

HORTICULTURE SCOPING STUDY FOR KENYA

Sustainable and responsible
sourcing of fruits and vegetables from Kenya

February 2022



Kingdom of the Netherlands

Study commissioned by Embassy of the
Kingdom of the Netherlands and undertaken by



Acknowledgements and Disclaimer

Mr. Edmond J. Ringo the Chief Executive Officer (CEO) of Match Maker Associates Limited (MMA) in Tanzania led a team of five consultants who conducted this study and prepared this report. The other two team members who focussed on the supply side are Professor Francis Wambalaba, MMA Associate Consultant and the founder and research associate of the Global Agribusiness Management and Entrepreneurship (GAME) Centre at the United States International University – Africa (USIU - Africa) in Nairobi Kenya and Mr. Kelly Matayian, MMA Associate Consultant based in Nairobi Kenya. The other two team members who focussed on the demand side are Mr. Lex van Boeckel, MMA Associate Consultant based in France and Mr. Henri van der Land, MMA Managing Partner. Mr. Ibrahim Mtuka, MMA Consultant and Neiked! agency supported the team in the report layout design and typesetting. The authors wish to thank all who contributed to the process including the provision of data and information.

Mr Peniel Uliwa, the founding director of MMA was instrumental in the conception of this study; unfortunately, he passed on in August 2021 when the team was being mobilised to kick start this assignment. We are all honoured to be able to step on his shoes and deliver this assignment. May his soul rest in eternal peace.

Special thanks go to all horticulture industry stakeholders who reserved their quality time to attend virtual and face-to-face interviews during data collection processes. We acknowledge and recognize their cooperation and inputs. Without them we would not have been able to make a thorough update of the supply and demand of horticulture products from Kenya to the EU and UK markets in such a short period of time. We acknowledge insights obtained from AFA – HCD, MAFLC, COLEACP Team, UNIDO MARK UP Programme team, COLEACP-EU Next Kenya Programme Team, FPEAK, FPC Kenya, SGS, KEPHIS, NSF International, KOAN and Rockefeller Foundation.

We thank Mrs Ingrid Korving, the Agricultural Counsellor for Kenya and Tanzania of the Embassy of the Kingdom of the Netherlands (EKN) and her entire team for entrusting MMA with this assignment.

Disclaimer

This report is a result of a horticulture scoping study in Kenya that combined primary and secondary data. To the best of the knowledge of the authors, the information, aims, strategies, projections, and estimations are based on assumptions that the authors consider reasonable. Assumptions that were available are in some cases based upon statistical data and field research and could not be independently verified. The authors, therefore, stress that opinions expressed in this report are purely their own based on observations and findings of this exercise and take sole responsibility for any errors or omissions.

Abbreviations and Acronyms

3PL	Third Party Logistics	DFIs	Development Finance Institutions
AAK	Agrochemicals Association of Kenya	EAC	East Africa Community
ACP	Africa Caribbean Pacific	EAG	East African Growers Limited
AFA	Agriculture and Food Authority of Kenya	EAOPS	East African Organic Products Standards
AfDB	African Development Bank	EC	European Commission
AFFA	Agriculture Fisheries and Food Authority	EDF	The European Development Fund
AGAK	Avocado Growers Association of Kenya	EGF	Equity Group Foundation
ASK	Agricultural Society of Kenya	EIB	European Investment Bank
ASSIP	Automated Support System for the Importation of Phyto sanitary Consignments	EKN	The Embassy of the Kingdom of the Netherlands
B	Billion	EMCA	Environmental Management and Coordination Act
B2B	Business to Business	EOA	Ecological Organic Agriculture
BDS	Business Development Services	EPA	Economic Partnership Agreements
BMGF	Bill & Melinda Gates Foundation	EPC	Export Promotion Council in Kenya
BMO	Business Member Organisation	EPZ	Export Processing Zone
BRC	British Retail Consortium	EPZA	Export Processing Zones Authority
BRC	British Retail Consortium	ETI	Ethical Trade Initiative
BRCGS	Brand Recognition Through Compliance Standard	EU	European Union
BREXIT	The withdrawal of the United Kingdom from the European Union	FCDO	Foreign, Commonwealth and Development Office of the United Kingdom
CAADP	Comprehensive Africa Agriculture Development Programme	FDI	Foreign Direct Investment
CAGR	Compound annual growth rate	FDOV	Facility for Sustainable Entrepreneurship and Food Security
CBA	Collective Bargaining Agreement	FFV	Fresh Fruits and Vegetables
CBI	Centre for the Promotion of Imports from developing countries	FLOCERT	Fairtrade Labelling Organisation Certification
CBTF	Capacity Building Task Force of UNEP	FMCG	Fast Moving Consumer Goods
CEO	Chief Executive Officer	FPC – K	Fresh Produce Consortium of Kenya
CHE	Switzerland	FPEAK	Fresh Produce Exporters Association of Kenya
COLEACP	Europe-Africa-Caribbean-Pacific Liaison Committee	FSSC	Food Safety System Certificate
COVID – 19	Coronavirus disease 2019	GAP	Good Agronomy Practice
CV	Curriculum Vitae	GBR	Great Britain
DANIDA	Danish International Development Agency	GEAP	The Green Employment in Agriculture Programme
		GFSI	Global Food Safety Initiative Standards
		GOK	Government of Kenya

GRASP	GLOBALG.A. P Risk Assessment on Social Practice	KNBS	Kenya National Bureau of Statistics
GSP	EU's Generalised Scheme of Preferences	KOAN	The Kenya Organic Agriculture Network
GVC	Global Value Chain	KRA	Kenya Revenue Authority
Ha	Hectare	M	Million
HACCP	Hazard analysis and critical control points	M&S	Marks & Spenser
HCD	Horticultural Crops Directorate	MALFC	Ministry of Agriculture, Livestock and Fisheries and Cooperatives
HPTC	Horticulture Practical Training Centre, FPEAK	MAPS	Medicinal and Aromatic Plants
IFC	International Finance Corporation	MARK UP	Market Access Upgrade programme (UNIDO)
IFS	International Featured Standards	MESPT	Micro-Enterprises Support Programme Trust (Kenya; EU)
IPM	Integrated Pests Management	MIT	Ministry of Industry and Trade
ISO	International Organisation for Standardisation	MMA	Match Maker Associates Limited
ITC	The International Trade Centre	MRL	Maximum Residual Levels
JICA	Japan International Cooperation Agency	MT	Metric Tonnes
JKIA	Jomo Kenyatta International Airport Nairobi Kenya	NACOSTI	National Commission for Science, Technology and Innovation
JKUAT	Jomo Kenyatta University of Agriculture and Technology	NBA	National Biosafety Authority
CAA	Kenya Airports Authority	NCCAP	National Climate Change Action Plan (Kenya)
KALRO	Kenya Agricultural and Livestock Research Organisation	NGO	Non-Governmental Organisation
KAM	Kenya Association of Manufacturers	NHT	National Horticulture Taskforce (Kenya)
KCAA	Kenya Civil Aviation Authority	NL	The Netherlands
KCV	Kenya Climate Ventures	NOR	Norway
KEBS	Kenya Bureau of Standards	NZL	New Zealand
KENFAP	Kenya National Federation of Agricultural Producers	PALWECO	Programme for Agriculture and Livelihoods in Western Communities in Kenya
KEPHIS	Kenya Plant Health Inspectorate Service	PCPB	Pest Control Products Board (Kenya)
KEPROBA	Kenya Export Promotion and Branding Agency	PELUM	Participatory Ecological Land Use Management
KEPSA	Kenya Private Sector Alliance	PPE	Personal protective equipment
KES	Kenyan Shillings (€ 1 = 125 KES)	PSD	Private Sector Development
KfW	German state-owned investment and development bank	QA	Quality Assurance
KHC	Kenya Horticulture Council	QC	Quality Control
KHE	Kenya Horticultural Exporters 1977 Limited	QM	Quality Management
KMA	Kenya Maritime Authority	RBC	International Responsible Business Conduct
KME	Kilifi Moringa Estate		
KNCCI	Kenya National Chamber of Commerce and Industry		

RVO	Rijksdienst voor Ondernemend - Netherlands Enterprise Agency	TMEA	TradeMark East Africa
SDC	The Swiss Agency for Development and Cooperation	TSB	Tender Stem Broccoli
SDGs	Sustainable development goals	UK	United Kingdom
SHEP	Smallholder Horticulture Empowerment Promotion	UNCFS	United Nation's Committee on Food Security
SIZA	Sustainability Initiative of South Africa	UNCTAD	United Nations Conference on Trade and Development
SME	Small and Medium Enterprises	UNEP	United Nations Environment Programme
SMETA	Sedex Members Ethical Trade Audit	UNICEF	United Nations International Children's Emergency Fund
SPS	Sanitary and Phytosanitary	UNIDO	United Nations Industrial Development Organization
SSA	Sub-Sahara Africa	USA	United States of America
SSNC	Swedish Society for Nature Conservation	USD	United States Dollar (US\$1 = 105 KES)
STAK	Seed Traders Association of Kenya	VAT	Value Added Tax
SWIFT	Single Window Information for Trade		

Table of contents

ACKNOWLEDGEMENTS AND DISCLAIMER	I
ABBREVIATIONS AND ACRONYMS	II
TABLE OF CONTENTS	V
FOREWORD FROM THE AGRICULTURAL COUNSELLOR FOR KENYA.....	IX
EXECUTIVE SUMMARY	X
1. INTRODUCTION	14
1.1 GENERAL BACKGROUND	15
1.2 ECONOMIC SITUATION	15
1.3 CHALLENGES FACED BY PRODUCERS AND EXPORTERS IN KENYA	19
1.4 CHAPTER 1 TAKEAWAYS	20
2. KENYA HORTICULTURAL PRODUCTION AND EXPORT TRENDS	21
2.1. PRODUCTION TRENDS	22
2.1.1. <i>Production of Main Fruits and Vegetables in Kenya</i>	22
2.1.2. <i>Production calendar</i>	28
2.2. EXPORT TRENDS	28
2.3. EXPORT MARKETS	31
2.4. MAIN ACTORS IN THE HORTICULTURE INDUSTRY IN KENYA	31
2.5. CHAPTER 2 TAKEAWAYS	34
3. KENYA CERTIFICATION AND PERMITS REQUIREMENTS	35
3.1. PRODUCER CERTIFICATION	36
3.2. EXPORTERS CONVENTIONAL CERTIFICATION	36
3.2.1. <i>Global Food Safety Initiative standards (GFSI)</i>	36
3.2.2. <i>Regulation (EU) 2020/625 of 6 May 2020</i>	37
3.2.3. <i>Customer Specific Standards</i>	37
3.2.4. <i>Kenyan Regulatory Standard/ requirements</i>	38
3.2.5. <i>Certification bodies active in Kenya</i>	38
3.3. EXPORTERS CERTIFICATION AND PERMIT REQUIREMENTS	38
3.4. CHAPTER 3 TAKEAWAYS	41
4. LOGISTICS ARRANGEMENT FOR EXPORT OF HORTICULTURE PRODUCTS TO EU AND UK FROM KENYA	43

4.1.	AIRPORTS AND PORTS	43
4.2.	AGENCIES AND CERTIFICATIONS	44
4.3.	AIR FREIGHT	45
4.4.	SEA FREIGHT	49
4.5.	CHAPTER 4 TAKEAWAYS	56
5.	SUSTAINABLE SOURCING OF FRUITS AND VEGETABLES FROM KENYA.....	57
5.1.	INTRODUCTION.....	58
5.2.	PRODUCTION RELATED SUSTAINABILITY PRACTICES.	62
5.3.	SUSTAINABLE LAND AND WATER USE.....	62
5.4.	ORGANIC PRODUCTION AND MARKETING OF FRESH ORGANIC FRUITS AND VEGETABLES IN KENYA	62
5.4.1.	<i>Organic Crop Area and Production</i>	64
5.4.2.	<i>Overview of export of organic fruits and vegetables from Kenya.....</i>	65
5.4.3.	<i>Examples of successful sustainable production and marketing of organic fresh produce from Kenya.....</i>	66
5.5.	SUSTAINABLE PROCUREMENT OF FRUIT AND VEGETABLES.....	69
5.6.	SUSTAINABILITY PRACTICES IN SUPPLY CHAIN TRANSPORT LOGISTICS AND PACKAGING	70
5.7.	SUPPLY SIDE AND DEMAND SIDE SUSTAINABLE STANDARDS AND CERTIFICATIONS.....	73
5.7.1.	<i>Supply Side</i>	73
5.7.2.	<i>Demand Side.....</i>	74
5.7.3.	<i>Across Board Standards</i>	75
5.8.	SUSTAINABLE HORTICULTURE EXPORT TRADE INITIATIVES IN KENYA	76
5.9.	CHALLENGES AND RECOMMENDATIONS	76
5.10.	CASE STUDIES.....	77
5.11.	CHAPTER 5 TAKEAWAYS	78
6.	ANALYSIS OF THE BUSINESS ENABLING ENVIRONMENT.....	80
6.1.	POLICIES AND REGULATORY FRAMEWORK IN KENYA	80
6.2.	UPDATES ON HORTICULTURE TAXATION IN KENYA.....	83
6.3.	CHAPTER 6 TAKEAWAYS	85
7.	EMERGING DEVELOPMENTS AND SUPPORT PROGRAMMES/INITIATIVES IN HORTICULTURE IN KENYA.....	87
7.1.	HERBS AND SPICES ARE GAINING INTEREST	87
7.2.	CONCERNS ABOUT SUSTAINABLE HARVESTING METHODS AND CULTIVATION OF MAPS	90
7.3.	SUPERFOODS' EXPORT MARKET GROWTH.....	90
7.4.	AGRIBUSINESS TECHNOLOGY DEVELOPMENT	92
7.5.	GROWING VALUE ADDITION TO FRUITS AND VEGETABLES PRIOR TO EXPORT.....	92

7.6.	POST BREXIT UK – KENYA EPA	93
7.7.	INNOVATIVE FINANCE INSTRUMENTS TO SUPPORT KENYA EXPORTERS OF FRUITS AND VEGETABLES.....	94
7.8.	CHAPTER 7 TAKEAWAYS	95
8.	ON-GOING SUPPORT INITIATIVES AIMING AT PROMOTING HORTICULTURE INDUSTRY IN KENYA	96
9.	SUMMARY OF MAJOR TRENDS, OPPORTUNITIES, CHALLENGES AND ADVICE	106
9.1.	MAJOR TRENDS: EXPORT OF FRUITS FROM SSA TO EU (INCLUDING THE UK)	106
9.2.	MAJOR TRENDS: EXPORT OF VEGETABLES FROM SSA TO EU (INCLUDING THE UK).....	106
9.3.	MAJOR TRENDS: EXPORT OF FRUITS AND VEGETABLES FROM EU AND UK TO SSA	107
9.4.	PROMINENT OPPORTUNITIES IN THE HORTICULTURE INDUSTRY IN KENYA.....	107
9.5.	LESSONS AND TAKEAWAYS FROM EMERGING TRENDS	109
	ANNEX 1: PRODUCTION (MT, KES) AND TARGET MARKETS FOR FRUITS , VEGETABLES AND HERBS – KENYA	110
	ANNEX 2: USEFUL CONTACTS	114
	ANNEX 3: SOME CERTIFICATION BODIES ACTIVE IN IN THE FRESH PRODUCE INDUSTRY IN KENYA.....	115
	ANNEX 4: UPDATE ON THE NEW EU ORGANIC REGULATION AND ASSOCIATED IMPLEMENTING & DELEGATED ACT	116
	ANNEX 5: SOME ORGANIC CERTIFICATION BODIES ACTIVE IN IN THE FRESH PRODUCE INDUSTRY IN KENYA	121
	ANNEX 6: INSTITUTIONAL LANDSCAPE OF HORTICULTURE GOVERNMENT AGENCIES AND SECTOR ORGANISATIONS	122

