

Constraints and Opportunities of Pineapple Marketing in Bureti Sub County, Kericho County, Kenya

Jacob O. Okal

Department of Agricultural Biosystems and Economics, University of Kabianga, Kericho, Kenya

*University of Kabianga, P.O Box 2030-20200 Kericho

Abstract: *A well-functioning marketing system is essential given the perishable nature of fresh pineapple fruits. Most agricultural marketing systems in Kenya as in other developing nations are underdeveloped making it difficult especially for smallholder farmers to access the markets. The objective of this study was to identify the major marketing constraints faced by farmers and traders as well as the major opportunities in pineapple marketing in Bureti Sub County, Kericho County, Kenya. Descriptive research design was used. Primary data was collected from 133 farmers and 37 traders using structured interview schedules through face to face interviews. This was supplemented by secondary data from published and unpublished sources. Descriptive statistics was used to analyse data and results presented in tables and graphs. Results revealed that both farmers and traders faced numerous challenges in pineapple marketing. And that there existed several opportunities for pineapple marketing. Based on the finding the study concludes that there is a lot of potential for the growth of the pineapple sector and that the potential could be unlocked by formulating and implementing strategies that maximizes on the existing opportunities while minimizing on the impacts of the constraints. The study however recommends involvement of all the stakeholders in the pineapple sector in the formulation and implementation of the strategies so as to improve the pineapple marketing systems and enhance growth in the pineapple sector.*

Keywords: Pineapples, constraints, opportunities, Bureti Sub County, Kericho -Kenya

1. Introduction

Pineapple is important tropical fruit because of its proven nutritional value and medicinal benefits [13]. The Philippines, Thailand, China and Brazil are the main producers of pineapples supplying almost 50% of the total pineapples traded in the world. The other producers include Costa Rica, Nigeria, Kenya, Mexico, and Indonesia [35, 23]. In Kenya pineapple is grown by large scale producers and small scale farmers. Large scale production is concentrated in Central Kenya where intensive inputs are used, while the small scale production is concentrated at the Coast, Central and Western Regions of the country; characterized by small farms with low input use. Pineapples are either sold as fresh fruit or are processed into a number of products like squash, jam, vinegar, alcohol and citric acid among others [12]. Marketing of pineapples is however complex and risky because of their perishable nature and bulkiness and therefore require a well-functioning marketing system to transfer it from the point of production to the point of consumption within a specified time when still fresh.

Market outlets in developing nations are however not well developed making it difficult to access the markets because of lack of the necessary resources and market infrastructure [25]. This constraints poses a special challenge to smallholder farmers because they lack the resources to access and interpret market information. They also lack the finances, human capital and social capital to develop the linkages needed to succeed in the market. For instance [33] established that the existence of an efficient marketing system in Africa was constrained by price fluctuations, inadequate transportation infrastructure, poorly developed market infrastructure, weather conditions that influences

what to produce, inappropriate government policies and lack of cheap post-harvest technologies. Similarly [8] established that some of the constraints faced by smallholder farmers in agribusiness value chain in Limpopo included small quantities of produce, poor produce quality, lack of appropriate transport facilities, lack of collective marketing by smallholder farmers, distance to the market, inconsistency in production and lack of accurate, reliable and timely market information. Moreover [6] noted that the perishable nature of pineapple was a major constraint to pineapple marketing in selected markets in Osun State, Nigeria while [16] indicated that spoilage of fruits, transport risk and irregular supply were the major constraint in watermelon marketing in Bayelsa State, Nigeria. Furthermore [29] established that lack of market information and high perishability of produce, poor storage facilities and poorly developed village markets were some of the constraints in the tomatoes marketing in Mbeya and Peru Urban in Tanzania. Similarly [24] found that inadequate technologies for value addition and high transportation cost were some of the constraints in soya beans marketing in Malawi. Additionally [21] recommended close partnership between the government and private sectors to improve the infrastructure and services so as to improve retail marketing of fruits and vegetables in India so as to counter the constraints faced in the supply chain of this commodities. Furthermore [20] opined that strengthening group cohesion and improving the relationship between the chain actors were some of the viable opportunities for upgrading the rice market in Uganda.

