.



Figure 3. Fresh Cassava on a structured Road Side Kiosk



Figure 4. Fresh cassava on Roadside Ground in Kiryateete



Figure 5. Cassava in basin/tin @15000 UGX



Figure 6. Cassava Displayed on Ground in 3-Piece Hip for Sale

Fresh cassava in the local market of Kiryateete is in most cases just displayed on ground as observed in photos 4 and 6, while in photos 3 and 5, they are on a structured kiosk and in a tin/basin ready for customers to buy. The advantage of having this kind of business, it's the local market and people born of that village and surrounding that mostly buy and consume the cassava. There is little concentration to add value either in form of cleanliness, packing or any value added to attract high class of customers (the so called the rich who are driving). The rich tend to visit well gazzeted markets where there is proper display of fresh foods. However due to high demand in other parts of the country, such as Kampala, more fresh cassava is always transported from Hoima to meet the demand in the capital city due to high population (Kleih, Phillips, Jagwe, & Kirya, 2012).

4.2 Processing of Chicken and Cassava

a. Cassava Processing

Cassava processing in the first place begins with slicing it into pieces, then it is sundried on a paper or mat. The dry cassava is taken for milling plant, wher it is weighted to get the net weight as observed in photos 7 and 8.



Figure 7. Cassava being dried as a Stage for Processing



Figure 8. *Dry Cassava being Measured before Milling*

As observed in photo 7, cassava is peeled and chopped or sliced in different but relatively similar shapes and then put on sunshine to dry. Traders or farmers use papers or bare ground to dry this cassava. After thorough drying up of the pieces of cassava, it is packed and taken to a Milling Plant nearby to process into cassava flour. This can be observed in photo 8, where two men and a lady are seen weighting the dried cassava to ascertain the kilograms before milling.

As observed from the photos below, many traders and household members take their dried cassava to different Milling Plants to process them into Cassava flour. However the quality of flour obtained depends on how cassava was dried, the nature of a milling plant and sometimes the variety of cassava.



Figure 9. *Tuhaise on a milling plant: Processing her Dry cassava in Kibaticell a nearby village to Kiryateete*



Figure 10. *A Lady owns a Milling Plant in Mpaija where many Households Process their Dry Cassava*

As depicted from photo 9, it is observed that processing of dry cassava into cassava flour and packing is locally done. As a challenge, Photos 9 and 10 indicate the milling plants existing in open ground that exposes it to risks of rain, wind and dirt that lower the quality of cassava flour. Therefore, the low quality of processed and marketed cassava flour ends up with many food security implications. First of all, both macro and micro nutrients in the food are affected which may promote malnutrition and undernourishment in the local population. Secondly, the issue of low and fluctuating prices come in which it deprives the sellers and producers of adequate income, thus expanding poverty trend in the smallholder farmers. Thirdly, the economic growth and productivity of Uganda is affected significantly.

b. Photos below Show how Cassava is Processed Using a Milling Machine in Kiryateete Peri-Urban

Milling is done by the machine that turns hard pans of dry cassava into flour which is then packed in sacks of any net weight. This can be observed in photo 11 and 12 where there is milling and packed cassava flour.



Figure 11. A Man Operating a Cassava Milling Plant



Figure 12. Packed Cassava Flour in 50kg Net Weight

Further processing of cassava but taking a different direction as observed from above, is when cassava is peeled and turned into cassava chips after frying with cooking oil. Cassava chips processing is an important stage that influences the quality of the final product that is consumed. It serves as a source of cash income for many rural and urban smallholder households, majority of who are women and youth. Demand for cassava and cassava chips is expected to increase as consumer preference changes with the development of new cassava products (Alacho et al., 2013).



Figure 13. 14. and 15. Depict how Cassava is turned into Cassava Chips and Ready for Consumption

4.3 Poultry /Chicken Processing

The slaughtering and processing of chicken is mainly done by consumers themselves in their household homes and traders or dealers especially chicken meat roasters. To other extent, it is done by traders on behalf of customers (such as hotels, restaurants and individual buyers). The other players are the small scale backyard slaughter. The products are sold through individual buyers (direct consumers), hotels, supermarkets and restaurants. The common types of chicken meats found on Hoima market in Uganda, includes local chicken meat which is most preferred and relatively more expensive than exotic chicken meat.