List of Tables and Figures

TABLE 1:	INVENTORY OF MAJOR FRUITS, VEGETABLES AND HERBS IN KENYA – 2019	22
TABLE 2:	SELECTED VEGETABLES PRODUCTION COUNTY DISTRIBUTION	24
TABLE 3:	SELECTED HERBS PRODUCTION COUNTY DISTRIBUTION.....	26
TABLE 4:	THE CHARACTERISTICS OF EXPORTERS OF HORTICULTURE PRODUCTS FROM KENYA	33
TABLE 5:	SUMMARY OF CERTIFICATION AGENCIES AND SERVICES THEY OFFER	38
TABLE 6:	KENYA CERTIFICATION AND PERMITS FOR HORTICULTURE EXPORTERS.....	39
TABLE 7:	MAIN DOCUMENTATION REQUIRED FOR LOGISTICS ARRANGEMENTS FOR SHIPPING	45
TABLE 8:	AIR FREIGHT CARRIERS FROM KENYA	45
TABLE 9:	FRESH PRODUCE SHIPMENTS BY SEA 2015 – 2021	52
TABLE 10:	OPTIONS OF SEA FREIGHT ROUTES	52
TABLE 11:	AIRFREIGHT TRANSPORT COST - NAIROBI TO AMSTERDAM.....	55
TABLE 12:	EXAMPLE COSTS PER CONTAINER OF END-TO-END MOMBASA TO ROTTERDAM BY SEA.	55
TABLE 13:	COST OF SEA FREIGHT COMPARISON	55
TABLE 14:	SUSTAINABILITY PRACTICES AND INDICATORS	61
TABLE 15:	POLICIES AND REGULATORY FRAMEWORK	80
TABLE 16:	ON-GOING SUPPORT PROGRAMMES AND INITIATIVES FOR THE PROMOTION OF HORTICULTURE INDUSTRY IN KENYA - 2021	97

TABLE 17: TRENDS OF HORTICULTURE CROPS PERFORMANCE IN KENYA 2016 – 2020.....	110
TABLE 18: 5 YEAR VEGETABLES EXPORT (VOLUMES IN KILOGRAMS).....	110
TABLE 19: 5 YEAR VEGETABLES EXPORT (VALUE IN KENYA SHILLINGS).....	111
TABLE 20: 5 YEAR FRUITS EXPORT (VOLUME IN KILOGRAMS)	111
TABLE 21: 5 YEAR FRUITS EXPORT (VALUE IN KENYA SHILLINGS)	112
TABLE 22: VEGETABLES EXPORTS BY COUNTRY (US\$ THOUSAND)	113
TABLE 23: GOVERNMENT AGENCIES AND SECTOR ORGANISATIONS IN HORTICULTURE IN KENYA	122
FIGURE 1: HORTICULTURE PRODUCTS EXPORTS IN VALUE 2016 - 2020	17
FIGURE 2: HORTICULTURE PRODUCTS EXPORTS IN VOLUME 2016 - 2020	18
FIGURE 3: CHALLENGES FACED BY PRODUCERS	19
FIGURE 4: KEY BANANA PRODUCTION AREAS AND TRENDS IN KENYA	23
FIGURE 5: MAJOR FRUITS PRODUCTION AREAS.....	23
FIGURE 6: MAJOR VEGETABLES PRODUCTION AREAS.....	25
FIGURE 7: SELECTED HERBS PRODUCTION COUNTY DISTRIBUTION	27
FIGURE 8: SELECTED ASIAN VEGETABLES PRODUCTION COUNTY DISTRIBUTION	27
FIGURE 9: SEASONALITY FLUCTUATION FOR SELECTED FRUITS	28
FIGURE 10: SEASONALITY FLUCTUATION OF SELECTED VEGETABLES.....	28
FIGURE 11: KENYA HORTICULTURE VALUE AND RESPECTIVE SHARE OF EXPORT 1976 – 2018.....	29
FIGURE 12: EXPORT DESTINATIONS OF VEGETABLES FROM KENYA 2019	31
FIGURE 13: ILLUSTRATION OF KENYA HORTICULTURAL GLOBAL VALUE CHAIN	32
FIGURE 14: NEW ENTRANT PROCESS.....	39
FIGURE 15: PERCENTAGE OF FRESH PRODUCE TO THE EXPORTED CARGO AND GROWING SHARE OF BELLY CARGO EXPORTS FROM KENYA	46
FIGURE 16: AIR CARGO SHIPMENT PROCESS MAP.....	47
FIGURE 17: ANALYSIS OF FRESH PRODUCE MOVEMENT BY AIR 2017 – 2020	48
FIGURE 18: KENYA FRESH PRODUCE DESTINATIONS AND TRENDS 2015- 2019	49
FIGURE 19: SEA CARGO SHIPMENT PROCESS MAP	51
FIGURE 20: THE MAERSK ROUTE	53
FIGURE 21: WORLD BANK LOGISTICS INDEX EAC REGION FROM 2012 - 2018.....	54
FIGURE 22: SUSTAINABILITY IMPACTS ALONG THE FRESH FRUIT AND VEGETABLES SUPPLY CHAIN (NOT EXHAUSTIVE)	58
FIGURE 23: CHALLENGES THAT IMPEDES SUSTAINABILITY SOURCING ALONG TYPICAL FRESH PRODUCE SUPPLY CHAIN	60
FIGURE 24: CARBON FOOTPRINT OF GREEN BEANS SOLD IN DUTCH SUPERMARKETS.....	61
FIGURE 25:PRODUCE AND ACREAGE UNDER ORGANIC FARMING	64
FIGURE 26: ESTIMATED INTERNATIONAL MARKETS SUPPLY.....	65
FIGURE 27: LOGISTICS AND TRANSPORT ACTIVITIES AND RESPECTIVE CERTIFICATION	72
FIGURE 28: VALUE OF KENYAN HORTICULTURAL EXPORTS 1963 - 2016	108

Foreword from the Agricultural Counsellor for Kenya



The demand for sustainably sourced fruits and vegetables from Kenya is on the rise, driven by more conscious consumers who are willing to pay more for responsibly sourced produce. There are some clear opportunities for Kenya in meeting the increasing demand for sustainable and organic products in the EU market. Horticultural goods imported from Kenya to the Netherlands increased from 403 million MT in 2015 to 484 million MT in 2020. The Netherlands is the main entrance point for fresh fruit and vegetables into Europe. Kenya and the Netherlands both have a strong ambition to contribute to sustainable production and consumption (SDG 12).

Already in 2012, Dutch retailers and traders launched the [Sustainability Initiative Fruit and Vegetables](#) (SIFAV). Today, SIFAV has become a pan-European initiative, all committed to the objective of making the procurement of fruit and vegetables from Africa, Asia and South America 100% sustainable. There are already a number of inspiring examples, like the “Living Wage Avocado”. This report includes several inspiring examples, provides you with practical advice on certification in Kenya and tips on how to source environmentally and socially responsible products.

Sustainable sourcing has many benefits, from better conditions for producers, a positive impact on environment and soil (“doing the right thing”), to making your company future proof by having better risk mitigation (“doing the smart thing”). In a world where change is more frequent and more pronounced, companies can use sustainability strategies as a way to manage supply scarcity risks and to improve their ability to cope with an emerging market demand and ambitions to reduce waste. A focus on sustainability can in fact create new business opportunities.

I am more than happy to support this updated report to assist buyers and retailers in their journey to source sustainably from Kenya. We realize that this report may not explain all there is to know about sustainable sourcing. However, this report will provide you with practical information. It gives you clear insights, will help you to make decisions and gives advice on how to source responsibly.

By sharing best practices in sourcing, we work together towards sustainable value chains.

I would like to thank everybody that has collaborated in making this production possible, especially the experts in Africa and in the Netherlands.

Mrs. Ingrid Korving
Agricultural counsellor for Kenya and Tanzania

Executive Summary

The Embassy of the Kingdom of the Netherlands (EKN) promotes and supports continuous inclusive and sustainable development of the horticulture industry. This report is an update to the 2016 report, providing businesses in the Netherlands and Kenya with a reliable overview of possibilities for sustainable and responsible sourcing of fruits and vegetables from Kenya and provides specific advice and a checklist for traders/investors and farmers on regulations, required permits and certifications. It is recommended that this report is jointly read with the sister [report](#) focusing on the European demand side.



It is worth noting that the horticulture sector is a critical sector in Kenya's economy both in terms of sector growth, proportion of national exports, and contribution to the economy, hence a strategic sector for engagement. For example, Kenya **exports** amounted to US\$6.25B in 2019 and while total volume of trade declined between 2019 and 2020, total export earnings increased by 7.9% mainly due to increases in the value of domestic exports of tea, horticulture, coffee, titanium ores and concentrates. The most common destination for the exports were Uganda (US\$619M), United States (US\$546M), Netherlands (US\$487M), Pakistan (US\$440M), and United Kingdom (US\$387M). Noteworthy is that the value of exports to the United Kingdom which rose by 24.4% due to increased exports of tea, vegetables and cut flowers. The prominence of horticulture in these numbers has implications to foreign investors, local producers, international retailers and local policy makers.

Kenya's **horticulture** constitutes a diverse supply of fruits, vegetables, herbs and spices. Thus, Kenya's major **fruits** are avocado, mango, passion fruit, pineapple, banana, pawpaw and water melon; while major **vegetables** include tomato, kale, cabbage, onion, potato, French beans, chillies, snow peas, sugar snaps, runner beans, baby corn, garden peas, Asian vegetables (e.g., Okra, Dudhi, Valore, Turia) and **herbs and spices**. The main EU markets are the Netherlands, Switzerland, Germany, France, and United Kingdom. During 2016 – 2020, export value of horticultural products increased by 10.6% to US\$1.24b and accounted for 24.0% of the total domestic export earnings. Despite COVID – 19 in 2020, earnings from exports of horticulture produce between 2019 and 2020 increased by 3.9% from US\$1.31b to US\$1.37b in 2020. However, a huge proportion of these earnings is reduced because of air freight costs, hence the need to enhance both air and sea freight systems.

A critical factor for horticulture products is the seasonality which affects supply regularity. However, due to the wide **geographical and climatic diversity** together with complementary irrigation allowing production of different types of horticultures for domestic and export markets, Kenya is able to produce horticultural products all year-round. Kenya's right climate, competitive labour and good market access in terms of regular flights has made it successful in growing horticultural crops particularly for the export market. Smallholder production constitutes 80% of all growers and produces 60% of total horticultural exports. There are over 200 fruits and vegetables exporters in Kenya of whom 137 are active members of Fresh Produce Exporters Association of Kenya (FPEAK) and Fresh Produce Consortium of Kenya (FPC Kenya). This makes sourcing of horticulture

from Kenya very competitive and reliable.

However, there are key **challenges** including: 1) low profit margins resulting from diminished capacity to implement Good Agricultural Practices (GAP) and other market requirements; 2) emerging pests and diseases affecting the quantity and quality of exported produce which led to stringent sanitary and phytosanitary regulations by Kenya in partnership with the European Union and United Kingdom; 3) instabilities such as fluctuating customer orders, unpredictable demand, and unrealistic timelines between placing orders and delivery; 4) delays due to inadequate cargo spaces leading to exorbitant freight charges; and 5) limited foreign markets, i.e., only 4% of all the horticultural produce (Fruits and Vegetables) is being exported while 96% is consumed locally. These challenges provide insights about intervention areas to not only enhance local livelihoods, but to also improve on export reliability.

For potential new entrants, some of the key reference stakeholders and requirements include:

1. The **main actors** in the Kenyan horticulture industry include: 1) **input suppliers**; 2) **production and packaging**; and 3) **processors**. There are also European based **retailers** such as Tesco (GBR), Marks & Spencer (GBR), Waitrose (GBR), Albert Heijn (NL) and Walmart (USA) and many more.
2. Kenya's **Certification and Permits** requirements include: 1) **producer's requirements** of HCDA Producer Certification, KEPHIS Phytosanitary and Sanitary certification, the National Environment Management Authority Environment Impact Assessment Certification, and Food hygiene licensing; 2) **demand side producer certifications** such as Global GAP, BRC, and others as specified by individual retailers; 3) **Exporters** required to be registered by the Horticulture Crops Directorate (HCD), a conformity and phytosanitary certificates including a KEPHIS Laboratory test report for proposed exports, a phytosanitary certificate (for fresh produce), and certificate of origin from the Kenya Revenue Authority.
3. With respect to **logistics**, over 98% of fresh produce is shipped by air and only a small portion shipped by sea. The movement of fresh produce from the farm to the port is not regulated, but movement by air and sea is regulated in accordance with international standards. Fresh produce constitutes more than 60% of Kenya's total **Air freight**. Airfreight typically has four broad steps 1) farmhouse to packhouse; 2) packhouse to exporter; 3) exporter to airport shed; 4) from airport shed to airline freighter. Airfreight cost for roses is typically US\$2.00 per Kg. The **Sea freight** process is much more complex than airfreight and takes approximately 5 days to arrange a sea freight movement with 35 days for transshipment (lowest ideal schedule is 21 and highest disaster schedule is 42 days). Depending on the shipping route, the cost of sea freight is around US\$11,000 to US\$13,000.

Towards Sustainability Sourcing, in 2012, the Sustainable Trade Initiative (IDH), Dutch retailers, traders in the sector and civil society organizations signed a covenant, which aimed to make imports of fruits and vegetables from Africa, Asia and South America 100% sustainable in 2020, putting into practice the SIFAV program (Sustainability Initiative Fruits and Vegetables). In Kenya for example, in 2018, Goshen invested in a facility to dry the fruit. This meant that fewer mangoes were being wasted and smallholder farms could sell a notably larger volume, generating a bigger income as a result. SIFAV launched a new collaborative sustainability strategy for 2025 focusing on improving working conditions, wages and incomes; strengthening due diligence reporting and transparency; and reducing the environmental footprint across the supply chain. In Kenya, a case study on Air Miles concluded that Kenyan roses are by far a greener option because food, flowers and other agricultural products grown near to the equator tend to have a lower carbon footprint than those produced locally under artificial greenhouse conditions, hence making the production process in Kenya 123 times more carbon efficient than in the Netherlands.

For example, the Mara Farm which has operations in Kenya and Holland is part of the SIFAV. It owns and operates a diversified horticultural agribusiness supplying quality fruit and vegetables to international markets, sourcing and distributing fresh produce. All their products can be traced from farm to fork and are Global G.A.P and SMETA (ethical trading) certified. They have their own farm and work closely with their Mara "family" community of smallholder farmers.

With respect to working conditions, Eosta, a leading distributor based in the Netherlands imports avocados from Kenya, coming from 20,000 smallholders who often have only a few trees each, but with a premium price helping them increase their income tenfold. In April 2021 it planned to add a Living Wage for avocados from Anthony Ngugi where customers would pay the living wage price of 2 cents per kilo.

Further sustainability has been achieved from organic farming. where Kenya has approximately 141,934 hectares of land under active organic farming management, considered to be an interesting option for smallholder farmers because it offers a unique combination of low inputs, environmental conservation and it provides access to premium price markets. The growing demand for organic produce in the EU and the UK has led to a rising number of local and foreign direct investments (FDIs) in organic agriculture in Kenya such as honey, essential oils, Macadamia, Coconuts, Cashew nuts, Fresh Fruits, Fresh Vegetable, Avocado, Root crops and Tea tree are the leading organic products produced. The main international markets for organic produce from Kenya are the EU and the USA which account for 56%, importing 104,841 tonnes of produce worth KES 105 million in the year ending 2017. A National Organic Policy has been drafted to help develop the value chain to ensure market differentiation between organically and conventionally produced crops. The endorsement of the East African Organic Product Standards (EAOPS) by the East African Community (EAC) places Kenya at a major advantage in the development of the sector since the demand for EOA products locally and internationally will be greatly enhanced.

Four **emerging growth areas** include: 1) organic horticulture products, 2) herbs and spices, 3) value addition products, and 4) post BREXIT arrangements. These emerging growth areas signal the need for investors, producers, retailers and policy makers to not only plan accordingly, but to also find ways of shaping these emerging areas to meet their respective objectives. In particular, organic horticulture, herbs and spices, and value addition provide a good opportunity for first mover advantage positioning.

