



## TRADITIONAL AND MODERN MARKETING CHANNELS FOR HORTICULTURAL PRODUCE IN KENYA

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### ABSTRACT

Horticultural produce can be retained on the farm or marketed through local fresh markets; local processed markets, fresh export markets, or processed export markets. Kenya has ecological conditions which favor a wide range of horticultural products which has or is being developed and produced to meet various demand in order to satisfy quantity and quality levels of consumers. Their marketing structure depends on where horticultural produce is developed or produced and point of use. Given such a diversified demand structure, there is need to outlay marketing channels that produce need to follow since product supply has to move along distinct marketing channels for it to reach respective target groups. In this research primary data was obtained through field survey using questionnaires and interviews by stratified random sampling method in horticultural markets. Secondary data obtained from varied sources (FPEAK, HCDA and MOA reports) was looked at, compared and analyzed to come up with marketing channels for various horticultural produce putting into account that several systems are operating simultaneously. Analysis of data was done by descriptive and qualitative method in the study. Results showed farmers pass and dispose off their horticultural produce through various market outlets including; modern channels like supermarkets, online trading portal and exports as well as traditional channels including rural and urban wholesale or retail markets. It was concluded that there are varied marketing channels for horticulture producers and marketers use at their disposal to enhance horticultural product flow.

**Keywords:** Horticulture, Market, Produce, Structure

### INTRODUCTION

The horticulture is a compound for numerous fresh farm products broadly classified as fruits, vegetables and cut flowers (MOA, 2019). It is the largest sub-sector of agriculture in Kenya, contributing 33% of the Agricultural GDP and 1.45% to the national GDP and is the second biggest foreign exchange earner for the country after tourism, generating approximately KES 90 billion in 2016 (AFA, 2017). It is the fastest growing industry within agricultural sector, recording an average growth of 15% to 20% per annum (MOA, 2018). It contributes positively to wealth creation, poverty alleviation and gender equity especially in rural areas (GOK, 2016). The industry continues to contribute to Kenyan economy through generation of income, creation of employment opportunities for rural people and foreign exchange earnings, in addition to providing raw materials to agro-processing industry (KNBS, 2017). The sub sector employs approximately 4.5 million people countrywide directly in production, processing and marketing (World Bank, 2016), while another 3.5 million people benefit indirectly through trade and other activities (MOA, 2017). Kenya's horticulture industry is made up of five commodities: vegetables, accounting for 44.6% of total value of produce; flowers (20.3%), fruits (29.6%), nuts, medicinal and aromatic plants (MAPs) at 5.8%. Small scale farmers most them with land below 10 acres produce a majority of these crops contributing about 50-60% of total horticultural production (MOA, 2018).

The main horticultural crops exports are: flowers, vegetables and fruits; with European Union (EU) being major destination accounting for over 80% of total exports (FPEAK, 2018). About 95% of horticultural production goes to domestic market and 5% to export market (HCDA, 2018). The main cut flowers exported include; Roses, Carnations, Statice, Alstroemeria and a variety of summer flowers (FCK, 2018). Under vegetables category are French beans, snow and snap peas, Asian vegetables e.g. Karella, Chilies, Aubergines and Okra dominate export list (EPC, 2018). Others are mangoes, avocados,

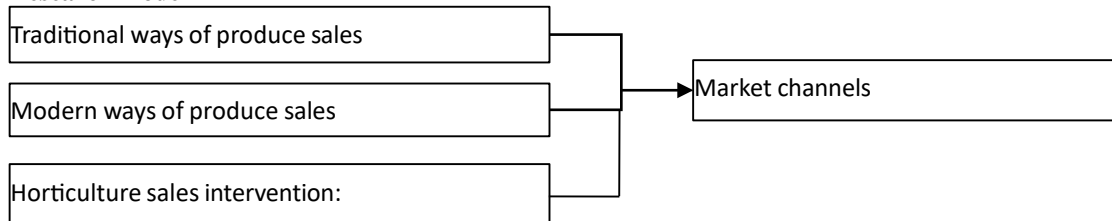
passion fruit, which are important export fruits. Some fruits and vegetables go to local processing plants including tomatoes, cabbages, bananas, citrus, pawpaw and carrots (FPEAK, 2017). Some horticultural produce ends up in local supermarkets and vendors/kiosk for local consumption (HCDA, 2017). All these horticultural produce follow several marketing channels, which this research is trying to outlay, to arrive at consumers and serve additional functions like: encouraging production above subsistence level, giving small producers access to market economy (Tschirley and Ayieko, 2008); creating potential for activities to be built in as services into final product, thus giving consumers more satisfaction and producers, processors and traders higher returns (Muendo and Tschirley, 2004).

There is need to outlay channels for produce marketing as channels differ from produce to produce due to different stages of produce development and consumption (Dijkstra, 1996; ASDS, 2010) necessitating research on individual crop's outlet. Horticultural crops show very distinct features, depending on objectives of producers or expectations of consumers (MAOK, 2014). This has led to a very interesting marketing structure for horticulture (MOA, 2010; Dijkstra, 1997), from which some general conclusions may be drawn such as: High rates of population growth combined with higher rates of urbanization caused large increases in local demand compared with previous years (Mitullah, et al., 2016; HCD, 2018); present real income level shows a high elasticity of demand (World Bank, 2016); HCDA, 2011); increases in income are utilized for equal increases on percentage basis of expenditure for horticultural product (Umar Farook, (2011); ILO, (2013); relatively large number of European expatriates and citizens of Asian origin supported production of specific types of fruits and vegetables not always consumed in African households (FPEAK, 2018) and strong demands from external markets in Europe, Middle East and parts of Africa have provided incentives large-scale producers to concentrate on export markets (USAID, (2015) and using air freight capacity presently available (HCD, 2018). Such diversified demand necessitated research to outlay traditional and modern marketing channels that horticultural produce follow as product supply move along distinct marketing channels to reach respective target groups and consumers in Kenya.

**Analytical framework**

The descriptive analytical framework was used to come up with what was happening in marketing of horticultural produce in horticulture sector in Kenya. It included administering survey questionnaires, market visit, interviews, and reports that simply provide marketing channels of produce in horticulture sector. Methods employed in descriptive analytics were observations, case studies, and surveys. The descriptive model was used because it makes it simpler to quantify relationships in data in a way that enabled user to classify data into channels which produce are passed from producer to end user in horticulture sector.