In Kenya the market for pineapples is largely informally organized and poorly integrated leading to high risk due to spoilage, post-harvest problems between farm gate and

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consumption points as leading to heavy losses, through high transaction costs [12]. The supply of pineapple to consumer markets in Kenya according to is seasonal because of their growth and climatic requirement. The problem of assemblage and perishability of the fruit has resulted in relatively few market actors at the wholesale levels, as opposed to existence of a large number of pineapple buyers at the retail levels [26]. Pineapples production in Bureti Sub County is a major source of livelihood to majority of smallholder farmers yet from the validated horticulture report from the Department of Agriculture, Kericho County [10], the growth of the sector is slow based on the production figures. The question therefore is what has constrained the growth of the pineapple sector and what are some the opportunities in the pineapple industry to counter the constraints and result in increased growth of the sector. The objective of this study was to identify the major marketing constraints faced by farmers and traders as well as the major opportunities in pineapple marketing.

2. Methodology

Descriptive research design was used in this study to identify and analyse the challenges and opportunities in the pineapple marketing in the study area. This design was preferred because it allows for thorough analysis, presentation and interpretation of a wide spectrum of qualitative data. The study was conducted in Bureti Sub-County in Kericho County situated in the South rift region of Kenya. The Sub-County is one of the 6 Sub Counties in Kericho County with a total land area of 321.1Km². The target population was pineapple traders in the major market centers of Bureti Sub-County. Both purposive sampling and systematic sampling were used to select traders for interview.

Purposive sampling was used to select the four major pineapple marketing sites in the study area while systematic sampling was used to identify the traders for the interview using traders register from the County Government of Kericho at the Bureti Sub County Office. A total of 133 farmers and 37 traders were selected for this research. Primary data was collected using structured interview schedule through face to face interviews. Secondary data was collected from different published and unpublished sources including government institutions, journals, working papers and the website.

Descriptive statistics using frequencies percentages were used to analysis the major constraints and opportunities. Both farmers and traders were asked to identify constraints and opportunities. Score ranking using percentages was then used to rank the constraints. Information from key informants was also used to give further information in the analysis constraints. Data was presented in tables and charts

3. Results and Discussions

Pineapple marketing

Result show that there are 6 market actors which include producers (farmers), rural assemblers, mobile transporters, wholesalers, retailers and consumers were involved in

pineapple marketing. According to Pabuayon et al. (2014) every market actor in an agricultural marketing system plays a key role in performing marketing functions and providing marketing services at different sub markets. Results further revealed that 96% of farmers sold their produce as individual, only 4% sold their produce in groups signifying lack of organization of the market in the study area.

As opposed to the numerous years of experience of the farmers in pineapple production, 81.1% of the traders had a trading experience of less than 5 years. This is critical since educated experienced farmers and traders would be more efficient marketing than the ones without experience as established by [22] that experience counted more than education in increase increasing marketing efficiency. In addition, only 10.8% of the traders did not have any formal education when compared to the 15.8% of farmers who did not have any formal education. This is significant because according to [1], educated farmers tend to be more innovative and are more likely to adopt the marketing better marketing strategies.

Pineapple marketing constraints

Results in Table 1 revealed that the major constraint faced by farmers included perishable nature of pineapples (94.7%), lack of high quality planting material (88.7%), poor rural access roads (85.0%) and lack of organized marketing groups (82.7%) ..

Table 1: Marketing constraints faced by pineapple producers and traders in Bureti, Kenya

Constraints	Frequency (n= 133)	Percent	Rank
Poor rural access roads	113	85.0	3
Lack of high quality planting material	118	88.7	2
Perishable nature of pineapples	126	94.7	1
Lack of market information	104	78.2	6
Inadequate value addition	75	56.4	7
Lack of organized marketing groups	110	82.7	4
Lack appropriate storage	107	80.5	5

Note: n = sample size; Score ranking using percentage was used to rank the constraints

Table 2 show the constraints faced by traders. The major constraints included poor market infrastructure (91.9%), poor rural access roads (83.8%), perishable nature of pineapples (75.7%), lack of grades and standards (70.3%) and lack of organized markets (64.9%).