Kenya is in sixth place in Africa with 37,000 **organic** farmers. There is a strong presence of many non-governmental organizations (NGOs) in the development of the ecological organic agriculture (EOA) subsector in Kenya. The Kenya Organic Agriculture Network (KOAN), the Participatory Ecological Land Use Management (PELUM) Association, and many non-governmental organizations (NGOs) have played critical roles in the development of the subsector and particularly the draft National Organic Policy, which is yet to be gazetted and announced by the relevant authority. Kenya has approximately 141,934 hectares (0.69% of the total agricultural land) that are under active organic farming management, including Fresh Fruits, Fresh Vegetable and Avocados. The main international markets for organic produce from Kenya are the European Union and the USA that together accounted for 56% (104,841 tonnes of produce worth KES 105 million in the year ending 2017).

With respect to **herbs and spices**, 95% of EU imports from non-EU countries come from developing countries, Turkey and central European states during the winter season. Farming and trading in herbs and spices in Kenya are on the rise. The MARKUP project funded by EU and implemented by UNIDO empowers herbs and spices farmers and marketing associations to accelerate industry growth. The project is collaborating with the Government of Kenya at national and county levels and other stakeholders in implementing policy reforms to create an enabling environment for competitive production and marketing of herbs and spices.

For **value addition**, while Kenya is a net importer of juices and other processed fruit and vegetable products, the export of some processed fruit and vegetable products, mainly pineapple juice, mixed juices and orange juice is growing. In 2020, the most exported juices included pineapple juice (67%), mixed juices (26.4%) and orange juice (3.92%). The EU countries, specifically the Netherlands, Spain and Greece accounted for about 45% of all exported fruit juice from Kenya in 2020. A Dutch company like Goshen sources its produce (avocados, mangoes, passion fruits, and French beans) from contracted small scale out growers located in various geographical locations in Kenya including Lower Eastern Kenya, Central Kenya and the Rift Valley where its small holder schemes are closely monitored by their technical team to ensure production of quality and safe produce. In addition, processes and distributes dried mangoes, dried pineapples and dried African leafy vegetables. Another Dutch company, Eosta BV which was founded in the

Netherlands in 1990 is an international distributor of fresh organic and fair fruits and vegetables, with a focus on overseas fruit and greenhouse crops. It is presently said to be Europe's most innovative importer, packer and distributor of organically grown fresh produce. Eosta serves major retailers and natural food stores in Europe, the USA, Canada and the Far East.

Since BREXIT, Kenya which is one of the UK's top-five trading partners is among the 16 African countries that signed a new trade agreement in 2021 with the UK. This allows Kenya to continue to export tea, coffee and spices, as well as vegetables and flowers to the UK, without paying duties.

About this report

This report (along with the sister European demand side [report](#)), provide the Dutch and Kenya traders/investors and farmers of fruit and vegetables with useful insights on the dynamics of the horticultural market in Kenya, EU and the UK and how traders/investors can identify and source environmentally friendly and socially responsible produce from Kenya. The report strives to strengthen further the Dutch – Kenyan cooperation and trade in the field of horticulture. Moreover, the study offers useful insights to support current programs in the horticultural sector with respect to supply and demand cycles to guide programs fill the gaps.

Specifically, **Chapter One** presents a contextual background, reviews the economic situation and pertinent opportunities and challenges. **Chapter Two**, outlines Kenya horticultural production trends along with export trends for main fruits and vegetables in Kenya, and finally highlights main actors in the horticulture industry in Kenya. **Chapter Three** outlines the Kenya certification and permits requirements including producer certification and exporters conventional certification. **Chapter Four**, reviews the logistics arrangement for export of horticulture products to EU and UK from Kenya primarily with respect to air freight and sea freight

Chapter Five discusses the importance of sustainable sourcing of fresh produce from Kenya and brings forward many examples of ongoing projects that emphasise the safeguarding of societal expectations. These are evidenced by the certifications and permits required towards balancing of planet, people and profit (PPP) objectives. This chapter also highlights on environmental and social standards for EU and UK export markets, organic production, marketing and certification, exporters certification and permit requirements, and challenges related to compliancy to stringent EU and UK export standards.

Chapter Six analyses the business enabling environment with emphasis on policies and the regulatory framework in Kenya and also provides updates on horticulture taxation in Kenya. **Chapter Seven** emerging development in the horticulture sector in Kenya. **Chapter Eight** highlights the status of the on-going support initiatives aimed at promoting horticulture industry in Kenya.

Finally, **Chapter Nine** presents a summary of major trends, opportunities, challenges and advice including, major trends in export of fruits from Sub-Saharan Africa (SSA) to EU (including the UK); major trends in export of vegetables from SSA to EU (including the UK); major trends in export of fruits and vegetables from EU and UK to SSA; lessons and takeaways from emerging trends; prominent opportunities in the horticulture industry in Kenya; prominent challenges facing the horticulture industry in Kenya; and finally provides tips and advice on how to navigate through challenges and complex dynamics in horticulture industry in Kenya.



1

INTRODUCTION

1. Introduction

1.1 General Background

The promotion and support of the continuous inclusive and sustainable development of the horticulture industry is an ambition of the Embassy of the Kingdom of the Netherlands (EKN). In 2016 the Agricultural Department of the Embassy of the Kingdom of the Netherlands in Nairobi published a report on the sourcing of fruits and vegetables from Kenya, this subsequently was the most downloaded report for the past few years. In response, the Netherlands Embassy in Nairobi wishes to continue to provide businesses both within the Netherlands as well as in Kenya with a reliable updated overview of the possibilities for sustainable and responsible sourcing of fruits and vegetables from Kenya. It is a good reference document especially for Dutch Horticulture investors, producers, exporters, retailers and other related intermediaries who need to position themselves in this market. The outputs of this study are two interdependent reports that are complementary namely:

1. **Supply side report:** Horticulture scoping study for Kenya: Sustainable and responsible sourcing of fruits and vegetables from Kenya
2. **Demand side report:** EU and UK fresh produce market: Sustainable and responsible sourcing of fruits and vegetables from Kenya.

Both reports, jointly provide the Dutch and Kenya traders/investors and farmers of fruit and vegetables with useful insights on the dynamics of the horticultural market in Kenya, EU and the UK. The reports give insights into opportunities for fruits, vegetables, herbs spices and organic produce and provide advice on how traders/investors can identify and source environmentally friendly and socially responsible produce from Kenya.

This study provides a specific advice & checklist for traders/investors and farmers on relevant regulations, required permits and certifications.

Both reports, jointly strive to strengthen further the Dutch – Kenyan cooperation and trade in the field of horticulture. Moreover, the study is offering useful insights to support current programs in the horticultural sector by providing a clear overview of the supply and demand cycles, so that they can direct their programs further in filling the gaps.

1.2 Economic situation

In 2019, Kenya exported a total of US\$6.25B, making it the number 107 exporter in the world or an increase in the last five years by US\$13.6M from US\$6.24B in 2014 to US\$6.25B in 2019. But Kenya's total volume of trade declined to KES 2,287.2 billion in 2020 from KES 2,403.0 billion in 2019, while total export earnings increased by 7.9% to KES 643.7 billion in 2020 mainly due to increases in the value of domestic exports of tea, horticulture, coffee, titanium ores and concentrates. Generally:

- The exports were led by Tea (US\$1.13B), Cut Flowers (US\$616M), Refined Petroleum (US\$404M), Coffee (US\$224M), and Titanium Ore (US\$143M).
- The most common destination for the exports were Uganda (US\$619M), United States (US\$546M), Netherlands (US\$487M), Pakistan (US\$440M), and United Kingdom (US\$387M).
- Earnings from exports to Europe amounted to KES 171.5 billion, accounting for 26.6% of the total export earnings.
- The value of exports to the United Kingdom increased by 24.4% from KES 40.1 billion in 2019 to KES 49.9 billion in 2020, due to increased domestic exports of tea, vegetables and cut flowers.

Kenyan agriculture accounts for 65% of the country's export earnings. The cash crops that drive these earnings by export value in millions of Kenya shillings include horticulture (135,959.7); Tea (130,353.4); coffee (22,242.7), tobacco (12,334.1), essential oils (15,811.9); and animal and vegetable oils (10,347.1). However, growth in agriculture is projected at 4.8% in 2021 and 5.1% in the medium term, assuming normal weather conditions and ongoing global economic recovery that will stimulate increased production of exports commodities (notably tea, cut flowers and vegetables). In general:

- Despite the poor short rains, COVID – 19 pandemic and desert locust incidence in various parts of the country, agriculture growth increased from 3.0% recorded in 2019 to 5.4% in 2020.
- Real Agricultural Growth Rate between 2016 – 2020 was respectively 5%, -2.16%, 6.10%, 2.96% and 5.30%)
- The value of marketed agricultural production increased by 9.3% from KES 466.3 billion in 2019 to KES 509.7 billion in 2020

While Kenya was not an exporter of the horticulture products in the 1970s, it is now the major exporter to the EU, where it accounts for almost 45% of the exports, especially cut flowers at 41%. According to a 2021 fresh produce logistics [study](#) financed by TMEA, Kenya's fresh produce has a footprint in 147 destinations which represents 77% of the countries globally. As a result, 77% of the countries across the globe have enjoyed one of Kenya's fresh products. The main EU markets are the Netherlands, Switzerland, Germany, France, and United Kingdom. As a powerhouse export segment and major engine for the agriculture sector, Kenyan horticulture has made enormous strides in recent years, despite an increasingly challenging and complex regulatory landscape in its key market, the EU.

According to Kenya National Bureau of Statistics (KNBS, 2021), the total horticulture export was about US\$ 1 billion in 2013. The floriculture sub sector accounts for a significant proportion of horticulture exports. Flowers account for more than 70 percent of Kenya's 2020 horticulture export earnings (KES 107.5b) while vegetables (KES 24.2b) and fruits (KES 18.4b) comprise about 16% and 12% respectively. Despite the COVID – 19 pandemic, export volumes and value rose in 2020, despite a drop-in price from 262.9 per Kg to 229.6 per Kg. In general, and as shown in [Figure 1](#) and [Figure 2](#) below:

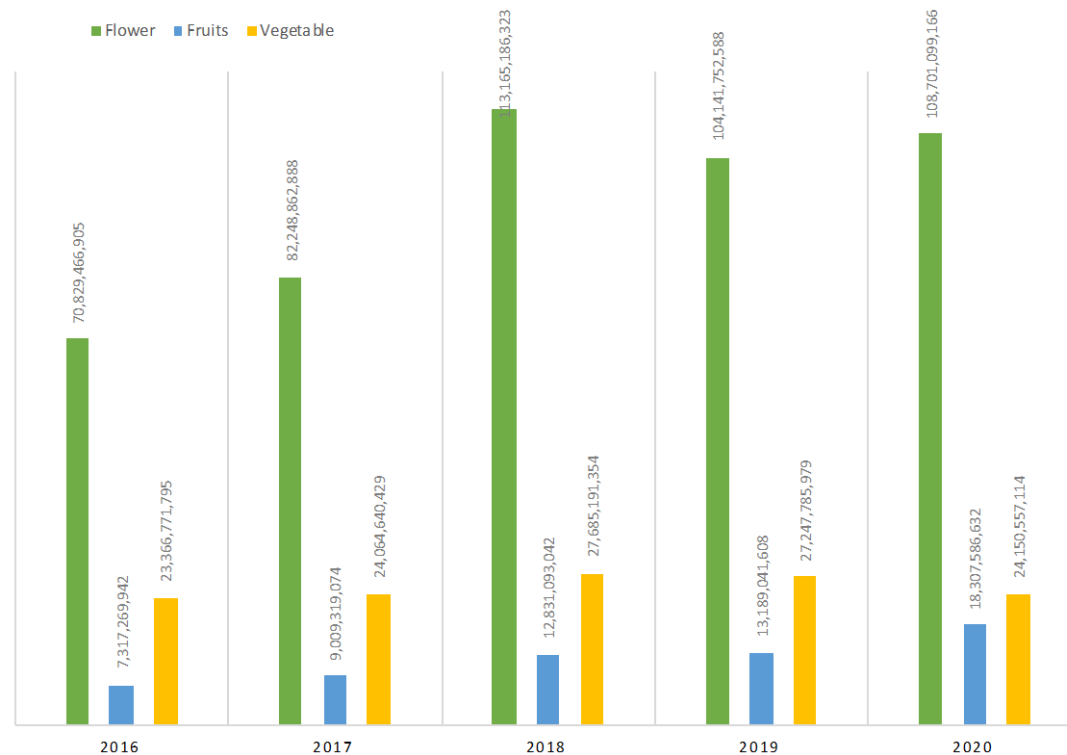


Figure 1: Horticulture products exports in value 2016 - 2020

Source: FPEAK-Exports in Value and Volume 2016 – 2020-sourced from HCD Validated Report.

- During 2016 – 2020 period, export value of horticultural products increased by 10.6% to KES 136.0 billion (or US\$1.24b)¹ and accounted for 24.0% of the total domestic export earnings compared to the 2017 report where the value increased from US\$816 million in 2014 to US\$877 million in 2015.
- Despite the emergence of COVID – 19 in 2020, earnings from exports of horticulture produce between 2019 and 2020 increased by 3.9% from KES 144.6 billion (US\$1.31b) to KES 150.2 billion (US\$1.37b) in 2020. However, according to a FPEAK horticulture [updates](#) of January 2021, a huge proportion of this earnings went to the payment of air freights.
- Fruits in 2020 earned KES 18.4 billion accounting for 12.3% of fresh horticultural exports earnings.

¹ Using 2021 October 21 exchange rate of KES110 per US\$1

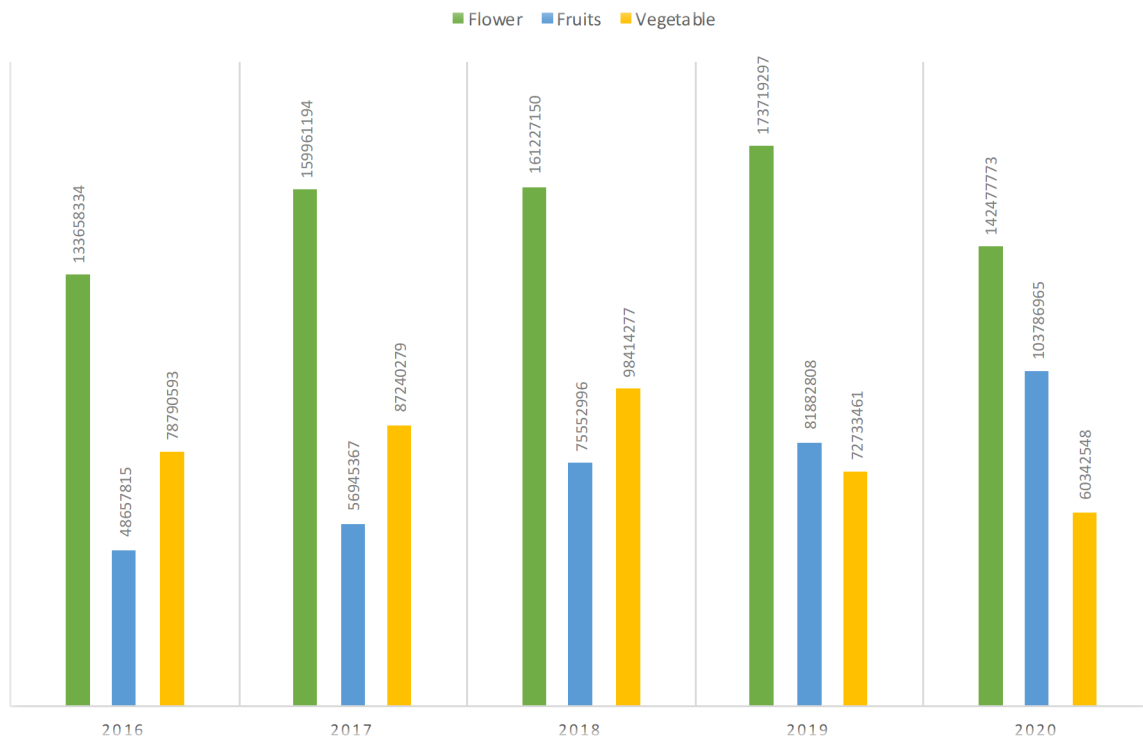


Figure 2: Horticulture products exports in volume 2016 - 2020

Source: FPEAK-Exports in Value and Volume 2016 – 2020-sourced from HCD Validated Report.