**Research model**



Independent factors

Dependent factor

H1: There is a positive association between traditional ways of produce sales and market channels H2: There is a positive association between modern ways of produce sales and market channels H3: There is a positive association between horticulture sales intervention and market channels

**Research methodology and data analysis**

Market visit and survey was done to collect data with questionnaires being administered and interviews made on a sampled 100 horticulture vendors and sellers in 5 markets of Eldoret-Uasin Gishu, Kitale-Trans Nzoia, Kibuye- Kisumu, Wakulima-Nairobi and Soko mjinga-Nyeri and 5 HCDA and 5 MOA officers in the five counties of horticultural produce. A stratified random sampling method was used in data collection. The study relied on primary data (survey questionnaires and interviews) and secondary data from various sources (HCDA and MOA reports) and earlier studies. Data grouped as per research questions and analysis done by descriptive and qualitative method, discussed and conclusion recommendation made.

**Overall objective of the study**

To outline traditional and modern marketing channels for horticultural produce in Kenya, with specific objectives to look at modern marketing channels for horticultural produce in Kenya, to look at traditional marketing channels for horticultural produce in Kenya and to outline individual horticultural produce marketing channels in Kenya.

**FINDINGS AND DISCUSSIONS**

**Modern marketing channels for horticultural produce in Kenya**

*Supermarket marketing channel*

Results show supermarket as one of modern marketing channels of horticultural produce. They have attempted to expand their participation in horticultural sales over the past few years, but their market share remains quite low.

Findings indicate three major supermarket chains being, Uchumi Tuskys and Nakumatt, each carry upwards of 80 horticultural products in produce section of their Nairobi stores, including fresh whole produce from Kenya, imported produce and prepared vegetables ready for cooking. Each had ambitious expansion plans; with Uchumi planning to reach 50 stores from 30 stores it had, concurring with research by Weatherspoon et al, (2003) earlier that supermarket channels is gaining foot print for horticulture produce sales in Africa. However, the plans appeared not stable due to financial difficulties facing them. These largest supermarkets relied on brokers and secondarily on direct procurement with an assortment of contracted commercial farmers and some organized small and medium- sized farmers. It was estimated that the supermarket share of the Fresh Fruits and Vegetables (FFV) market in Nairobi was below 10% and concurs with report by Fresh Produce Exporters Association of Kenya (FPEAK, 2018).

Though so, supermarkets in Kenya is receiving considerable attention over the past few years as findings showed they are spreading quickly in urban areas and are modernizing their product procurement systems, differentiating them from those used by traditional retailers and wholesalers. This is in agreement with other research findings by Neven and Reardon (2004) that showed that supermarkets were growing at an annual rate of 18% and had a 20% share of urban food market overall, although only an extremely incipient 4% of the FFV market. Findings indicate supermarket chains in Kenya have recently begun to modernize their procurement systems by centralizing procurement over the country into distribution center, (away from store-by-store sourcing), by selecting sets of preferred supplier-farmers and specialized wholesalers dedicated to sourcing from those farmers as well as wholesale markets and instituting incipient and basic private standards of quality. When supermarkets first started selling FFV in a significant way, they procured from whatever source was available, hence sourcing only 30% direct and the rest from traditional brokers. Over the past few years, the chains have begun shifting toward sourcing directly from farmers. The “supermarket-channel farmers” universe is farmers who are listed as direct suppliers of FFV to leading supermarket chains. These chains now market 90% of FFV sold through supermarkets in Kenya.

The supermarket suppliers appear to be an emerging “domestic elite” in horticulture production, between small traditional farmers producing for local fragment spot markets and larger export farmers producing for a very demanding foreign (supermarket) market. They are thus in an intermediate position. This is especially interesting because literature point to farmer-leaders or innovators, somewhat better capitalized than the average but not extremely distant in capacity, that forges the way in product diversification, market development and technology modernization. Supermarkets pay highest wholesale prices in market, of 10-20% higher than traditional retailers, but other benefits of selling to supermarkets are even more important to farmers than higher price. While 34% of supermarket-channel farmers say that higher price is key reason for selling to supermarkets, 46% say that ease of selling to supermarkets is key attraction i.e., lower transaction costs and market risks. The combination of higher net incomes, lower transaction costs and greater transaction stability in supermarket channel has created a strong growth dynamic concurring with research by Neven and Reardon, (2004) that average farmed acreage of supermarket- channel farmers increased by 104% over 1999-2004, compared to by only 10% for traditional-channel farmers.

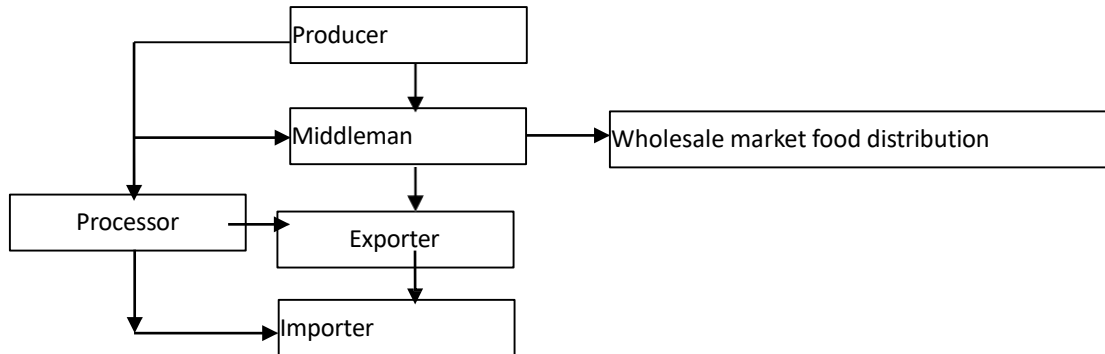
#### ***Online trading portals e.g. Fruit commerce marketing channel***

Another modern marketing channel for horticultural produce is internet-based trading portals which offer fresh produce traders opportunity to source products “without intermediaries” and was launched in 2011. The portals, e.g. FruitCommerce.com, is backed by Italian fresh produce company Agrifruit and the country’s Cesena based trade event Macfrut, and aims to bring FFV buyers and suppliers together in a single, online market place. It is a virtual market that allows sales prices between buyer and seller to be agreed upon in real-time. They offer service to operators in the sector, such as retailers, cooperative and cooperative consortiums, producer organizations, importers, exporters, wholesales of all sizes and growers. The sites are available in five languages (English, French, German, Italian and Spanish) and offer a range of product information including price, volume, quality, characteristics and any eventual complains. Payments are made using a credit card and after product have been received and approved by the buyer. A commission is paid to the site once a transaction is completed and registration is free of charge at fruitcommerce.com site.