Table 2: Marketing constraints faced by pineapple traders in Bureti, Kenya

Constraints	Frequency (n=37)	Percent	Rank
Poor rural access roads	31	83.8	2
Perishable nature of pineapples	28	75.7	3
Lack of market information	22	59.5	6
Transportation problems	21	56.8	7
Poor market infrastructure	34	91.9	1
Lack of organized marketing groups	24	64.9	5
Lack of grades and standards	26	70.3	4

Note: n = sample size; Score ranking using percentage was used to rank the constraints

From the Table lack of high quality planting material was a major constraint to the pineapple farmers given its rank. This could imply low productivity and low quality produce which directly affect supply of the produce to the market. The findings are in line with [17] that smallholder pineapple farmers in Ngoma District of Rwanda were faced with inadequate planting materials and unhealthy planting materials which negatively affected pineapple production and supply to the market.

The poor rural access road meant high transportation cost and delays in delivery of produce leading to spoilage especially during the rainy seasons. This relates to the findings by [30] that poor road infrastructure, especially the rural and trunk roads constitute significant challenge in Mango production and marketing in Kenya. Similarly lack of organized marketing group was a constraint to both farmers and traders. This could have been attributed to the fact that most pineapple farmers sold their produce individually as [8] also established that lack of collective efforts was a major constraint in smallholder farmers in agribusiness in Limpopo, South Africa. On the other hand, traders finds it difficulties to collect sufficient quantities when each farmer sells his/her produce individually because of high transportation costs due produce assembling. Likewise the poor rural access roads could result in delays in collection of fresh pineapple produce resulting in the deterioration of quality while transportation problems would result into high transportation cost, high prices and low marketing margins. This is in line with [24] who found that poor road infrastructure constrained soya beans marketing in Malawi and [2] who noted that road systems are the most serious infrastructural bottleneck facing agriculture.

The lack of market information could be attributed to lack of market information centers where farmers and traders can access timely and reliable information. The findings is not different to [34] that lack of timely information was one of the constraints on small-scale agricultural marketing in Saboba Northern region of Ghana. Similarly the lack of access to credit could be attributed to high interest rates, lack of collateral and lack of information on source of credit.

It also meant that most traders did not have reliable information for proper pricing of their produce as established by [19] that access to market information encourages long-distant trade by giving traders reliable information about the conditions in distant markets.

Furthermore the lack of appropriate storage and at the farm level and at the nearest markets and inadequate value addition meant inflexibility in selling the products, low bargaining power, high post-harvest loss given the perishability nature of pineapples hence low returns. This is supported by [24] that soya been marketing in Malawi was constrained by among other factors inadequate technology on value addition and storage facilities. Processing of pineapple fruit would increase its shelf life. And also by [15] that processing minimizes the qualitative and quantitative deterioration of the produce after harvest and increases the shelve life of the produce

The poor market infrastructure was because attributed to inadequate running water, storage and grading facilities, stalls and toilets which resulted into poor quality of the produce and low price offers. This finding agrees with [28] that lack of storage, notably cold storage was a big constraint in fresh produce marketing across Kenya to all the market actors. In addition, the perishable nature of pineapple could meant that farmers and traders were not able to store the produce for a longer period of time and was sometimes forced to dispose of the produce at lower than purchase prices to minimize total loss. This agrees with [6] also indicated that perishable nature of pineapple was a major constraint to pineapple trade in selected markets of Osun State, Nigeria. Lack of grades and standards implied lack of fairness in the buying and selling of the produce since grades and standards contribute to operational and pricing efficiency by providing buyers and sellers with a system of communicating price and product information. Most farmers sorted pineapples according to sizes (small, medium and large) and used this sizes to arrive the price. It was however observed during the interview that there was no standard measure upon which they based their classification in the various sizes. This posed a challenge at all levels of the marketing channel and especially to the consumer. The findings are supported by [34] who stated that inadequacies exist in standardization and grading of agricultural products especially in developing economies and that this posed a challenge in assigning prices to the commodities as per the quality specification.