- The volume of horticultural exports decreased by 4.5% from 328.3 thousand tonnes in 2019 to 313.6 thousand tonnes in 2020.
- Export earnings from cut flowers increased by 3.2% to KES 107.5 billion in 2020 and accounted for 71.6% of total fresh horticulture exports earnings. The high export earnings from cut flowers are attributed to better prices offered in the export market.
- While the value of vegetable exports decreased by 11.1% from KES 27.2 billion in 2019 to KES 24.2 billion (or US\$220m) in 2020, it was still higher than the 2017 report where it increased by 11.2% from US\$182 million in 2014 to US\$203 million in 2015.
- Flowers earned the country KES 108B.
- Prior to COVID 19 pandemic, the highest quantities of fresh horticultural exports of over 30.0 thousand tonnes were recorded in the month of February 2020. Export earnings from horticulture were highest in March 2020 and lowest in June, 2020.

1.3 Challenges faced by producers and exporters in Kenya

Both literature and information from interviews indicate that producers and exporters of fresh fruits and vegetables face a combination of challenges as they attempt to meet the growing demand of fresh fruits and vegetables, comply with market requirements and at the same time remain profitable. Such challenges combined with high cost of inputs ends up increasing the cost of Kenya's fresh fruits and vegetables resulting to primary producers making insignificant profits or even losses.

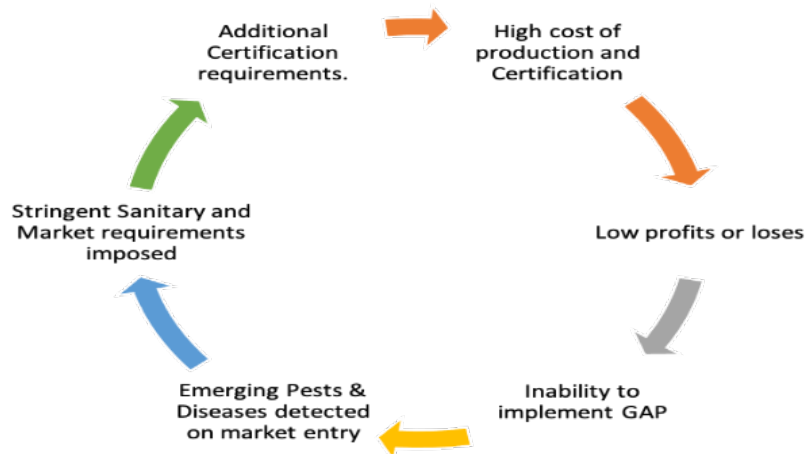


Figure 3: Challenges faced by producers

Low profit margins result to diminished capacity to implement Good Agricultural Practices (GAP) and other market requirements. Emerging pests and diseases affect the quantity and quality of exported produce.

In response to the deteriorating quality, regulators both in Kenya, the European Union and the United Kingdom resort to stringent sanitary and phytosanitary regulations in addition to other requirements imposed by retailers. The costs associated with the certification are then transferred to the producer.

Other challenges include fluctuating orders by customers and unpredictable demand, producers reported that some exporters for example resort to giving unrealistic timelines between placing orders and delivery. As a result, producers' resort to working with minimum timelines between planting and harvesting resulting to immature crop harvests. If an exporter has bulk shipment requiring timely deliveries, delays due to inadequate air cargo spaces leads to exorbitant freight charges, this has results to some exporters dropping out of Kenya's horticulture export business.

1.4 Chapter 1 Takeaways

Report Objectives: The goal of the twin scoping studies, i.e., the Supply side report on Horticulture scoping study for Kenya: and the Demand side report on EU and UK fresh produce market, jointly provide the Dutch and Kenya traders/investors and farmers of horticulture (**key stakeholders**) with useful insights on: a) the dynamics of the horticultural market in Kenya, EU and the UK; b) opportunities for fruits, vegetables, herbs spices and organic produce; and c) how traders/investors can identify and source environmentally friendly and socially responsible produce from Kenya. A key takeaway is that Kenya's horticulture sector is growing, facing challenges, but resilient to shocks and thus a promising and reliable source for horticulture produce.

Challenges: Producers and Exporters of fresh fruits and vegetables face a combination of challenges, i.e., the dilemma of meeting growing demand of fresh fruits and vegetables on one hand and the challenge of complying with market requirements and facing high cost of inputs on the other. Nonetheless, to enhance the horticulture sector in Kenya, and thus ensure its export supplies into the European markets and elsewhere, it is critical that key stakeholders not only recognize these challenges but also learn from them, anticipate and mitigate them. The key challenges include:

- Low profit margins result to diminished capacity to implement Good Agricultural Practices (GAP) and other market requirements.
- Emerging pests and diseases affect the quantity and quality of exported produce.
- Stringent sanitary and phytosanitary regulations in addition to other requirements imposed by retailers with certification costs transferred producers.
- Fluctuating orders by customers and unpredictable demand
- Minimum timelines between planting and harvesting resulting to immature crop harvests.
- Delays due to inadequate air cargo spaces leads to exorbitant freight charges, resulting in some exporters dropping out

Resilient Responsiveness: Despite the global and domestic challenges several signs of resilience were evident.

- For the **overall economy**, Kenya's total exports increased over five years by US\$13.6M from US\$6.24B in 2014 to US\$6.25B in 2019. This, while total volume of trade declined due to global dynamics, total export earnings increased by 7.9% mainly due to increases in the value of domestic exports of tea, horticulture, coffee, titanium ores and concentrates.
- The **agricultural sector** accounts for 65% of the country's export earnings led by horticulture (135,959.7), Tea (130,353.4), coffee (22,242.7), tobacco (12,334.1), essential oils (15,811.9); and animal and vegetable oils (10,347.1). Growth in agriculture is projected to be at 4.8% in 2021 and 5.1% in the medium term, partially reflecting its resilience. Thus, despite the COVID – 19 pandemic, the poor short rains, and desert locust incidence in various parts of the country, agriculture growth increased from 3.0% recorded in 2019 to 5.4% in 2020.
- The **horticultural sector** is now the major exporter to the EU, where it accounts for almost 45% of the exports, especially cut flowers at 41%. Thus, Kenya's fresh produce has a footprint in 147 destinations which represents 77% of the countries globally. The main EU markets are the Netherlands, Switzerland, Germany, France, and United Kingdom. The floriculture sub sector accounts for a significant proportion of horticulture exports, i.e., in 2020, flowers accounted for more than 70 percent export earnings, vegetables 16% and fruits 12%. Despite the COVID – 19 pandemic and the price decrease, horticulture export volumes increased with export earnings increasing by 3.9% between 2019 and 2020.

A woman wearing a plaid shirt, a hat, and gloves is harvesting coconuts from a tree. She is holding a large bunch of coconuts, some green and some yellow. The background is a blurred outdoor setting with trees and a building.

2

KENYA HORTICULTURAL PRODUCTION AND EXPORT TRENDS

2. Kenya Horticultural Production and Export Trends

2.1. Production Trends

2.1.1. Production of Main Fruits and Vegetables in Kenya

Table 1 below shows some of the major products, where they are produced and exported volume and destination markets in 2019. Figure 4 and Figure 5 thereafter shows the production cluster and intensity in 2019 (AFA – HCD Validated Horticulture Report 2018 – 2019).

Table 1: Inventory of major fruits, vegetables and herbs in Kenya – 2019

S/No	Horticultural Products	Where they are grown	Exported Volumes (2019)	Export Destinations
	<u>FRUITS</u>			
1	Avocado	Central highlands of Kenya mainly Murang'a, Kiambu, Makueni, Embu, Nyeri and Meru areas. Though there are other avocado growing areas outside Central Kenya such as Kisii, Eldoret, Bungoma, Laikipia, Nakuru and Naivasha.	59,331	United Kingdom, France, Netherlands, Germany, Belgium, Sweden, Djibouti, Middle East, South Africa, Australia, China
2	Mango	Major production counties are Makueni, Kwale, Kilifi, Machakos, Nyeri, Embu, Meru, Bungoma, Tharaka Nithi, and Elgeyo-Marakwet.	9,446	United Kingdom, Germany, Holland, France, Japan and Middle East
3	Passion fruit	Kiambu, Nyeri, Embu, Meru, Trans-Nzoia, Usain-Gishu, Kwale, Elgeyo Marakwet, and Laikipia are the major producing Counties.	597	United Kingdom, France, Germany, Belgium, Middle East.

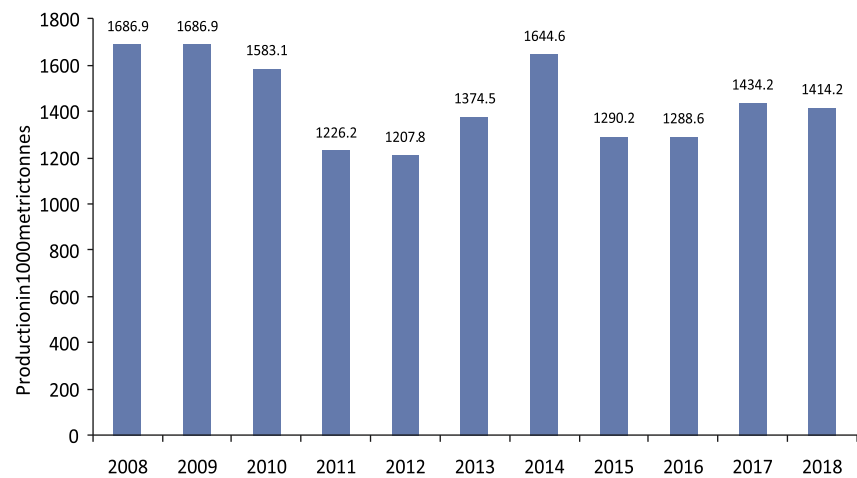


Figure 4: Key banana production areas and trends in Kenya

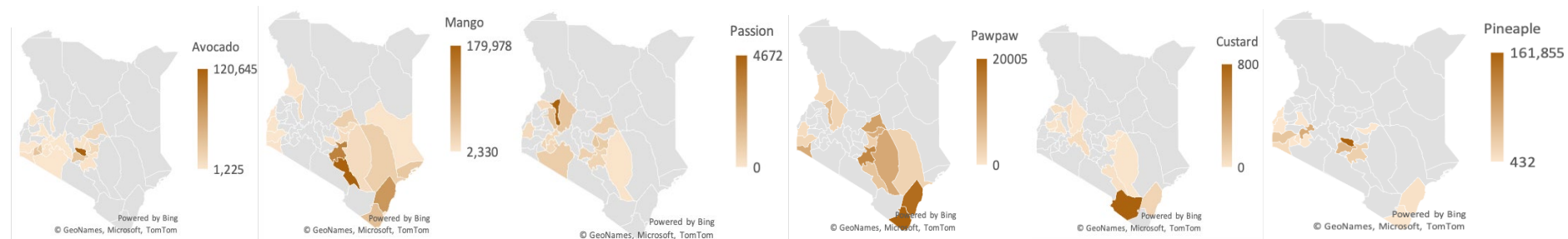
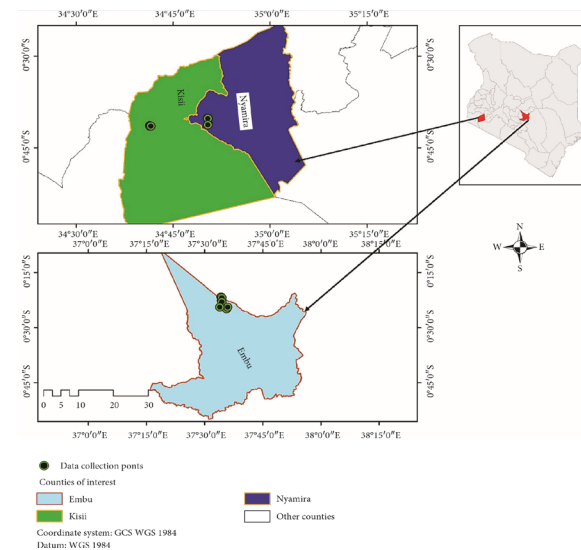


Figure 5: Major fruits production areas

For vegetables, there are many varieties that are grown for exports and also distributed in several spots along the Mombasa-Malaba railway corridor as indicated in [Table 2](#) and [Figure 6](#) below.

Table 2: Selected Vegetables Production County Distribution

S/No	Horticultural Products	Where they are grown	Exported Volumes (2019)	Export Destinations
	VEGETABLES			
1.	Fine beans	Kirinyaga, Murang'a, Meru, Machakos, Narok, Kiambu, Taita-Taveta, Embu, Nyeri, Bomet, Makueni and Kajiado	18,416	United Kingdom, France, Netherlands, Germany, Belgium, Russia, Djibouti, Middle East
2.	Snow Peas	Meru, Nyandarua, Laikipia, Taita Taveta, Kiambu, Narok, Baringo, Nyeri, Trans Nzoia, Nakuru	33,049	United Kingdom, France, Netherlands, Germany, Belgium, Djibouti, Saudi Arabia, United Arabs Emirates
3.	Sugar Snaps	Meru, Trans Nzoia and Taita-Taveta produce 98% of sugar snap grown. Other counties include Uasin Gishu, Narok, Elgeyo Marakwet, Laikipia, and Nyeri	860	United Kingdom, France, Netherlands, Germany, Belgium, Russia, Djibouti, Middle East
4.	Tender stem broccoli (TSB)	Meru, Nyandarua, Laikipia, Kiambu, Narok, Thika, Nyeri, Naivasha, Nakuru, Migori, Siaya	855	United Kingdom, France, Netherlands, Germany, Belgium, Russia, Djibouti, Middle East
5.	Snow Mangetout	Kirinyaga, Murang'a, Meru, Machakos, Narok, Kiambu, Taita Taveta, Embu, Nyeri, Bomet, Makueni, Kajiado	2,297	United Kingdom, France, Netherlands, Germany, Belgium, Russia, Djibouti, Middle East
6.	Runner beans	Grown by large-scale growers in Meru, Nyandarua and Migori.	1,509	United Kingdom, France, Netherlands, Germany, Belgium, Djibouti, Saudi Arabia, United Arabs Emirates
7.	Aubergines	Nyeri, Makueni, Meru, Kwale, Murang'a, Machakos, Naivasha, and Nakuru	1,387	United Kingdom, France, Netherlands, Germany, Belgium, Russia, Djibouti, Middle East
8.	Baby corn	Makueni, Kirinyaga, Machakos, Laikipia counties account for 94% of production.	85	United Kingdom, France, Netherlands, Germany, Belgium, Djibouti, Saudi Arabia, United Arabs Emirates
9.	Baby carrot	Meru, Nyandarua, Laikipia, Taita	10.5	United Kingdom, France, Netherlands, Germany, Belgium,

		Taveta, Kiambu, Narok, Thika, Nakuru, Nyeri		
10.	Baby courgettes	Makueni, Kirinyaga, Machakos, Laikipia, Naivasha, Meru, Nyandarua,	14.5	United Kingdom, France, Netherlands, Germany, Belgium,
11.	Baby Leeks	Makueni, Kirinyaga, Machakos, Laikipia, Naivasha, Nyeri Meru. Nyandarua,	9	United Kingdom, France, Netherlands, Germany, Belgium,
12.	Chillies	Makueni, Kirinyaga, Machakos, Laikipia, Nakuru, Meru, Nyandarua, Embu	1,286	United Kingdom, France, Netherlands, Germany, Belgium, Russia, Djibouti, Middle East
13.	Irish potatoes	Central highlands mainly Nyandarua, Nyeri, Meru, Kiambu. Other areas are Elgeyo Marakwet, Nakuru, Narok, Bomet, Murang'a, Baringo and Uasin Gishu	131	Vibrant domestic and regional market

Vegetables Production Distribution

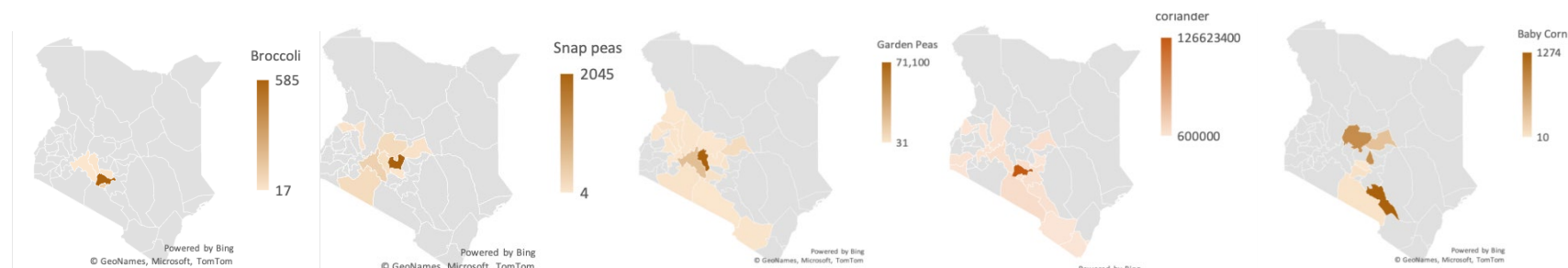


Figure 6: Major vegetables production areas

With respect to herbs, there is a much wider distribution across the country especially capsicum (African bird's eye chillies and bell paper) but with the Mombasa-Malaba trail corridor still represented fairly well as presented in Table 3 and Figure 7 and Figure 8 below.