Findings show other online trading portals are Google Product Search, NexTag and Shopping.com, which use comparison shopping engines (CSEs) and are becoming more prevalent as these sites make online shoppers’ lives easier. These engines allow consumers to shop, compare products, features and pricing, consumer and expert ratings and store locations all from one centralized place. Ultimately, they can be a dream come true for shoppers as they enable them to find right produce, from right merchant, at right price.

### ***Producer - Formal exports marketing channel of fresh horticultural commodities***

The other modern marketing channel is formal exports. Exporting is the marketing of goods produced in one country into another. A distinction has to be drawn between passive and aggressive exporting. A passive exporter awaits orders or comes across them by chance; an aggressive exporter develops marketing strategies which provide a broad and clear picture of what the firm intends to do in the foreign market. From the research, exporting methods include direct or indirect export. In direct exporting the organization may use an agent, distributor, or overseas subsidiary, or act via a Government agency. Exporters can also be growers and in low season both these and other exporters may send produce to food processors which is also exported (figure 1). Export markets are of minor importance to FFV supermarket-channel growers, as only 15% also sell to export markets. This differs by product: involved in higher value, lower volume items such as French beans or avocado tend to also export, while farmers selling lower value and heavier products, such as banana, tomato and kale, are selling all into domestic market.



**Figure 1. The export marketing channel for Kenyan horticultural products**

### ***Producer – wholesales marketing channel***

Findings indicate wholesale as main marketing channel for Kenyan horticultural produce. Wholesalers as a group were divided into collecting wholesalers and distributing wholesalers. The former specialized in collecting produce from farmers. They travelled long distances to purchase commodities in spot markets from producing areas and towns in Kenya. To facilitate operation, collecting wholesalers employed purchasing agents who worked in the production areas on their behalf. Purchasing agents reduced costs by identifying produce for sale, carrying out negotiations, accumulating, assembling and carrying produce to nearby earth road for ease of collection concurring with earlier research by Dijkstra, (1996) that purchasing agents’ streamlined procurement process of horticultural produce. Once enough produce were obtained, collecting wholesalers transported the commodities to the main cities/towns Lorries with a minimum of seven tons. These professional collecting wholesalers sold primarily in urban wholesale markets. For example, this research outlaid that oranges were fetched from Kitale and sold in Mombasa, Nairobi and Kisumu concurring with MOA, (2017) indicating e.g. onions were obtained from Marigat and sold in Mombasa, Kisumu and Nairobi along water melons. Other crops like coconuts were transported back by same wholesalers from Mombasa and sold in Nairobi and Kisumu after off-loading horticultural produce to save on expenditure costs and increase returns. Bananas sold in Nairobi market were obtained from Kisii and Meru.

Collecting wholesalers operated in such a way as to allow distributing wholesalers to focus entirely on their urban clientele concurring with reports by MOA, (2018); HCD, (2018) that this is important in large urban centers such as Nairobi, Mombasa, and Kisumu where wholesale and retail markets were operational six days a week. For such distributing wholesalers, being absent, resulted in lost revenue and poor customer relations concurring with earlier research by Dijkstra, (1997) that urban clientele that these distributing wholesalers serve were highly diverse. Findings from this research show wholesalers targets included: traders in traditional open-air retail markets, green grocers serving middle-class clientele in roadside kiosks, high-end green grocers mostly in established retail centers, supermarkets, and hotels. The other targets also included “traditional-channel farmers” universe which were farmers who sold produce to traditional wholesalers but not directly to supermarkets.

### ***Producer - Brokers horticultural marketing channels***

Results from this research outlaid brokers as one other horticultural marketing channel. Brokers were found in both traditional and modern marketing channels. It was evident that brokers obtain some of their produce in wholesale markets and producers though detail is lacking on the volumes and specific commodities that they tend to procure in this manner. The large supermarket chains were found to have been trying and targeting to phase out brokers over

time as they developed their “preferred grower” programs. Brokers supplied a broad range of high and low margin FFV to large supermarkets, restaurants and other institutional buyers. Their competences were highly skilled with extensive network of buyers, all with cell phones, across a broad range of agro-ecological zones. They sourced horticultural produce of different types from far and near and of best quality; they efficiently procured a range of products at different margins from multiple sources; they shifted products from local to export markets depending on opportunities and price; and more seemingly they responded to opportunities for new FFV products through a flexible network of farm suppliers they have developed. From this research, the domestic FFV market was highly competitive with an increasing number of new entrants frequently, placing pressures on margins and source of profit for brokers. To counter negative effects on profits, Brokers used strategy of sourcing and supplying a broad range of products both high volume and low margin e.g. onions, cabbages and low volume and high margin e.g. sukuma-wiki, collard greens, spring onions, broccoli, etc.

The case of Kenyan brokers is instructive because it illustrates how a broker with core competencies in extensive marketing has integrated an intensive strategy into their business model to offset the instability of supply in order to lower their cost and stabilize their supply to a growing number of institutional buyers. This concurs with research done by Muendo and Tschirley, (2004) indicating brokers developed a network of out-growers in order to satisfy clients with a diverse mix of quality product on a consistent basis to mitigate profit loss due to competition. Their strategy ideally was to identify lead farmers and have them specialize in one specific product such as broccoli, sukuma-wiki and Chinese onions e.g. spring onions concurring with report by Tschirley and Ayieko, (2008) that brokers use specialization of product by using lead farmers to ensure increased quantities and quality over time. In this strategy, Brokers had contracts with up to four farmers per product to spread risks in case of failure by one farmer. The brokers provided a package of services that were embedded in the supply contract e.g. market information on what to grow, seeds, technical know-how like crop rotation and cash advance to cover purchased inputs. They also adjusted level of upfront service in relation to farmer risk and in turn expect better price from the farmer concurring with Sandika, (2011) indicating effective middlemen or brokers know how to make money even when margins are small by putting in appropriate strategies to cushion profits. The other method was that Broker chose to incorporate a strategy of backward integration into farm services, like providing a more stable flow and diverse range of FFV to clients. For instance, at times they by-passed local assembly markets for low volume and high margin product by procuring directly from farmers whom they supplied farm services in return for supply agreements concurring with research by Rozhan, et al., (2013) that backward linked marketers to the farm have competitive advantage of quickly responding to changes in customer preferences through their own supply network.