On the other hand, processing of chicken begins with Muslims in the community participating in the slaughter of livestock. This is in approval of the Halal meat laws and guidelines where a purely circumcised male person carries the process of slaughtering the poultry bird (Chicken) to ensure that animals are not improperly slaughtered or dead before slaughtering and animals and birds are not slaughtered in the name of anyone but Allah (God) (International Trade Centre, 2015).



Figure 16. A Muslim Slaughtering a Poultry Bird (Chicken) Bought by a Customer in Kiryateete Roadside Mark



Figure 17. *A young-man Removing Feathers to have Chicken Meat after Slaughter (Removal of Head by a Muslim)*

Chicken or poultry business is associated with a number of challenges. Some of these include: Poor slaughter house facilities as depicted in photos 8 and 9; Overpricing of a poultry birds by farmers and traders; poor quality chicken-birds; undermining the butcher job; Escaping of poultry birds; Scarcity of birds and theft among fellow traders and dealers(Charles, Jackson , William , & Matia , 2020). These are challenges mostly faced during the marketing of poultry birds in Busiisi Division Hoima, particularly in Kiryateete Village.

a. Photos Showing how Chicken is Chopped into Pieces, and then Placed on a Fire for Roasting on Kiryateete Road Side



Figure 18. *Freshly Chopped Chicken before*



Figure 19. *Chicken Meat being roasted while other Ready*



Figure 20. *Young Men Roasting Chicken at Kiryateete Roadside*



Figure 21. *Roasted Chicken together with Tomato Spice*

4.3 Results on Marketing of these Products (Cassava And Chicken) and Associated Marketing Challenges

a. Marketing of Cassava and Its Products

Both producers and value chain traders encounter similar challenges when it comes to marketing their cassava products (Odongo & Etany, 2018). Some of these include but not limited to; price fluctuation as the major challenge to marketing their cassava products, Low product quality, lack of market information, mixed display of cassava flour with other types of flour such as maize and millet flour and poor infrastructure (like poorly made market stalls and proximity to dusty roads). Some marketing challenges are sharing of stands/stalls of dry foods (flour, beans and rice) together with fresh foods like tomatoes as observed in the photos below.



Figure 22. Flour of Cassava and Maize on Same Stall with Beans



Figure 23. Cassava Flour, Rice and Fresh Tomatoes

b. Many Producers and Dealers

There are number of large players in poultry whose production processes and methods are at of quality standards. This makes overall, poultry production estimated to be significantly higher in the country than official figures indicate (Embassy of the Kingdom of the Netherlands in Uganda, 2020). The increasing scale of the main players and the associated economic advantages of scale are skewing the playing field against smallholder dealers and mid-sized players, preventing them from further growing their business or pushing them out of the market.



Figure 24. Dry Cassava in a Basin Placed with other Food Stuffs on Table as a Stall at House



Figure 25. Cassava Flour on Well Gazetted Market Stall though some Flour not Packed to Avoid Dust



Figure 26. Dry Cassava Placed with Fresh Onions on a Road Side Stall



Figure 27. A Woman with her Packed Dry Cassava Waiting by the Roadside a Transport means to the Milling Plant

c. Improper Packaging and Handling Materials

Many traders face a marketing challenge of poor packing materials. They usually have their dry cassava (as in Photo 24 and 26) either in basin or just placed on the surface of a stall respectively. This may not well attract customers of high class.

d. Limited Transport means that may cause Delays in Serving Customers

As observed in photo 27, a woman is by the roadside waiting for a means of transport. This results into delay to serve her customers who may want cassava flour in time.