Table 3: Selected Herbs Production County Distribution

S/No	Horticultural Products	Where they are grown	Exported Volumes (2019)	Export Destinations
	HERBS			
1.	Chives	Highland regions in Meru, Laikipia, Nyeri, Nakuru, Kirinyaga, Embu, Kajiado.	183	United Kingdom, France, Netherlands, Germany, Belgium, Russia, Djibouti, Middle East
2.	Basil	Meru, Laikipia, Nyeri, Naivasha, Nakuru, Kirinyaga, Embu, Kajiado.	1,717	United Kingdom, France, Netherlands, Germany, Belgium
3.	Coriander	Kiambu, Kisii, Nakuru, Murang'a, Narok, Uasin Gishu, Laikipia and Meru.	22	United Kingdom, France, Netherlands, Germany, Belgium
4.	Thyme	Kajiado, Meru, Laikipia, Nyeri, Nakuru, Kirinyaga, Embu.	46	United Kingdom, France, Netherlands, Germany, Belgium
5.	Rosemary	Nyandarua, Nyeri, Meru, Kiambu, Elgeyo Marakwet, Nakuru, Narok, Bomet, Murang'a, Baringo and Uasin Gishu, Nakuru, Kirinyaga, Embu Kajiado.	11	United Kingdom, France, Netherlands, Germany, Belgium, Russia, Djibouti, Middle East

Source: AFA – HCD Validated Horticulture Report 2018 – 2019

According to the Horticultural Crops Directorate (HCD), in 2018, Kenya produced 93 tonnes of ginger (locally known in Swahili as *Tangawizi*), valued at KES 9,672,000, up from 84 tonnes in 2017. Ginger is rarely grown in Kenya despite huge demand both locally and internationally, with some 90% consumed in Kenya sourced from Uganda, Tanzania, South Africa, China, Ethiopia, or India. Exports were, negligible, at just 704 kilograms in 2019, up from 32.5 kilograms in 2017. Kenya did not export any ginger in 2018.

Herbs Production Country Distribution

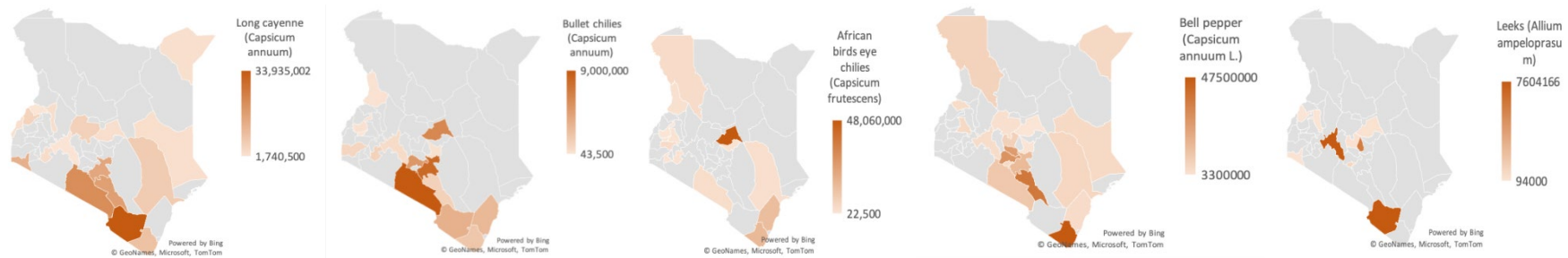


Figure 7: Selected Herbs Production County Distribution

Asian Vegetables Production Country Distribution

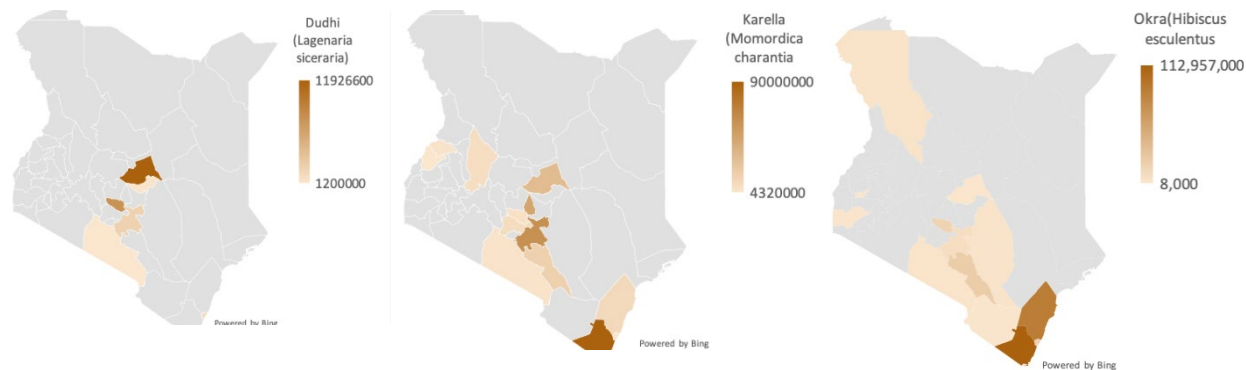


Figure 8: Selected Asian Vegetables Production County Distribution

Horticultural crops in Kenya can be produced in a wide range of ecological zones from the high and mid rainfall regions to the semi-arid and arid regions. The wide geographical and climatic diversity together with complementary irrigation have allowed production of different types of horticultural crops that target both domestic and export markets. Consequently, Kenya is able to produce horticultural products year-round as further shown in Figure 9 and Figure 10 below.

2.1.2. Production calendar

Fruits Production Calendar 2020

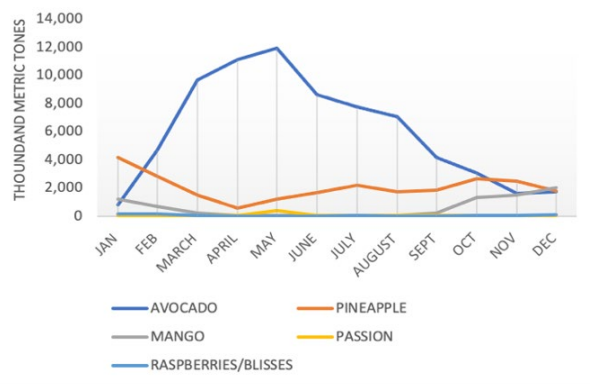


Figure 9: Seasonality fluctuation for selected fruits

Vegetables Production Calendar 2020

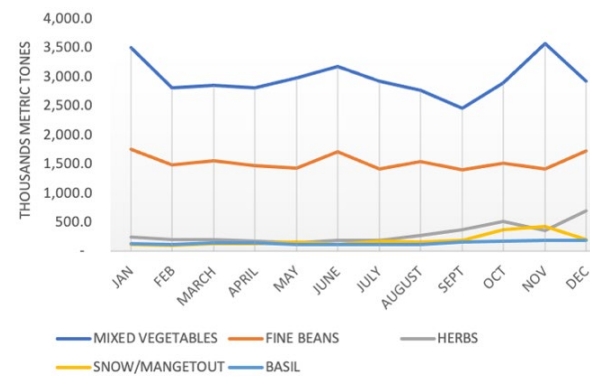


Figure 10: Seasonality fluctuation of selected vegetables

2.2. Export Trends

The horticulture sector in Kenya resulted from pioneering foreign investments which created a route to international markets for local firms. By providing access to foreign expertise, technology, and capital. Foreign direct investment (FDI) was critical to launching Kenyan producers into the horticulture global value chain (GVC). The pioneering FDI and foreign entrepreneurs living in Kenya (with strong, kinship connections to EU markets) ignited the growth of the sector. Subsequently, economies of scale made possible crucial investments in the local infrastructure and enabled commercial-scale production. Figure 11 visualises three distinct growth phases of the sector, i.e., the era of the pioneers; build-up; the golden decade and in search of new spark which COVID – 19 did not seem to affect very much.

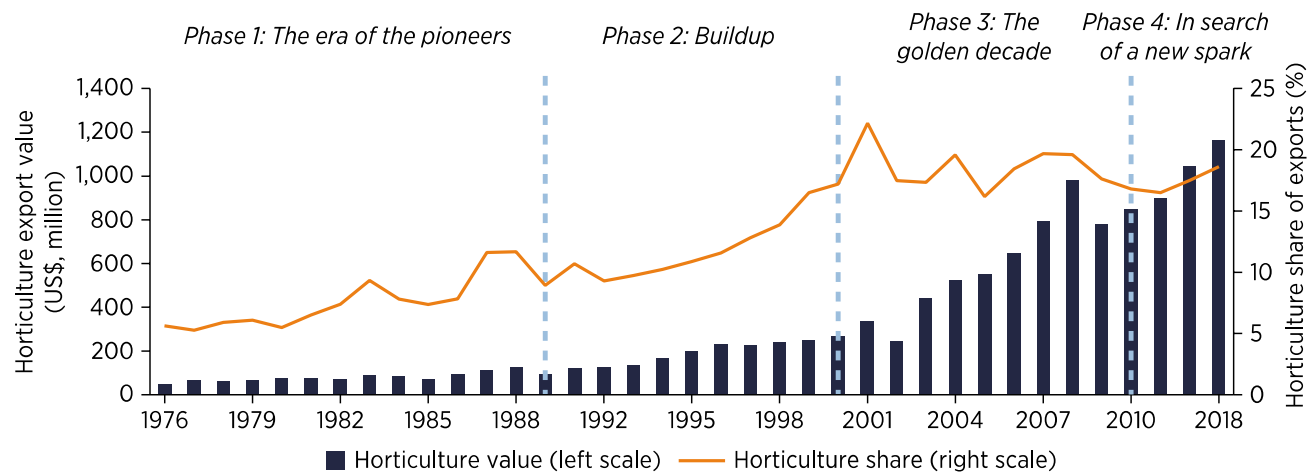


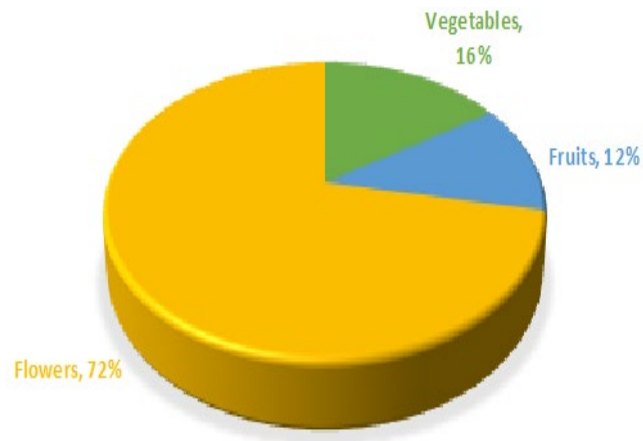
Figure 11: Kenya Horticulture value and respective share of export 1976 – 2018
 Source: Qiang, Christine Zhenwei, Yan Liu, and Victor Steenberg (2021), *An Investment Perspective on Global Value Chains*. Page 224

According to [HCD](#), the total value of horticultural produce exported in 2021 from January to November rose from KES136.7 billion in 2020 to KES145.4 billion in 2021 representing a 6% increase. The total volume of exports increased by 85 million kilos, representing a 30% rise that was attributed to increased demand especially flowers and vegetables.

The volume of flowers exports increased from 287.8 million kilos in 2020 to 373.78 million kilos in 2021, a 3.3 percent rise while value increased from KES 99 billion previously to KES 101 billion in the review period. Vegetable volumes rose to 65.13 million kilos from 34.38 million kilos in 2020. The value also increased from KES 13.9 billion in 2020 to KES 23.78 billion in the period.

The volume of fruits increased by 11 percent, from 99.5 million kilos in 2020 to 110.5 million kilos in 2021. However, the value dropped marginally from KES 17.75 billion to KES 17.57 billion.

The leading contributors to fruits exports were avocado, pineapple and mangoes, sold mainly to The Netherlands, France, The United Kingdom, UAE and Saudi Arabia. The European Union still accounts for the largest portion of Kenyan horticultural exports, taking in 45 percent of the exports majorly comprising cut flowers, French beans, snow peas and Asian vegetables.



Export earnings for the year 2020 stood at KES.151Bn. Majority of earnings from the sector comes from Flowers which earned the country KES 108B, Fruits KES 18B and Vegetables KES 24B. Growers and exporters did not realise the kind of profits they expected due to high freight costs, Generally There was a 5% improvement on earnings as compared to 2019.

The total value for exported vegetables has grown by at least 5% but the volume exported has decreased by about 19.3% from 2015 to 2020. The value for exported fruits has increased by at least 106% and exported volumes increased by at least 90% during the same period.

The volume of fresh horticultural exports also increased by 10.4% in 2020 from 105 thousand MT to about 116 thousand MT. The increase in value and decrease in volume of vegetables is attributed to EU and UK traders sourcing a percentage of vegetables from Kenyan export competitors while the increased demand for fruits is mostly driven by increased interest in Kenya's avocado.

Major fruits grown in Kenya are avocado, mango, passion fruit, pineapple, banana, pawpaw, and water melon; while vegetables include tomato, kale, cabbage, onion, potato, French beans, chillies, snow peas, sugar snaps, runner beans, baby corn, garden peas, Asian vegetables (e.g., Okra, Dudhi, Valore, Turia), herbs and spices.



2.3. Export Markets

Major importing countries are mainly Pakistan, Netherlands, United Kingdom (UK), Egypt, United Arab Emirates (UAE) and Uganda due to either bilateral and multilateral agreements or proximity factors. Generally, the European Union (EU) has the largest share in fruits and vegetables (Figure 12). Other export destinations include Egypt, United States of America (USA), Canada, Japan, Russia, South Africa and Australia. Competition in these markets is stiff due to a large number of other international suppliers such as the Colombia, Ecuador, Ethiopia, Spain, Morocco, Israel, Egypt, India and China among others.



Figure 12: Export destinations of vegetables from Kenya 2019
Source: HCDA

Kenya's right climate, competitive labour and good market access in terms of regular flights has made it successful in growing horticultural crops particularly for the export market. Export horticulture is an important source of income for the resource poor in the peri-urban and rural areas either through smallholder out grower schemes or through employment on commercial farms. Smallholder production constitutes 80% of all growers and produces 60% of total horticultural exports, typically resulting from contracted out grower arrangements. There are over 200 fruits and vegetables exporters in Kenya of whom 137 are active members of FPEAK and Fresh Produce Consortium of Kenya (FPC Kenya). The majority are small and medium scale enterprises (SMEs) and about 20% are large companies.

2.4. Main actors in the horticulture Industry in Kenya

The main actors in the Kenyan horticulture industry include input suppliers such as BASF, Syngenta, Balton CP, Koppert and Yara supplying seeds, fertilizers, agrichemicals, farm equipment and irrigation equipment. Secondly are those involved in production and packaging such as Finlay/ Flamingo, DCK, Vegpro, Koenpack, Homegrown, and Kakuzi Ltd. Thirdly, are processors such as Del Monte and Olivado. Finally, are retailers who are involved in distribution and marketing such as Tesco, Marks & Spencer, Waitrose, Albert Heijn, Walmart and many more.