### **Traditional marketing channels for horticultural produce in Kenya**

#### ***Producer – urban wholesale marketing channel***

Findings show urban wholesale as one of traditional marketing channel and played a dominant role in horticultural FFV marketing. It supplied horticultural products for open-air retail markets, kiosks, and small stores. They were un-attractive to buyers concerned with assuring high quality and food safety. Most of produce for this market e.g. banana and tomato were imports from the region estimated at 7-8% share of Kenyan market concurring with reports by MOA, (2019) indicating oranges imports from Tanzania were up to 20% and onion up to 10% with almost no Kenya exports of same produce to regional markets. Finding also outlaid that there was ongoing construction of 10 wholesale markets in major towns at Nairobi, Mombasa, Kisumu, Eldoret, Nakuru, Embu and Nyeri, Karatina. Its aim is to construct fully equipped integrated mega producer wholesale markets and encouraged large scale producer groups around major towns to use these facilities concurring with HCD, (2017) that construction of markets in major town on-going at cost Ksh. 5 billion and expected to be completed by 2023. These will provide an avenue for product consolidation, infrastructure for easier market access, improved facilities, and revamped supply chain from small scale producers to retail markets.

#### ***Producer – Retail marketing channel in Kenya***

Retail market was the other traditional channel of disposing of horticultural products. It was served by public wholesale markets and dominated the market share. They served local consumers directly for daily horticultural purchases. The **retail sector** has been expanding substantially in numbers and concurred with HCDA, (2011) indicating retail markets being a fast growing channel assisting Kenya’s economy growth through produce sales. The vibrant retail market sector supplied most horticultural produce though most business was conducted informally in open air markets, as AFA (2017) reports indicate most produce disposed off through retail method countrywide.

Changes were occurring in retail marketing channel for FFV. The most noted was the rise of stores in small and large supermarkets retailing horticultural produce. These stores accounted for a small share of FFV marketing. Rapid replacement of traditional 'dukas' with smaller supermarkets selling little FFV was on-going with preference of using part of their limited cold storage space besides e.g. dairy products like milk and yogurt, meat and poultry products. The more dynamic part of the FFV retail market was the proliferation of FFV kiosks. Some of these kiosks were larger, with more substantial structures located outside small supermarkets or at service stations. Some of horticultural produce was being retailed at mobile stands or on spread out marts or on vehicles parked along roadside. This retail marketing channel sourced their product from municipal wholesale markets.

The municipal markets were also experiencing change, reflecting a rising and diversified demand for FFV, as well as congestion driven shift of demand away from the large, central markets toward the community based council markets. This concurred with research and reports by ASDS, (2010); GOK, (2016); KNBS, (2017), FCK, (2018) predicting future continued population growth and urbanization enhancing and supporting further growth in both kiosk-based shopping for FFV and flowers as well as shopping at the council municipal markets. It is envisaged smaller supermarkets bringing FFV into a capital and electricity intensive cold-storage structure, in a bid to replace the kiosks out front. This shift is likely to occur due a rapidly growing income environment concurring research by Perera, et al., (2006). The findings showed supermarkets were becoming more competitive in retail marketing of higher value FFV though market share was still small supporting research by Ghezan, et al., (2002) and Chen, et al., (2005) that the concept of extensive and intensive sourcing strategies was being used in retail marketing for development of FFV markets.

### **Group marketing channels**

#### ***Floriculture marketing channels***

Findings showed presence of group marketing channel for specific horticultural produce occasioned by horticultural produce distinct features, objectives of producers, or expectations of consumers. Differing channels in groups was due to different stages of produce development and consumption for e.g. Floriculture, Vegetable and Fruits.

One such group marketing channel was floriculture with cultivation area in Kenya being in Nakuru and centered within Lake Naivasha. High pressure on available resources and infrastructure in Naivasha region was curtailing possible expansion of area under cultivation concurring with HCD, (2017) reasons of flower farms exiting area. The finds also agree with research by FCK, (2018) reason being easier access of resources in other parts of Kenya e.g. Mt. Elgon, Kinangop, Kitale, Eldoret, Kericho, Limuru, Kiambu, Athi River, Thika and Mt. Kenya region.

Kenya supplied over 35% of cut flowers and ornamentals to world largest market where the EU consumed 50% of the world flowers concurring with FPEAK, (2018) on same. The major destinations for these flowers were The Netherlands (65%), UK (23%), Germany, France and other EU countries sharing balance being in agreement with MOA, (2017) indicating EU as main floriculture destination. With market diversification USA, Japan and Middle East had come up recently as additional market destinations for Kenyan flowers agreeing with MOA, (2018) on emerging flower destination. The large-scale flowers producers were vertically integrated and deliver directly to the mass retail chain in UK, France, Netherlands, and Germany in a contract basis (EPC, 2018). The larger growers had their own infrastructure and trucks to secure conditioned post-harvest handling and transportation up to air freighting, as well as breeding and propagation units as envisaged by this research. Handing and transport by air was by organized freight forwarding all aggregated horticultural produce. For export, large scale producers had their own logistic infrastructure for individual produce directly to supermarkets and other mass retail outlets.

The flower farms with less than 20 ha under cultivation had more ad hoc marketing channel arrangements and relied more on the Dutch auction system for their marketing and sales. Some of them had ventured to grow summer flowers in diversification. These were particularly important as fillers used for export of bouquets. Sometimes brokers aggregated the flowers for transport to the European market. Although Kenya exported some carnations, Chrysanthemums and other cut flowers, the bulk of exports were cut roses. The total export volume of cut flowers from Kenya was more than 93 million kg in 2019 representing more than 33% of total EU flowers imports concurring with EPC, (2018), and MOA, (2019) on same.