Pineapple marketing opportunities

Figure 1 show pineapple marketing opportunities for pineapple farmers. The major opportunities included development of rural access roads, developing market infrastructure, introduction of high yielding pineapple varieties, training farmers on improved pineapple production technologies and linkage to high value urban/export markets.

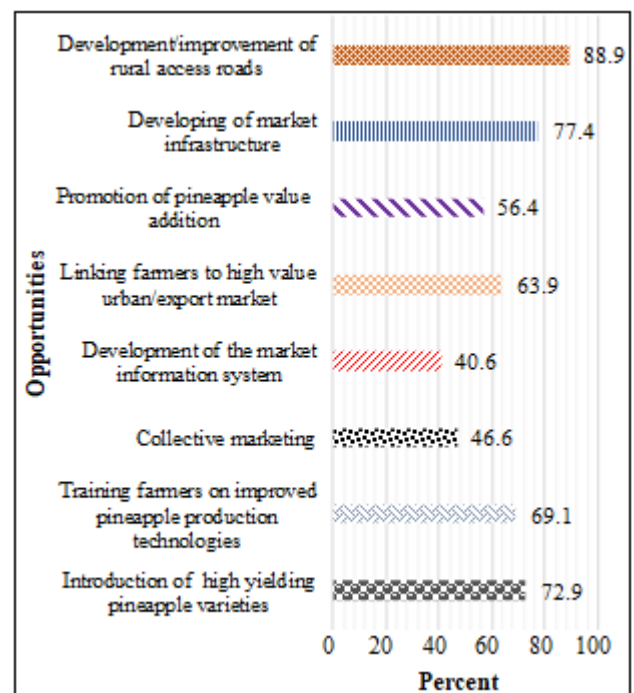


Figure 1: Pineapple farmers marketing opportunities

From Figure 1, Introduction of new high yielding pineapple varieties would result into increased productivity and improved quality of the produce hence increased supply and marketability of the pineapple fruits. This could be possible in collaboration between the County Government of Kericho, research organizations like Kenya Agricultural Livestock Research Organization (KALRO) and large established pineapple companies like Delmonte Kenya Ltd. This agrees with [27] that the use of improved technologies would increase the efficiency of production and ensure adequate supply of the produce to the market.

Similarly improvement of rural access roads would enable traders to easily access the farms while at the same time enable farmers to take the produce to the collection points and market place. This would be possible through proper prioritization of improvement and development of access roads in pineapple growing areas by the County Government. This would ensure timely deliveries while minimizing losses given that pineapple fruits are perishable and help reduce transportation cost thereby increasing the farmers and traders net returns while also ensuring that the produce reaches the consumer at reasonable price. This agrees with [22] who recommended that the government should endeavor to build roads in areas where they do not exist and maintain them already existing ones for easy access to market and thus reduce transportation cost, in order to boost the revenue of Garri marketers in Abia State of Nigeria.

Moreover pineapple value addition would increase the shelf life, improves the product for the customer and returns per unit of pineapple produce. This is because pineapple fruits can be processed into pineapples are juice, squash, halva, jam, candy, pickles, chutney and wine. This is supported by [15] who stated that there was an urgent need to increase the level of pineapple value addition to improve its quality for domestic and export market. Furthermore linking farmers to high value urban and export market would be an important strategy for raising rural income and reducing poverty since there is great potential for pineapple export by smallholder farmers in Kenya as a result increasing demand for pineapple in the international market. The government can facilitate linkage between farmers, other buyers and the export market by facilitating the formation of farmer groups and formulating policies for farmer traders contract schemes.

Figure 2 show the pineapple marketing opportunities for the pineapple traders. The major opportunities included development of rural/improvement of rural roads, grading and standardization, development of market infrastructure and collective marketing.