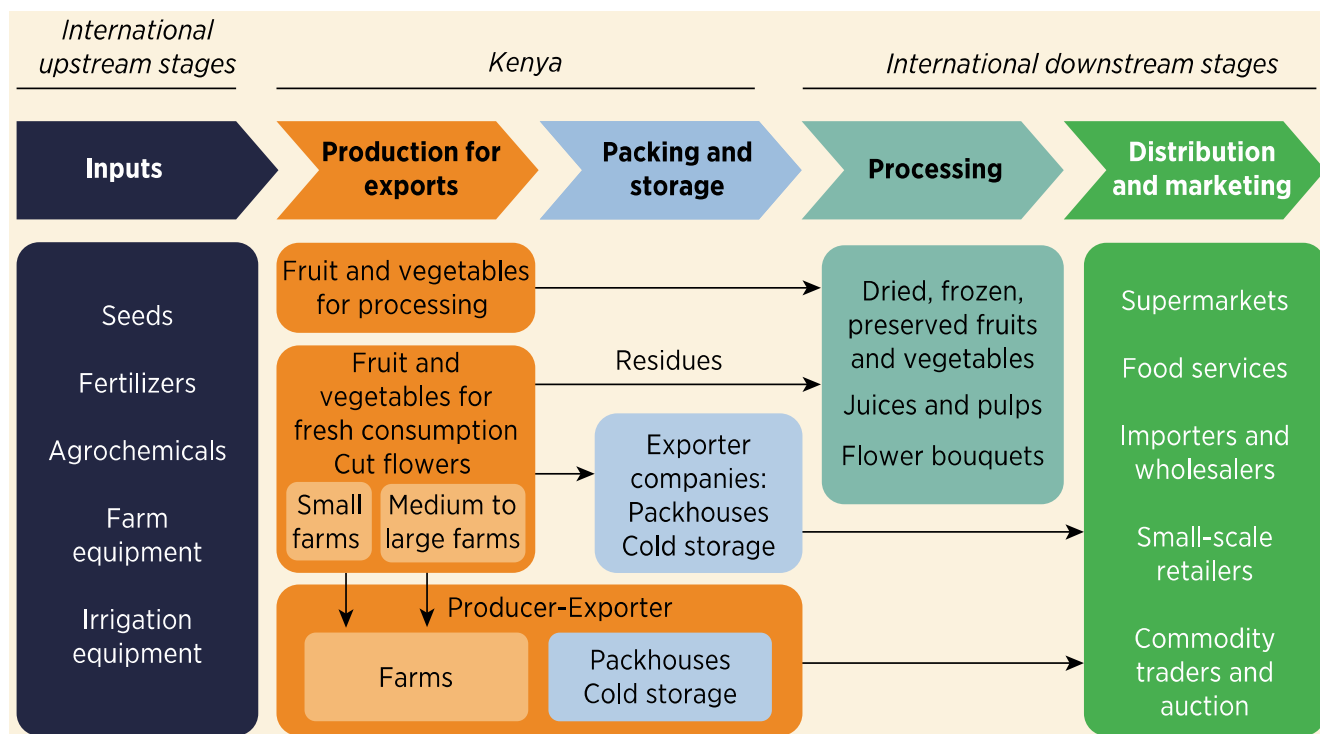


Figure 13: Illustration of Kenya Horticultural Global Value Chain

Source: Qiang, et al, (2021), *An Investment Perspective on Global Value Chains*. (Page 173): Adapted from Fernandez-Stark, Bamber, and Gereffi 2011 and UNCTAD 2009.

The main actors in the horticulture sector can be divided into three categories, i.e., small scale exporters, medium scale exporters and large-scale exporters with respective activities as indicated in **Table 4** below.

Table 4:The characteristics of exporters of horticulture products from Kenya

Scale	Small-scale exporters	Medium scale exporters	Large exporters
Distribution	Work with 2 nd tier importers (don't work directly with retail chains)	Work with 2 nd tier importers and some retail chains (supermarkets)	Work with both 2 nd tier traders and directly with retailers (supermarkets)
Packaging	Rely on hired Packhouse (currently HCD facility at JKIA) for final packaging and documentation prior to shipping.	Own small Packhouse for final packaging and documentation prior to shipping	Own medium/large pack house for final packaging and documentation prior to shipping
Bulking	Bulking is mainly from brokers and smallholder farmers	Bulking is mainly from brokers and certified outgrower farmers (GlobaGAP)	Bulking is mainly from certified outgrower farmers (GlobaGAP)
Farms	Most don't own farms	Some own small farms (up to 20% products from own farms)	Some own large farms (up to 40% products from own farms) Some own high care facilities (HCF)
Cold Chain	Absence of cold chain infrastructure	Absence of cold chain infrastructure	Presence of cold chain infrastructure
Perishables	Focus on less perishable fruit and vegetables for EU market (French beans and avocado) and focus more on non-EU markets. No obligation to comply to EU standards to export to Middle East and South Africa	Focus on less perishable fruit and vegetables for EU market (French beans and avocado) and focus more on non-EU markets. No obligation to comply to EU standards to export to Middle East and South Africa	Focus on all range of perishable fruit (avocado, passion fruit, mangoes), vegetables for EU market (French beans, snow peas, sugar snaps, baby corns, runner beans, baby carrots, baby leeks, baby courgettes and tender stem broccoli –TSB) and herbs (chives, basil, etc.
Markets	Active in local market especially food service sector	Some have started to access EU markets and engage in highly perishable products e.g. TSB, chives, etc..	Supply other non-EU markets such as Middle East, South Africa, Japan, and Hong Kong and Australia.

2.5. Chapter 2 Takeaways

The two key takeaways from this chapter is that the horticulture sector: a) provides opportunities for small holder farmers; and b) the trend is not only growing, reliable and resilient, but it is an all-year-round industry, often with peaks in winter season when local European fresh produce is limited.

First, smallholder production constitutes 80% of all growers and produces 60% of total horticultural exports, typically resulting from contracted out grower arrangements. The European Union (especially Netherlands and UK) account for the largest portion of Kenyan horticultural exports, taking in 45 percent of the exports, with the majorly comprising of cut flowers, French beans, snow peas and Asian vegetables (vegetables originating from Asia).

Secondly, its flat seasonality ensures continuous supply of fresh produce, i.e.,

- **Vegetables** are evenly distributed all year round with some minor peaks in Fall and Winter (September to February). There are many varieties of vegetables grown for exports. These are distributed in several spots along the Mombasa-Malaba railway corridor including: Fine beans, Extra Fine beans, Snow Peas, Sugar Snaps, Tender stem broccoli (TSB), Snow Mangetout, Runner beans, Aubergines, Baby corn, Baby carrot, Baby courgettes, Baby Leeks, Chillies, and Irish potatoes.
- **Fruits** are also all year round, especially passion fruits, but Avocados peak in Spring and Summer (February to September), while Mangoes peak from Fall to Spring (September to March) and Pineapples peak from Summer to Winter (July to February). Major production sites include Avocado (Central/Western), Mangoes (South East and Coast), Passion (Central/Western), Pineapples (Western/Central/Coast), and Bananas (Central/Western).
- **Herbs** are also produced all year round with a much wider distribution across the country but with the Mombasa-Malaba trail corridor as the core. These include: capsicum (African bird's eye chillies and bell paper), Chives, Basil, Coriander, Thyme, and Rosemary.

With respect to **growth trends**, the horticulture share of export market has been growing steadily both in volume and value. This has been divided into four phases by Qiang, *et al*, (2021), *An Investment Perspective on Global Value Chains*. (Page 224); i.e., from 5% in 1976 to about 1990 at 10% (*era of pioneers*); to about 2001 at 15% (*build up phase*); to about 2010 at about 18% (*the golden decade*) and about 2018 at 20% (*in search for a new spark*).

Image: Jani Fresh



3

KENYA CERTIFICATION AND PERMITS REQUIREMENTS



3. Kenya Certification and Permits requirements.

Production and Export of Fresh fruits and vegetables in Kenya are guided by legislation including; Crops (Horticultural Crops) Regulation of 2012, Agricultural Food Authority Act of 2013, Crops Act of 2013, The Agriculture Produce (Export) act 2012, The Plant protection act of 2012, The Biosafety Act of 2009, The Biosafety (Import, Export, and Transit) regulation of 2011 and The Environmental (Impact Assessment and Audit) Regulations, 2003. Fees and Levies are provided by the plant protection (fees) rules 2009, and The Miscellaneous Fees and Levies Act of 2016.

Enforcement of this regulations is done through the respective government agencies which include; The Agriculture Fisheries and Food Authority's (AFFA) Horticultural Crops Directorate (HCD), the Kenya Plant Health Inspectorate Service (KEPHIS), the National Biosafety Authority (NBA), the Kenya Revenue Authority (KRA), The National Environment Management Authority and other governmental and member organizations.

3.1. Producer certification

HCDA Producer Certification, KEPHIS Phytosanitary and Sanitary certification, The National Environment Management Authority Environment Impact Assessment Certification and Food hygiene licensing are the main certification requirements for producers by the Government of Kenya. There are additional demand side producer certifications such as Global GAP and BRC and others as specified by individual retailers such as Marks and Spencer (M&S) field to fork certification, the Albert Heijn protocol and the TESCO Food Manufacturing Standard (TFMS). The most common certification is the Global GAP. Thus, in 2008, only 4% of Kenya's agricultural production was exported, due to the lack of certified product. The Kenyan Ministry of Agriculture decided to lay out a 5-year plan to increase local fruit and vegetable exports. The Horticultural Crops Development Agency (HCDA) was tasked to implement this 5-year plan, including the implementation of an appropriate certification scheme. The HCDA chose GLOBALG.A.P. for several reasons: a) GLOBALG.A.P. is internationally recognized and globally accepted; b) GLOBALG.A.P. offers three standards allowing farmers to start within their means and over a period of time complete IFA V4 Certification; and c) GLOBALG.A.P. Certification can open previously closed domestic markets and increase foreign demand for products.

Africa has certification bodies able to audit farms against the GLOBALG.A.P. Standard.

3.2. Exporters Conventional Certification

Exporters are required to be registered by the Horticulture Crops Directorate (HCD), Conformity and phytosanitary certificates are required including a KEPHIS Laboratory test report for proposed exports, a phytosanitary certificate (For fresh produce) and certificate of origin from the Kenya Revenue Authority. **Table 6** below summarizes the procedure and requirements for the certification. Kenya is in the process of implementing Kenya Standard 1758:2016 (KS 1758) a code of practice for the horticulture industry which stipulates production hygienic and safety requirements, handling and marketing of flowers & ornamentals, fruits, vegetables, herbs and spices. The standard applies to all operators in the horticulture value chain including but not limited, to breeders, propagators, producers, consolidators, traders, shippers, and cargo handlers for local, regional and international markets.

3.2.1. Global Food Safety Initiative standards (GFSI)

- **Global GAP Certification.** There are accredited bodies such as AfriCert, EnCert, and Bureau Veritas Kenya, that conducts farm audits to verify whether you meet the Global GAP standards or otherwise.
- **Brand Recognition Through Compliance Standard (BRCGS)** formally (BRC) is a standard created by British retailers to create a framework that covers internationally accepted food safety standards and help improve food safety. The certification process assesses the ability of food handlers and to observe that they are taking due care for food safety. The

standard is recognized by all major UK food retailers and foodservice companies as well as throughout Europe and North America. BRC certification is a food safety standard that demonstrates a food and beverage company's commitment to industry best practices. There are four standards which include;

- BRC Global Standard for Agents and Brokers
- BRC Global Standard for Food Safety
- BRC Global Standard for Packaging and Packaging Materials
- BRC Global Standard for Storage and Distribution.

To obtain and maintain certification, companies undergo audits against the specified standard's requirements performed by an accredited certification body.

- **FSSC 22000** is certification based on ISO 22000 which is a voluntary food safety international standard. The standard requires the setting up of systems that facilitates communication between organizations both upstream and downstream in the food chain. To ensure communication with customers and suppliers about identified hazards and control measures that assist in clarifying customer and supplier requirements. ISO 22000 is also linked to Hazard Analysis Critical Control Points (HACCP) which is a management system in which food safety is addressed through the analysis and control of biological, chemical, and physical hazards from raw material production, procurement, and handling, to manufacturing, distribution, and consumption of the finished product.
- **International Featured Standards (IFS)** – for packers and processors focus on food safety and the quality of processes and products. IFS has two certifications (Logistics Certification) and Food standards which concerns food processing companies and companies that pack loose food products. IFS Food applies when products are “processed” or when there is a hazard for product contamination during primary packing. The Standard is important for all food manufacturers, especially for those producing private labels, as it contains many requirements related to compliance with customer specifications.
- **Euro 1 Certificate** also known as “movement certificate”, enables traders of produce from Kenya to export goods at a reduced rate of import duty under trade agreements between the Kenya and the EU, The Certificate is issued by the Kenya Revenue Authority in Nairobi.
- **SQF (Safe Quality Food)**

3.2.2. Regulation (EU) 2020/625 of 6 May 2020

The EU has imposed [stricter measures](#) on the import of Kenyan beans, which will be subject to mandatory 10% sampling checks on the residue levels. These measures were effective from the 26th May 2020. Excessive levels of pesticide residues are likely to lead to a total ban. The EU, which is Kenya's main market for horticulture produce, had initially capped the sampling at 5%. The increase in the inspection sample size means that the growers are expected to bear the extra cost. Therefore, the produce will be marketed more expensively on the world market.

3.2.3. Customer Specific Standards

- **Marks and Spencer (M&S) field to fork certification** is a requirement for the suppliers that supply the commercial chain of fresh products from the British supermarket Marks and Spencer, the certification ensures that the production process has been carried out following the code of good agricultural practices and respecting the environment, focusing mainly on reducing the use of pesticides, avoiding contamination of food and the use of approved agricultural products.
- **The Albert Heijn protocol** lays down the contracting requirements to guarantee the full application of the legislation in EU-MRL and ARfD-NL for fresh produce, the protocols monitor the levels of residues at source: the producers and packaging stations of suppliers.
- **The LEAF Marque standard** certification stands for environmental sustainability and is held by farm businesses that meet their sustainable farming practice.
- **The TESCO Food Manufacturing Standard (TFMS)** is a required benchmark for all food & drink-related companies that currently supply products, ingredients, or packaging materials to TESCO supermarkets.

- **ASDA Responsible Sourcing Approach** Partners with their suppliers and their facilities globally, to mitigate risks, drive remediation and improve standards for workers via their risk-based approach. Suppliers are expected to operate responsibly through abiding by applicable labour and employment laws and adhering to their Standard for Suppliers.

3.2.4. Kenyan Regulatory Standard/ requirements

- **Kenya Standard 1758:2016 (KS 1758)** is a code of practice for the horticulture industry in Kenya which stipulates the hygienic and safety requirements during the production, handling, and marketing of flowers & Ornamentals, fruits, vegetables, herbs, and spices. The standard is in two parts; Part 2 of the standard is responsible for the regulation of the Fruits and vegetable industry.

Other environmental and social standards are discussed further in **Chapter 5** below.