Kenya exports went mainly to the Netherlands and United Kingdom, with a small portion being exported directly to Germany and Japan. The export value of Kenyan cut flowers increased in the period 2012 – 2016 by an average of 21% per year, while average export value of other countries increased by only 9% p.a. in the same period. Also in

the year 2017- 2018 the export volumes of Kenya flowers continued to grow agreeing with FCK, (2018). The impressive growth and development of the Kenyan floriculture export trade has come to a standstill in the past year as a result of world economic downturn affirmed same by EPC, (2018). The global economic crisis starting in 2018 has had a negative impact on the consumer demand for flowers, particular in the new growth markets of Central Europe, USA and Russia and the UK. In some markets the devolution of the currency, most notably the British pound and US dollar further reduced the export incomes concurring with MOA, (2019).

### ***Vegetable marketing channels in Kenya***

Findings outlaid Vegetable market as another group marketing channel used to dispose-off vegetables from main regions of Central Rift valley and Eastern though varying amounts were produced across other areas. Results showed majority of vegetables were produced by smallholder producers with most being consumed locally concurring with MOA, (2018) on same. In Kenya vegetables production for export took place in four different production systems namely: Background integration, where exporter had its own production; Product segmentation, where products requiring full traceability were grown on own farms and products who had less demanding requirements were sourced from contracted small holders; Modified extension, where there was combination of own production and out grower/smallholder production; and lastly, Higher intensity out grower system, where most of vegetables were procured from out growers or smallholders.

The large portion of Kenyan vegetable exports went to the UK market with The Netherlands and France being the other main importers. In addition to a growing export market, demand for indigenous leafy vegetables in Kenya was increasing rapidly, both at urban and rural markets being in agreement with HCD, (2018) on same. Nearly all Kenyan main chain supermarkets like Uchumi, Nakumatt, Tuskys, and others like Ukwala and Naivas were stocking these greens, alongside commonly consumed vegetables such as leaf cabbages, known in Kenya as 'sukuma wiki'. While cabbages were produced in large quantities, supply of indigenous leafy vegetable was inadequate concurring with MOA, (2017) indicating low volumes especially during dry season. The marketing channels for vegetables had many links and were divided in to two; fresh produce and processed.

Findings showed small holders' productions were purchased by brokers and agents, and then sold to exporters or from them to the importers and wholesalers, until finally arriving at the retailers, and sometimes from them to restaurant and caterers. The local market was diversified, ranging from rural markets to retail markets and supermarkets to restaurants and hotels. Up to half of Kenyan exporters were part-time exporters who went in and out of the market according to the market situation concurring with FPEAK, (2018) of them only being present at market peaks for temperate vegetables such as the European winter months.

These exporters had no structures in place in the sense that they do not have farms of their own, nor do they have permanent trading facilities like Lorries and cold stores, but rent transport vehicles and space in cold stores when they needed them. While the number of these exporters was large, the amount they exported was very small between 2 – 10%. Up to 90% of exports were done by year-round exporters. Most of these had their own farms and supplemented export volume by buying from other farmers either large or small scale commercial farmers or small holders. The main traders at regional market were wholesalers who collected vegetables and sold primarily in urban wholesale market. The domestic end-market in Kenya was divided into five different types, each supplying different client group and included: Fresh rural market, Fresh urban market, processed produces market, Fresh greengrocers or kiosk, and Supermarkets aimed at an increasing group of middle and high income urban consumer.

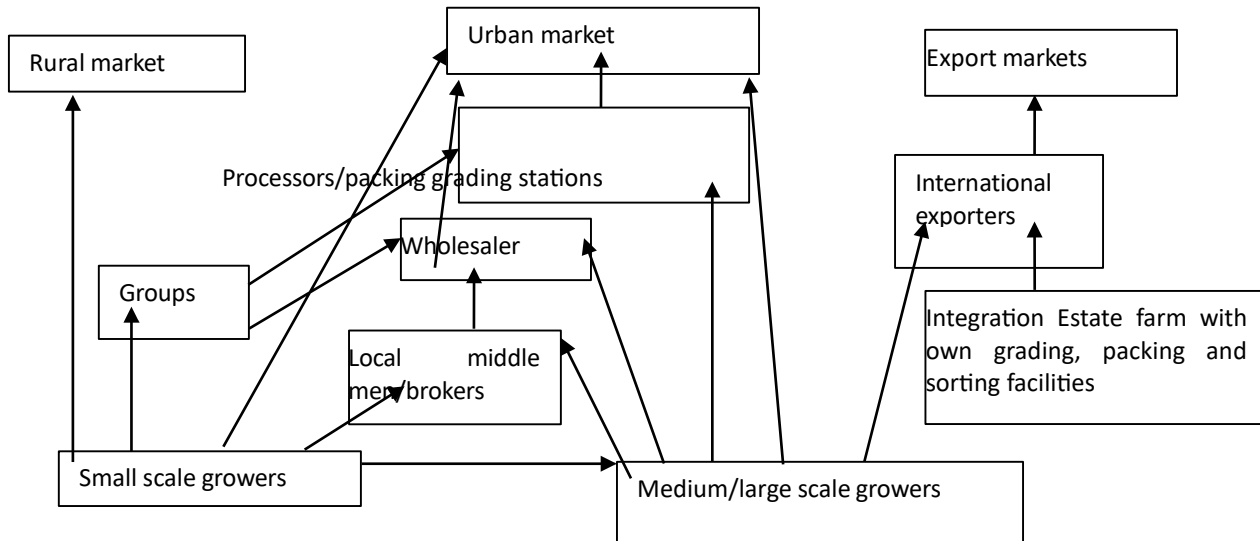
The most commonly produced and exported vegetables in Kenya were snow peas, sugar snap peas, French green beans, mange touts and baby vegetables (carrots and baby corn). The vegetables seed market in Kenya was very diverse agreeing with EPC, (2018) that up to 100% of seed and planting materials was being imported into Kenya for some crops. Findings showed that majority of growers make use of local suppliers and importers who were specialized in bulk product. A small section of export vegetable growers, make use of quality seeds. These seeds were imported by local companies or were obtained from local branches of seed companies concurring with HCD, (2017) indicating vegetable seed were imported from the US, Great Britain, Japan and South Africa as none was produced in the country.