Photo 28: Cassava flour in a sack but being sold/mixed display with other food stuffs and non-edibles like bars of soap



Photo 29: Woman selling cassava flour and clothing (local name called Bitengi cloth)



Photo 30: Dry cassava placed with fresh Melons sold on a compound by a woman



Photo 31: Roadside storage of fresh cassava to prevent it from direct sun heat and cover during the night



Photo 32: Drying cassava on a piece of paper but on dusty ground that may spoil the cassava flour quality

e. Limited Storage and Housing Facilities

As observed in figure 31, Fresh cassava is in most cases just covered with spoilt or damaged papyrus mat along roadside in Kiryateete. This exposes it to risk of theft at night, dust and direct sun-heat during day time. This reduces quality of cassava and hence affects the price of cassava.

f. Poor Drying Habits

It is discovered many traders and farmers, dry cassava on dusty environment that still affects or deteriorates the quality of cassava flour.

The business of cassava is **mainly biased to women.**

This implies many household female headed (as observed from most photos) are the ones involved in the activity of marketing to look for survival income and livelihood.

4.4 Marketing Challenges of Chicken



Figure 33. Chicken Meat in an Open Bucket, no Freezer to keep them Fresh



Figure 34. Roasting Chicken on Roadside with no Eating Ground for Customers



Figure 35. Many Roadside Dealers in Roasted Chicken Meat

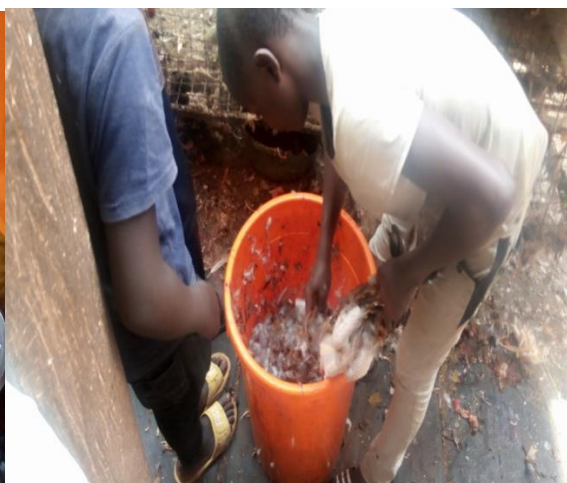


Figure 36. Slaughtering Chicken in a Bucket

There is a challenge of poor storage facilities (Dealers in fresh chicken meat lack freezers) to keep the meat fresh for customers who may want fresh chicken meat to take home and prepare for their household members. This limits the market because they are keeping them in open buckets, as observed in figure 33.

No gazzeted eating ground for quick customers at the roasting point. This is because chicken roasters are situated along the roadside, are unable to provide sits to customers who may want to eat their bought roasted chicken from there. In the end, many customers may go to other gazzeted hotels and restaurants where there is room for eating while seated.

Absence of well gazzeted slaughter point. Many young men dealing in the chicken meat business just slaughter chicken in their buckets (as observed in photo 36). There is no point or place gazzeted (Abattoirs) for slaughter like as it is for slaughtering animals like cattle and goats (Mwesigwa R. et. Al., 2020). Abattoirs are designated licensed places for hygienic meat processing (Alonge, 2005). The government has put a deaf ear on such habits yet it is supposed to emphasize and monitor all policies.

V. Conclusion

Just like many other businesses, the food sector (Cassava and poultry marketing inclusive) is not spared from challenges; ranging from structural to logistical and policy. To most of these challenges, a solution has been suggested and these can be tested out over time through a multi-sectoral engagement (Charles L. T et al. , 2020).It is important to know whether with expected changes in technology, policy and prices, cassava could play an even greater role in improving the quality of urban diets by increasing supplies of a low cost staple foodstuff in “easy to cook” forms (Waigumba, et al., 2016). This will depend on the evolution of production and marketing costs, as well as the price of cassava relative to those of other staple foods, particularly cereals.

Value chain actors mostly retailers who are women, incur high level of losses due to rapid postharvest physiological deterioration of cassava tubers, simply they keep the tubers for long time having to sit the whole day in open and road side markets awaiting for buyers (Waigumba, et al., 2016). This can be observed in the following photos:



Fresh Cassava displayed on Roadside Kiosk in Kiryateete

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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