3.2.5. Certification bodies active in Kenya

The main certification bodies present in Kenya include NSF International, Bureau Veritas, DNVL, Control Union, SGS, AFRICERT ISACERT, KEBS, etc. and their services offered are highlighted in **Table 5** below and their details are included in **Annex 3**. The KEBS certification schemes include: Quality Management System (QMS); Food Safety Management System (FSMS); Environmental Management Systems (EMS); Information Security Management System (ISMS); Food Management System Standard (FSSC); Good Manufacturing Practice (GMP) Certification; Good Hygiene Practices (FSCE) Certification; Occupational Health and Safety Management Systems (OHSMS); and Others

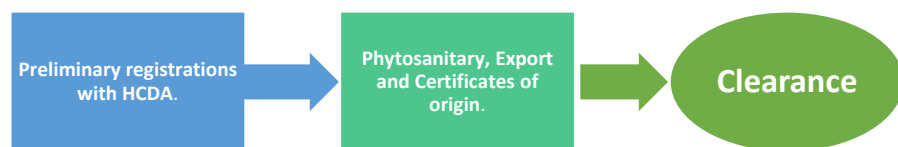
Table 5: Summary of certification agencies and services they offer

s/n	Agency	GAP	HACCP	(EU)organic	BRCGS	FSSC	IFS	ISO22000	BRC	BAP	SQF	KS1758	SMETA	Albert Heijn	Rain Forest	LEAF
1	NSF INTERNATIONAL															
3	DNV GL															
4	CONTORL UNION															
2	BUREAU VERITAS															
5	SGS Kenya Limited															
6	AFRICERT Limited															
7	ISACERT															

3.3. Exporters certification and permit requirements

Production and Export of Fresh fruits and vegetables in Kenya are guided by legislation including; [Crops \(Horticultural Crops\) Regulations](#), [Agricultural Food Authority Act](#), [Crops Act](#), [Agriculture Produce \(Export\) Act](#), [Plant protection Act](#), [Biosafety Act](#), and [Biosafety \(Import, Export, and Transit\) regulation](#), Fees and Levies are provided by the [plant protection \(fees\)](#)

rules, and [The Miscellaneous Fees and Levies Act](#). Enforcement is done through The Agriculture Fisheries and Food Authority's (AFFA), Horticultural Crops Directorate (HCD), the Kenya Plant Health Inspectorate Service (KEPHIS), the National Biosafety Authority (NBA), the Kenya Revenue Authority (KRA) and other governmental and member organizations.



New entrants into production and export of fresh fruits and vegetables are required to meet the basic company registration and statutory requirements for submission to HCDA for an award of horticulture producer and/or exporter license, this is then submitted to KEPHIS who inspects and award phytosanitary export certificate, the Kenya Revenue Authority then awards the certificate of origin which qualifies the company to export Fresh fruits and vegetables

Figure 14: New Entrant Process

Table 6: Kenya certification and permits for horticulture exporters

Organization	Requirements	Charges
<p><u>Export licence from</u></p> <p>HORTICULTURAL CROPS DIRECTORATE Regulations & Compliance Department (HCD)</p> <p>PHYSICAL ADDRESS Mazao Road, P.O. Box 00100-42601, Nairobi, Kenya</p>	<ol style="list-style-type: none"> 1. Certified copy Certificate of Business Registration from the Registrar of companies. 2. Copy of KRA Pin Certificate. 3. Certified copies of memorandum and articles of association. 4. Copies of Identity Cards of all the Directors or a photocopy of passport and work permit for non-nationals. 5. Documentary evidence from overseas clients, e. g. a letter, fax, or e-mail that you are ready to start an export business. 6. Knowledge of the requirements from overseas market 7. A business permit from local Authorities (County Government) 8. Typed application forms 1A and 1B. 9. Certified Tax compliance certificate 	<ol style="list-style-type: none"> 1. Registration fee KES. 5,000 2. License Application fee KES 15,000 3. Annual license renewal KES 10,000 4. Cess deposit fee KESs 5,000
<p><u>Conformity and phytosanitary certificates from</u></p> <p>Kenya Plant Health Inspectorate Service (KEPHIS) P.O. Box 001100-49592, Nairobi Tel: +254 709 891 000 / +254 770 704 096</p>	<ol style="list-style-type: none"> 1. Valid HCD Export License 2. Company's Organogram (s) 3. Two distinct quality Manuals (farm QM and packhouse QM) 4. Documented QMS with Key food safety Policies and Procedures. 5. Lists of contracted farmers/suppliers/agents and their contracts as well as a list of own farms (Lists, PS I or PS II, contracts) and expected monthly volumes of products intended for export 	

<https://www.kephis.org/>

6. Copies of academic certificates, short-term training, CVs, and employment offer letters for Agronomist, Farm Manager, and or TAs on the ground.
7. Academic certificates, short-term training, CVs, and employment offer letters for Packhouse Manager and QA/QC.
8. Medical examination reports for TAs, Sprayers, Packhouse Manager, QA/QC, Hygiene supervisor, and other key produce handlers both at farm and packhouse level
9. Calibrated spray equipment (codes, calibration data)
10. Records and schedules for Planting, Weeding, Fertilizer/soil amendments applications, and actual data obtained, Scouting and actual data obtained, Spray calibrations and actual data obtained, Actual spray operations, Harvesting, Cleaning of crates, PPEs & Equipment
11. Approved supplier of PPPs, contracts of a supplier, lists of registered PPPs for use on the intended crop
12. HCD Inspection reports for produce collection/handling and packing facilities
13. Soil and or irrigation water reports for either chemical or microbial contaminant analysis
14. Stores such as:
 - a. PPPs stores for farmers/farmer groups/suppliers and relevant records kept
 - b. PPE and or Equipment stores and relevant records kept
 - c. Fertilizer and or Seed stores and relevant records kept
15. Waste disposal mechanisms that guarantee food, environmental and human safety

Certificate	Procedure	Fee	Remarks
Food hygiene license	<ul style="list-style-type: none"> ● Filled original rules of origin exporter registration form. ● Certificate of incorporation (original). ● HCDA license (original). ● Request for Consignment. 	KES: 1,000 Registration KES: 2,000 License	Port Health Services or County Public Health Officers
(E.U) Preferential trade certificate. KRA	<ul style="list-style-type: none"> ● Individual PIN certificate (copy). ● Identity card (copy). ● Contact details. ● Company PIN certificate (copy). ● Certificate of incorporation (copy). 		
National Chamber of Commerce Certificate		KES 10,000 corporate KES 5,000 enterprise Annual Membership KES 500,000 gold KES 300,000 silver	Online Registration

		KES 100,000 corporate KES 50,000 enterprise	
(AFA) Agriculture And Food Authority	<ul style="list-style-type: none"> Cover letter requesting a GMO-free certificate. 		Online Registration
Genetically modified organism (GMO) free certificate	<ul style="list-style-type: none"> Filled original rules of origin exporter registration form. Certificate of incorporation (original). HCDCA license (original). Request for Consignment verification. Unique registration number 	KES 30,000 For local sampling and analysis. KES 2,000 For issuance of a certificate.	info@biosafetykenya.go.ke

3.4. Chapter 3 Takeaways

The takeaway of this chapter is the desire to balance comprehensiveness of the certification process for purposes of gaining global and local markets confidence in product standards and simplicity of the process to enhance efficiency and reduce post-harvest losses.

With respect to **comprehensiveness**:

- In 2008, only 4% of Kenya's agricultural production was exported, due to the limited product certifications. Hence, the Kenyan Ministry of Agriculture decided to lay out a 5-year plan to increase local fruit and vegetable exports. The Horticultural Crops Development Agency (HCDCA) was tasked to implement this 5-year plan, including the implementation of an appropriate certification scheme
- Major certification requirements for producers in Kenya include: HCDCA Producer Certification; KEPHIS Phytosanitary and Sanitary certification; The National Environment Management Authority Environment Impact Assessment Certification; and Food hygiene licensing.
- Key certifications include: Producer certifications, exporters conventional certifications; Global Food Safety Initiative standards (GFSI); Regulation (EU) 2020/625 of 6 May 2020; Customer Specific Standards; and Kenyan Regulatory Standard/ requirements.

With respect to simplicity, there are two main processes, i.e., Preliminary Registrations process with HCDCA; Phytosanitary, Export and Certificates of Origin process; and then Clearance :

- Registration:** New entrants into production and export of fresh fruits and vegetables submission to HCDCA for an award of horticulture producer and/or exporter license
- SPS:** Submitted to KEPHIS who inspects and award phytosanitary export certificate
- Export:** The Kenya Revenue Authority awards the certificate of origin qualifying for export.

An aerial photograph of a large container ship sailing on the open sea. The ship is densely packed with multi-colored shipping containers, including red, blue, yellow, green, and white. The ship is viewed from an elevated angle, showing its length and the vast expanse of the ocean around it.

4

LOGISTICS ARRANGEMENT
FOR EXPORT OF
HORTICULTURE PRODUCTS
TO EU AND UK FROM KENYA

4. Logistics arrangement for export of horticulture products to EU and UK from Kenya

Freight from Kenya to EU and UK is typically by air or sea as there is no rail or road connection except for local transport to respective air or sea ports. While most of the fresh produce has been by air, improvements at the Port of Mombasa has been promising, especially with new technological innovations which are increasing possibilities for the export of fresh produce by sea. Controlled atmosphere (CA) containers have for example made it possible to export avocados to new markets. The CA containers can extend the shelf life of the fruits from less than seven days to six weeks, allowing for movement of consignments from Kenya to the Middle East and Europe, which are the main consumers.

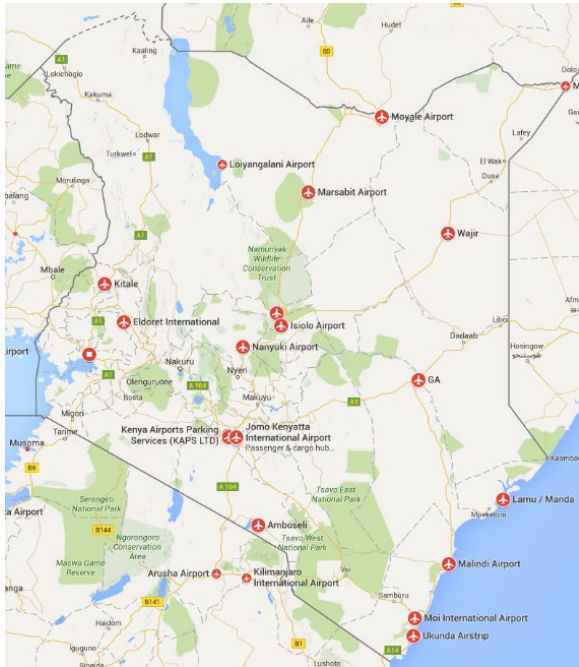
The movement of fresh produce in Kenya from the farm to the port either by sea or air is done by road and using by trucks and vans, which may or may not be refrigerated ([FPEAK 2021](#)). The movement of fresh produce by road is done through private arrangements by the respective exporters. Over 98% of fresh produce is shipped by air, and a small portion is shipped by sea. The movement of fresh produce from the farm to the port is not regulated, whereas movement by air and sea is regulated in accordance with international standards. Fresh produce logistics has many players (government agencies, freight forwarders, and airline operators) working independently without any coordination framework.

4.1. Airports and ports

Currently KAA operations 4 international airports, five domestic airports and 8 airstrips. The main gateway connecting Kenya to the rest of the world is Jomo Kenyatta International Airport and Moi International Airport. Kilindini Harbour at Mombasa. Other KPA ports include Lamu, Malindi, Kilifi, Mtwapa, Kiunga, Shimoni, Funzi and Vanga. Mombasa port is one of the busiest Ports along the East African coastlines as it provides connectivity to over 80 Ports worldwide and is linked to a vast hinterland comprising Uganda, Rwanda, Burundi, Eastern Democratic Republic of Congo, Northern Tanzania, Southern Sudan, Somalia and Ethiopia by road

Image: Jani Fresh





International Airports

1. Eldoret (EDL) Eldoret Airport
2. Jomo Kenyatta International Airport, Nairobi
3. Kisumu (KIS) Kisumu Airport
4. Mombasa (MBA) Moi International Airport

Local Airports

5. Amboseli (ASV) Amboseli Airport
6. Kerio Valley (KRV) Kerio Valley Airport
7. Liboi (LBK) Liboi Airport
8. Kalokol (KLK) Kalokol Airport
9. Samburu (UAS) Samburu Airport
10. Wajir (WJR) Wajir Airport
11. Nyeri (NYE) Nyeri Airport
12. Kericho (KEY) Kericho Airport
13. Loyangalani (LOY) Loyangalani Airport
14. Kiwayu (KWY) Kiwayu Airport
15. Lake Baringo (LBN) Lake Baringo Airport
16. Garissa (GAS) Garissa Airport

International Sea Ports

1. Kilindini Harbour, Mombasa
2. Lamu,
3. Malindi,

Local Sea Ports

1. Kilifi,
2. Mtwapa,
3. Kiunga,
4. Shimoni,
5. Funzi
6. Vanga

4.2. Agencies and Certifications

Government agencies include Kenya Airports Authority (KAA), Kenya Civil Aviation Authority (KCAA), Kenya Revenue Authority (KRA), Kenya Plant Health Inspectorate (KEPHIS), Agriculture Food Authority (AFA), Kenya Ports Authority (KPA), and Kenya Maritime Authority (KMA), each with a respective role in the supply chain. Approximately 90% of the fresh produce is destined for Europe. There are 9 key documents required for transport of fresh produce from Kenya to other countries, i.e., Phytosanitary Certificate, Export Certificate, Certificate of Origin, Export Health Certificate, Customs Release Report/Clearance, Unique Consignment Document, Airway Bill, Invoice, and a Packing List. These are further narrated in [Table 7](#) below.

Table 7: Main documentation required for logistics arrangements for shipping

Document		Comments
1	Phytosanitary Certificate	Certifies that plant and plant products are free from regulated pests and conform with other importing country's phytosanitary requirements (using a web based electronic certification system (ECS) system to ensure products meets importing country standards and the overall Vision 2030 strategy.
2	Export Certificate	Issued by AFA Horticultural Crops Directorate (HCD) to indicate clearance of consignment for export.
3	Certificate of Origin	Confirms that the goods in an export consignment have been produced, manufactured, or processed in a particular Kenya.
4	Export Health Certificate	Required to export all commodities for human consumption, is regulated by Port Health Services, and is required for each consignment for export.
5	Customs Release Report/Clearance	A "Customs Delivery Note" by Kenya Revenue Authority indicating release of goods under its control to be placed at the disposal of the party concerned for export.
6	Unique Consignment Document	A document that contains details of the Exporter, importer and the Consignment.
7	Airway Bill	A contract between the shipper and aircraft operator(s) issued directly by the airline or through a freight forwarder for the carriage of goods over routes of the operator(s).
8	Invoice	A document required by Customs in an importing State in which an exporter states the invoice or other price and specifies costs for freight, insurance, and packing, as well as terms of delivery and payment, for the purpose of determining the Customs value of goods in the importing country.
9	Packing List	A document specifying which goods are in each package

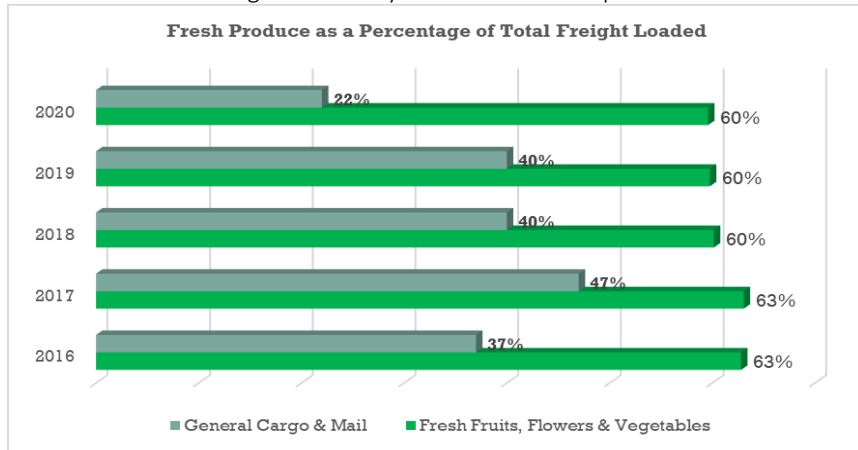
4.3. Air freight

The fresh produce constitutes more than 60% of Kenya's total air freight. Unlike complications in sea freight, airfreight typically has four broad steps as indicated in [Figure 16](#) below. In general, the airfreight shows a growing trend as reflected in [Figure 15](#) below. The airfreight system has two main transport means, i.e., by cargo airlines which are the majority or belly carriers where a few carriers participate (see [Table 8](#) below).