### ***Fruit marketing channels in Kenya***

Findings showed other group marketing channel was for fruits mainly available in markets such as: mango, bananas, melons, avocado, pineapples, passion fruits, papaya and citrus, others in low volumes were pears, apples and plums.



Avocado was the leading exported fruit to European supermarkets during the winter period when other producing countries had limited supplies. The bulk of the fruits was sold either as fresh produce or processed products on the local or regional market. Of the total Kenya fruit production only 1% was exported while 99% was consumed locally concurring with MOA, (2019). Despite the low volume, fruit exports accounted for 35% of total value of Kenya fruit market supporting EPC, (2018) and AFA, (2017) indicating fruits sale had major significance to Kenya fruit producers and exporters economy. Europe was the most popular fruit export market followed by Middle East. Avocado sales accounted for more than 50% of export value in Kenyan fruit sector. In European market, Kenyan avocado exporters competed with South Africa, Mexico, Israel and the United States. Kenya's competitive niche in Europe was its ability to supply avocados during winter, when imports from South Africa and other suppliers were not widely available. The following (figure 2) is a summary of the various fruit marketing channels in Kenya.



**Figure 2. The Fruit marketing channels in Kenya**

Results showed avocados were sea freighted to Europe contributing to Kenya's competitiveness. Furthermore, passion fruit and mango were other important fruits exported to Europe and Middle East in significant quantities. These fruits were mainly produced by small farmers spread across Nyanza, Eastern and Central regions. The fruit marketing channel included many small scale farmers who depended on local middle men or brokers to sell their fruits. In rare cases fruit growers were organized in marketing groups. More often fruit growers acted as individuals, the predominant marketing channel arrangement being the local fruit sector. The demand for fresh fruit from the processing industry was ever increasing as development of horticulture industry increased. For example there was ever increasing demand at regional and domestic market for passion fruit juice and concentrate production agreeing with EPC, (2018) indicating regional market e.g. Uganda had significant fruit processing capacity and required purple passion fruit for juice production and Kenya had proved to be an important source of the product.

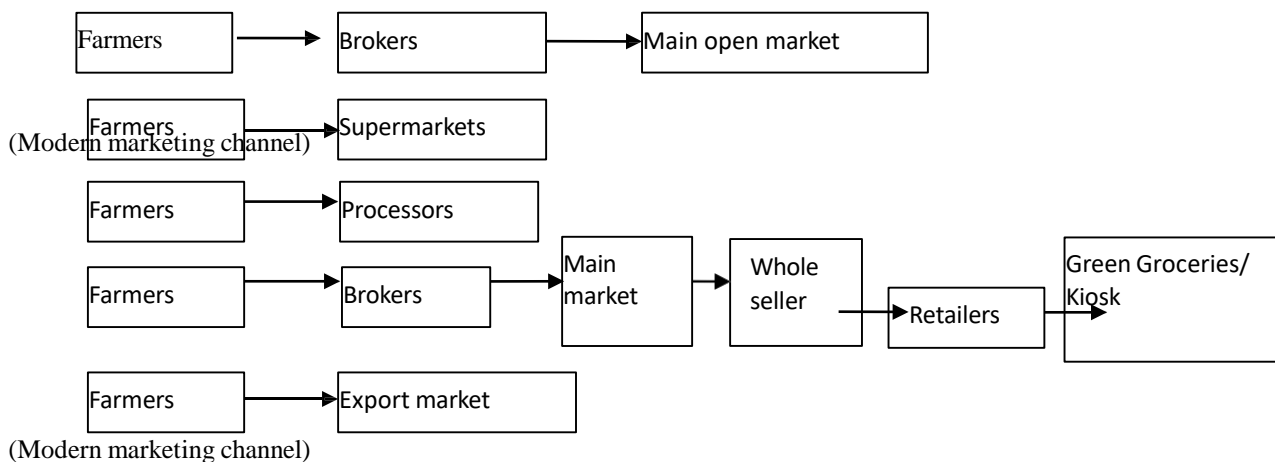
Findings outlaid few challenges befalling fruit marketing channel and include: lack of market information and transparency; Smallholder fruit producer's heavily dependence on local middlemen thereby monopolizing their market access; Transaction cost and post-harvest losses in segment high; lack of knowledge on post-harvest handling; poor transport facilities and limited (conditioned) storage capacity at wholesale and retail level. Other challenges were restricted access to the higher value export markets for smallholder produce due to lack of compliance of traceability rule and absence of pesticide residue checks.

**Individual (few selected) horticultural marketing channels**

***Passion fruit marketing channels in Kenya***

Results show passion fruit disposal as falling under individual marketing channel. Many small scale farmers depended on local middle men or brokers to sell their fruits. In rare cases fruit growers were organized into marketing groups. More often fruit growers acted as individuals, which was predominant marketing arrangement in Kenyan fruit sector. The following (figure 3) is summary of passion fruit marketing channels in Kenya.

(Traditional marketing channel)



**Figure 3. The Passion fruit marketing channels**

Findings showed an increasing demand for fresh passion fruit from the processing industry. The medium and large scale farmers export their passion fruits directly. Some farmers sold their produce directly to supermarkets or to processors. Passion fruit was ranked third biggest exported fruit from Kenya taking up 7% of total volume exported yearly. The biggest passion fruit market was Holland taking up 29% of volume exported with United Kingdom and Belgium taking up 20% and 21% respectively of the total volume exported.

Findings outlaid some challenges facing marketing of this crop. Marketing difficulty of passion fruit was the small quantities involved, which made sales firms reluctant to handle the product not only from the point of view of the initial quantity but also the possibility of repeat orders being unavailable. Kenyan passion fruit growers at times had many reasons to smile as they occasionally received highest price with a kilogram going for more than Ksh 200 in some areas. This was fuelled by increased demand for the fruit, not just locally but regionally as well. In fact, the local and regional demand of fresh fruit for processing was unmet. This has had a ripple effect concurring with FPEAK, (2018) indicating new growers encouraged by such market potentially ventured into production with commercial nurseries flourishing and striving to fulfill the new demand for quality passion fruit seedlings.