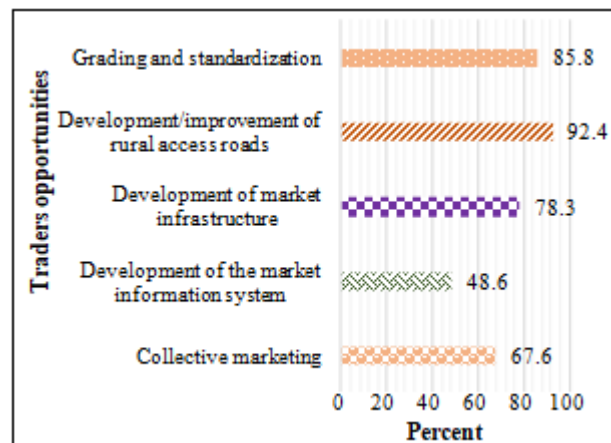


Figure 2: Pineapple traders marketing opportunities

The development/improvement of rural access roads would help to reduce the time traders take to collect the produce from the farms while at the same time reducing the transportation cost as well as minimizing loss due to delay in marketing. This finding agrees with [32] that improvements of feeder roads, bridge construction, and rural road routine and spot maintenance results in increased participation of vendors at local markets, increased farm gate prices of agricultural goods and a reduction of transport cost and/or travel time which in turn lead to increased production.

Developing market infrastructure would facilitate easy collection, help reduce post-harvest losses, improve produce hence ensure efficiency in marketing. For instance construction of appropriate storage facilities, collection centres, market stall and cold storage would enhance marketing as [9] established that appropriate storage facilities ensure efficiency in marketing since storage enhances the shelf life of products and thus offers commodity for sale in a phased manner to avoid unnecessary glut in the market and therefore a slump in prices

Development of market information system would enable farmers to plan their production more in line with market demand, schedule their harvests at the most profitable times, decide which markets to send their produce to and negotiate on a more even footing with traders. As [3] also indicated that spot market information was useful for direct sales negotiations and to keep abreast of market conditions. Marketing information would also enable traders to move produce profitably from a surplus to a deficit market and to make decisions about the economics of storage, where technically possible [5]. It would further help in timing of sales particularly for farmers and traders as there is potential of earning more from delaying sale after harvest though at the same time there is the risk of prices falling. The existence and dissemination of complete and accurate marketing information is the key to achieving both operational and pricing efficiency [4]. Besides having timely and relevant information especially marketing information on transport availability, new marketing opportunities and the market prices of farm inputs and outputs is fundamental to an efficient and productive agricultural economy [7]. Market information encourages more efficient spatial and temporal arbitrage. Arbitrage is the process of exchange of

commodities with the objective of taking advantage of price differences that exceed transaction costs. Spatial arbitrage takes place when traders take advantage of price differences until these differences decrease to the level of transaction costs while temporal arbitrage is the storing of products in order to take advantage of expected higher prices later in the season or in some cases in subsequent years [11].

Collective marketing through farmers marketing groups would increase the farmers bargaining power and benefit from economies of scale as well as protecting them from price fluctuation. It would further help them lower transaction costs and empower them to hold service providers and buyers accountable for the types and quality of service they deliver [18]. Besides collective marketing would yield a higher price than selling individually. According to [31] producer marketing groups have the potential simplifying and shortening the marketing chain by directly connecting small producers to markets, coordinating production and marketing activities and facilitating farmer access to production inputs at fair prices.

4. Conclusion and Recommendations

4.1 Conclusion

From the findings this study concludes that there is a lot of potential for the growth of the pineapple sector and that the potential could however be unlocked by correctly identifying constraints in the pineapple marketing, analyzing the possible opportunities for pineapple marketing and formulating strategies to maximize on the opportunities while minimizing the impacts of the marketing constraints.

4.2 Recommendations

The study recommends involvement of all the relevant stakeholders in the pineapple sector in the formulation and implementation aimed at improving the pineapple marketing system and enhancing the growth of the sector.

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