***Bananas marketing channels in Kenya***

The other individual marketing channel was for bananas, a popular fruit with most markets in Kenya. Their production was scattered all over the sampled area markets though only a very small proportion of it was exported with big portion being consumed locally. Local cultivars in Kenya included Muraru, Kiganda and Sukari among others and were eaten as dessert or cooked. Improved cultivars available included Apple, Gross Michel, Kampala, Dwarf Cavendish, Giant Cavendish Williams, Grand Nain, Variety, Poyo and Lacatan.

Tall varieties were Poyo and Lacatan, while medium varieties included Valery, Paz and Williams. The recommended banana varieties for export in Kenya were Apple (Sweet Banana), Giant Cavendish, Lacatan, Sabaki, Valert, Red Banana (all dessert type), and Uganda Green (cooking type). Bananas for export market were usually cut into hands and end carefully trimmed with a specially curved knife, wrapped with a soft paper and packed in fiberboard cartons. Hands with small fingers were place in the centre of box and ensured the fruits were not protruding from the packed box to avoid bruises on transport.

Findings showed banana Export market in Kenya was increasing over the years concurring with EPC, (2018) indicating same trend though world quarterly system was slowing the rate. Importing counties included Holland, U.K and Germany. In marketing channels of this produce, farmers’ bananas was either purchased by brokers and agents, or sold to the exporters, from them to the importers and wholesalers, until finally arriving at the retailers, and sometimes to restaurant and caterers. The local market was diversified, ranging from rural markets to retail markets and supermarkets to restaurants and hotels. Figure 4 summarizes banana marketing channels in Kenya. The demand for bananas has been increasingly as Kenyans become aware of health benefits of the products and was being

consumed in fruit form or as juice. Fingers were considered mature for harvest when they were  $\frac{3}{4}$  round (75% maturity). Bananas were harvested green at varying stages of maturity depending on market requirement.

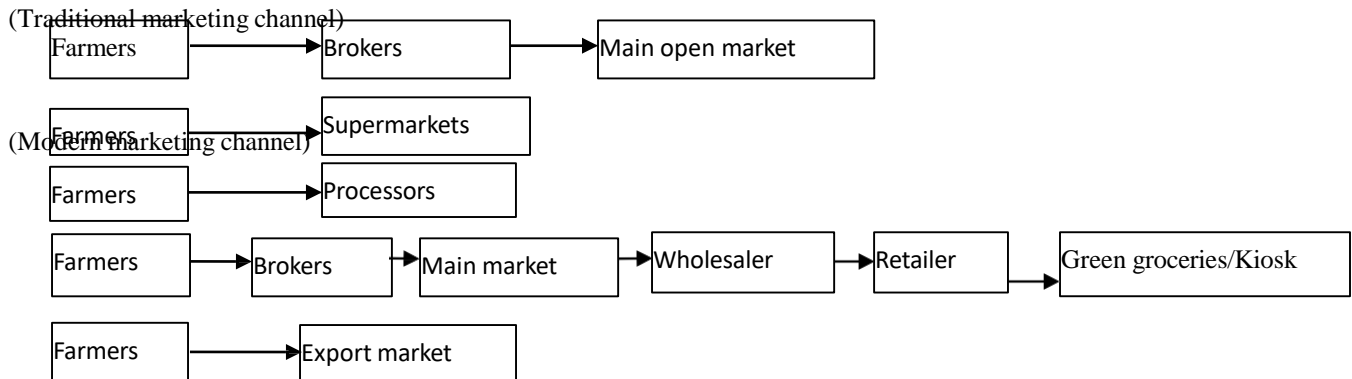


Figure 4. The Bananas marketing channels in Kenya

**Tomato marketing channels**

Most of the regions in Kenya produce tomatoes which were marketed in local markets through various marketing channels. The produce marketed in the urban markets of Nairobi, Kisumu, Eldoret, Kitale and Nyeri were sourced from Kirinyaga district (Mitunguu area and Isiolo region), Nyeri district, Nakuru district (Bahati and Kabazi region) and Taita Taveta district. To be sold, tomatoes had to meet various market requirements e.g. for export, processing or local consumption and included being fresh, consistent, clean, whole, free of external humidity, free of insect damages, no severe deformations, free of foreign matters and free of rotting due to fungi and bacteria.

The tomatoes ended up in local supermarkets, vendors/kiosk, while some went to local processing plants through various marketing channels like brokers, hawkers, retailers and agents for processors. The tomatoes were usually graded to meet market demands. Take for example in the first grade, usually for export, tomatoes need be of good quality free of open cracks. Acceptable were slight defects of forms and development, discoloration, slight skin defects and light bruises. Maturity level was between green and ripe. Second grade category included those that could not be classified in the first category, but displayed the minimum characteristics. They had be firm with no unhealed cracks. The tomato marketing channel in Kenya was very complicated in that it included many brokers at farm and at market, hawkers, processors and farmers themselves who depend on local middle men or brokers to sell their produce. The below figure 5, is summary of various tomato marketing channels in Kenya.

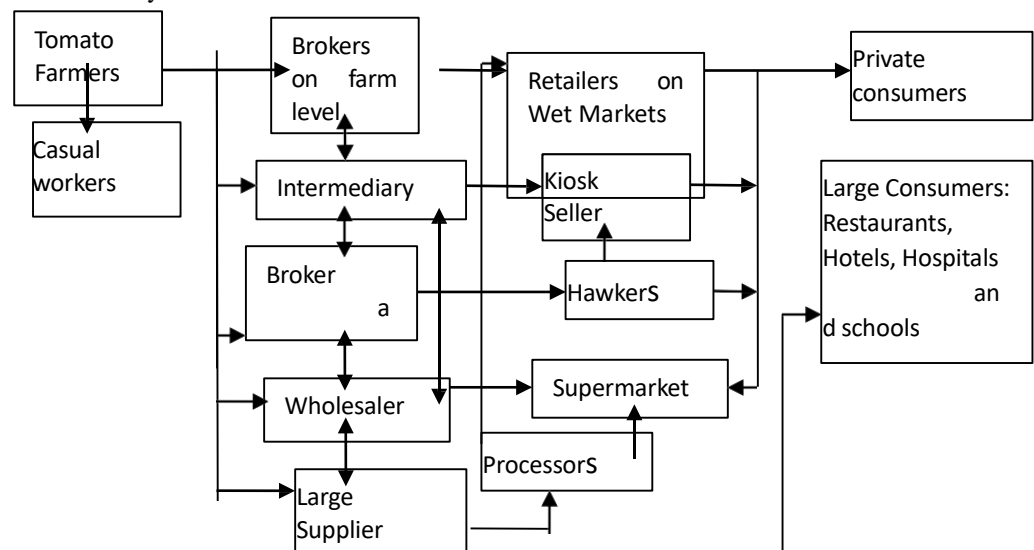


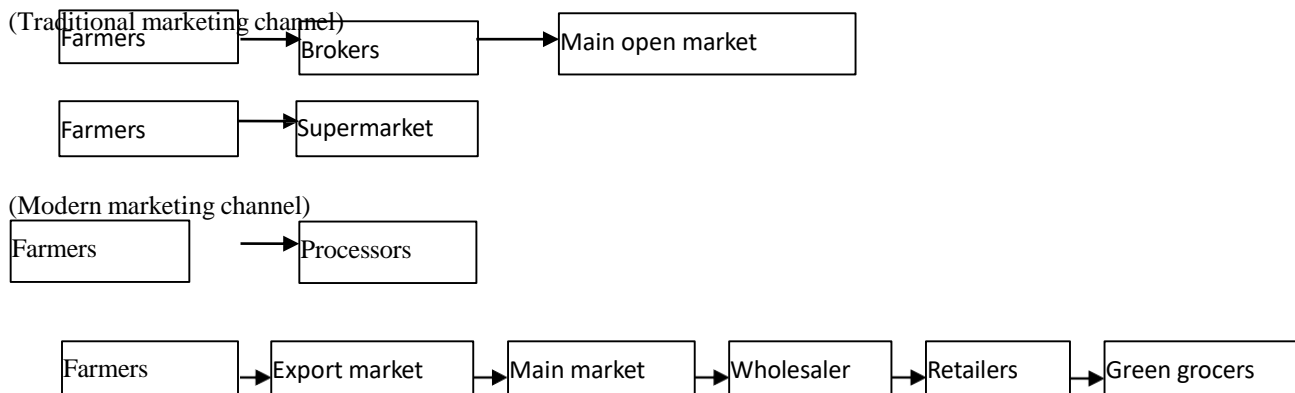
Figure 5. The Tomato marketing channels in Kenya

### **Mango marketing channels in Kenya**

The other individual marketing channel is for mango fruits. Findings showed mango availability in markets increased steadily over the past decade concurring with MOA, (2019) attributing it to improved yields of up to 10 tons per hectare. Two types of mango fruits found in markets included the local and the exotic or improved varieties. The latter were from grafted local mangoes and most were grown for the export market. Most local varieties were high in fibre content, commonly referred to as “stringy”, concurring with Kameri, (2012) that such characteristic made them unpopular for fresh consumption. The local varieties available in the market included Ngowe, Dodo, Boribo and Batawi. The exotic varieties were Apple, Kent, Keit, Tommy Atkins, Van Dyke, Haden, Sensation, Sabre, Sabine, Pafin, Maya, Kenston and Gesine. Most of the mangoes produced were consumed within the same production area agreeing with Serem, (2010) indicating sales in urban markets.

Findings showed two main market destinations for fresh mangoes, the local and export markets. Exports of fresh mangoes comprised a small proportion of national production concurring with Steve, (2010) that total mango export was slightly above 1 percent of total production. Most of the mangoes were bought from farms by middlemen who transported them either to local markets or sold them to exporting companies. The exotic varieties fetched better farm gate prices, ranging from Kenya shillings 5 to 20 per piece, depending on the size, quality, season, buyer and the destination market. Only high quality fruits of exotic varieties were sold in the export markets. Some of the mango export companies bought mangoes directly from farms and packaged them for export. The export market offered better prices than the local market. In cases where exporting companies bought directly from the farms, producers sold at better prices than when they sold their products to middlemen. The prices offered also depended on the mango season. The export market was served by a few large private sector farms concurring with HCD, (2018) and MOA, (2018) indicating presence of about 22 mango exporters in Kenya. Independent smallholders produced the bulk of the mangoes for domestic markets. The brokers assembled the mangoes from producers and then supplied the main open markets. Once consignments were delivered, wholesalers bought and sold them to retailers who then sold to consumers in kiosks, other retail markets, green groceries and roadside markets.

Findings indicate Processors often acquired mangoes directly from producers. At the high end of the market were three main supermarkets of Nakumatt, Uchumi and Tuskys which sold high quality mangoes to the upper income consumers. This outlet, however, only accounted for less than 5 percent of the mango distributed in Kenya. The open market accounted for 56 percent in urban centres and more than 70 percent in rural areas, while kiosks accounted for 36 percent of mango sales. Mango processing in Kenya has not expanded and only a negligible share of total production was being processed. The local juice and jam makers imported mangoes in form of concentrates mainly from Mauritius, Egypt and South Africa concurring with Musinga et al., (2012) indicating local mango production was of low quality. Ninety-five percent of mango produced in Kenya was made up of indigenous varieties. These, as already mentioned, were rich in fibre, and of little market value and were either consumed within the households or sold at very low prices in the village markets or kiosk/roadside stalls. Producers sold mangoes using various channels like from farmer to broker or supermarket or main market, retailers, or green grocers. The following (figure 6) is summary of various mango marketing channels in Kenya.



**Figure 6. The Mango marketing channels in Kenya**

## CONCLUSION

Marketing channels of horticultural produce in Kenya is diverse and is dependent on various factors including produce itself, destination, distinct features, and objectives of the producers or the expectations of consumers. The market outlets include; modern channels like supermarkets, online trading portal and exports as well as traditional channels including rural and urban wholesale or retail markets. It was concluded that there are varied marketing channels for horticulture producers and marketers use at their disposal to enhance horticultural product flow.

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