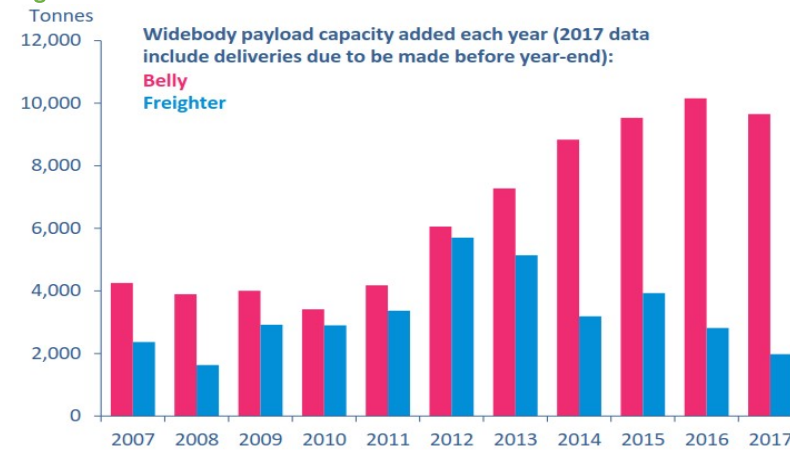
Table 8: Air Freight Carriers from Kenya

	CARGO AIRLINES		BELLY CARRIERS
Kenya Airways Cargo	Ethiopian airlines	Martin Air	Kenya Airways
Air France/KLM	Turkish Cargo	Egypt Air	British Airways
Lufthansa Cargo	MK Airline	Singapore Airlines	South African Airways
Emirates Sky cargo	Saudia Airlines	Qatar Airlines	Air Rwanda
Cargolux	Etihad Crystal Cargo	Astral Aviation	Emirates
Swiss World Cargo			

Over 60% of the air freight from Kenya constitutes fresh produce as reflected in the **Figure 15** below.



Source: FPEAK 2021.



Source: ENK 2018

Figure 15: Percentage of fresh produce to the exported cargo and growing share of Belly cargo exports from Kenya

The four common steps in airfreight shipment process with applicable costs and certifications from farm to airline freighter include: 1) farmhouse to packhouse; 2) packhouse to exporter; 3) exporter to airport shed; 4) from airport shed to airline freighter as reflected in the **Figure 16** below.

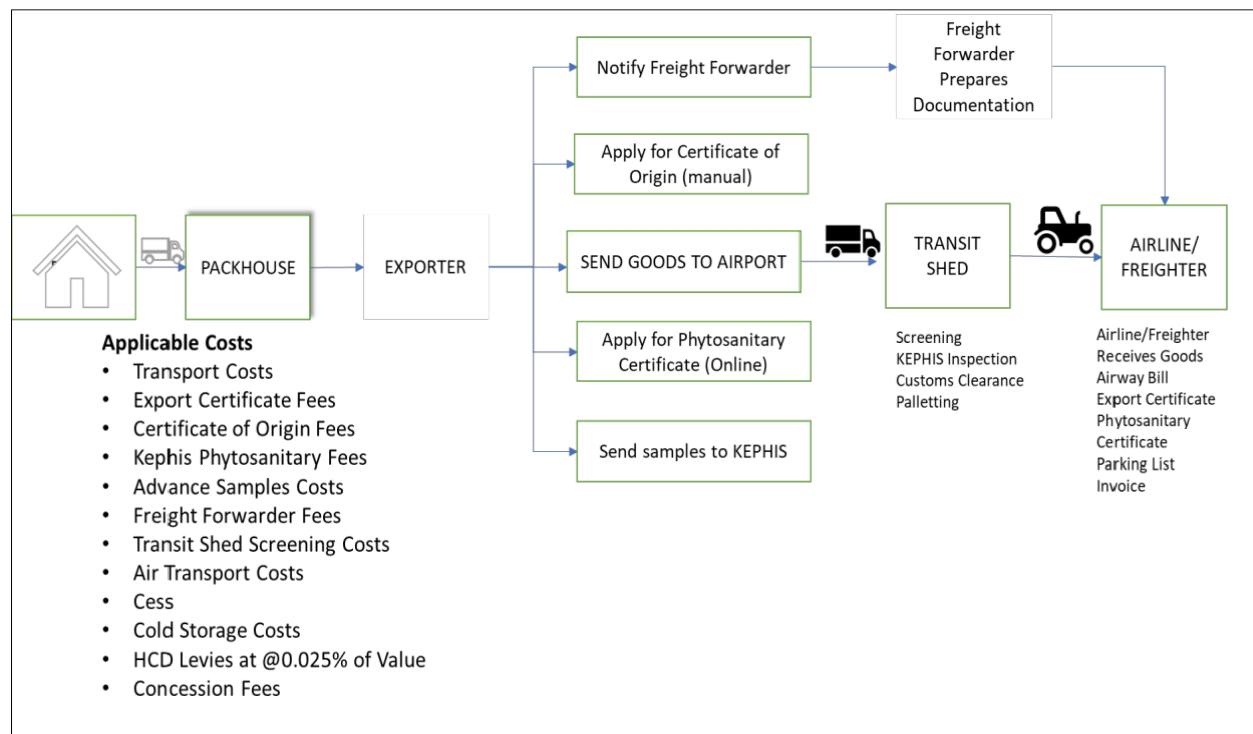


Figure 16: Air Cargo Shipment Process Map

Source: FPEAK, 2021

The movement of fresh produce has been on an upward trend since 2017, with an increase in many products, destinations, and shipments. i.e., a) the number of products increased by 64% between 2017 and 2020; b) the number of destinations increased by 18% from 125 destinations in 2017 to 147 destinations in 2020; and the number of shipments increased by 66% between 2017 and 2020 as reflected in the **Figure 17 and 18** below.

ANALYSIS OF FRESH PRODUCE MOVEMENT BY AIR FROM 2017 TO 2020

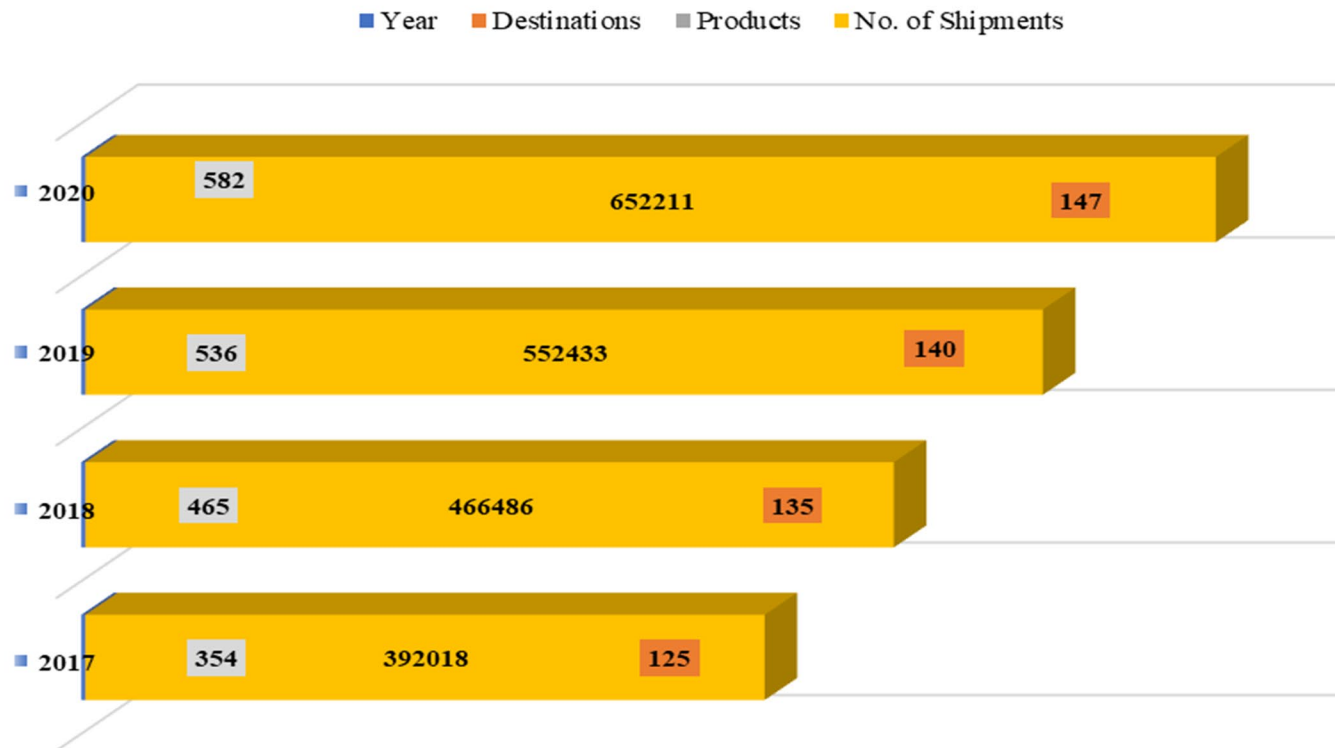


Figure 17: Analysis of Fresh Produce Movement by Air 2017 – 2020

Source: FPEAK 2021.

The main destinations are Netherlands, United Arab Emirates, Switzerland, Germany, Norway, France and Russia which have recorded significant growth, i.e., more than doubled from 2017 to 2020. Not surprising, the Netherlands as the main European trade hub for flowers, fruit and vegetables from developing countries, was the top destination for Kenya's fresh produce with a total 160,314 shipments in 2020.

2015 TO 2019 EXPORT TRENDS FOR TOP 20 DESTINATIONS

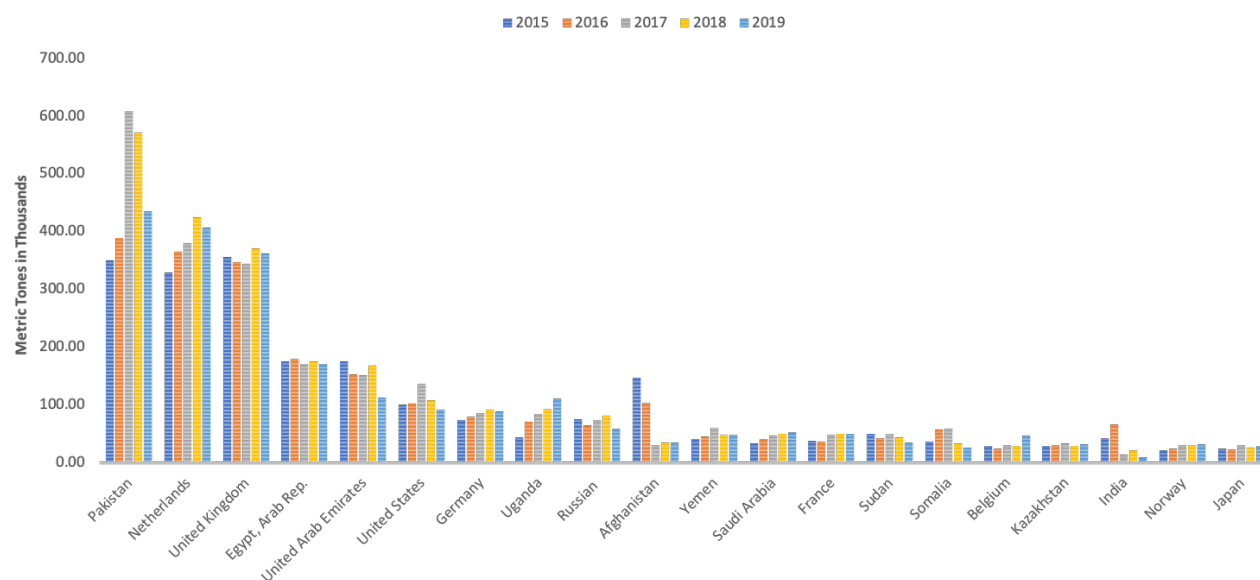


Figure 18: Kenya Fresh Produce Destinations and Trends 2015- 2019

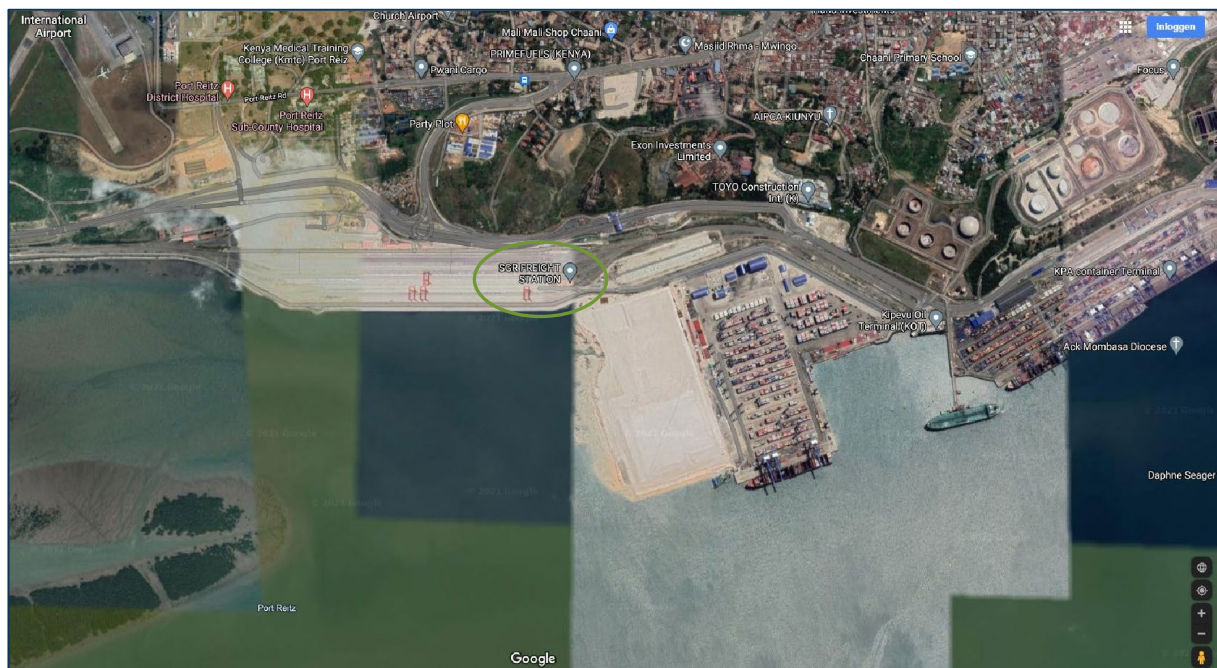
4.4. Sea Freight

Port of Mombasa Improvements and Expansion

The Container Terminal at the Port of Mombasa has six dedicated container berths with a capacity of 1.6 million TEUs. The Second Container Terminal, developed under the Mombasa Port Development Project (MPDP) in 2016, has two berths with a quay length of 560 metres and an annual capacity of 550,000 TEUs. The development of the new container terminal at the Port of Mombasa on 100 hectares at the western side of the existing Kipevu Oil Terminal (KOT) is complete and operational. It has a yard capacity of 4,135 ground slots, 1,090 and 3,045 for yard Berths nos. 20 and 21, respectively. The new terminal comprises two berths of Panamax and Post-Panamax container vessels of 20,000 tonnes and 60,000 tonnes, respectively. Phase II of the second container terminal, which is under construction, will increase the port's capacity by 450,000 TEUs upon completion by the end of 2021. There are also plans to develop a third phase that will increase the port's capacity to 2.4 million TEU by 2025. The current demand forecast is for 2.412 million TEU by 2025, and by 2035 the demand is expected to reach 3.789 million TEU. The port has 543 plugging points for reefer containers. The current capacity of reefer points is adequate and does not pose any challenge to reefer containers. KPA charges 7 US\$2 per house for 20ft reefer and US\$3 for a 40ft reefer.

Some of the new technologies include the use of more advanced “Active” Controlled Atmosphere (CA) systems to slow down respiration and extend product life; use of mobile data services that can provide accurate container information on temperature and gas levels in real time; and use of post-harvest dips of the flower heads prior to packing

which helps avoid Botrytis and gives greater confidence to ship by sea. Another potential technology is the use of modified atmosphere packaging (MAP) which creates an atmosphere similar to the container but on a much box smaller scale. Other recent developments include the Standard Gauge Rail (SGR) station at the port of Mombasa; increase in the number of shipping lines offering sea freight from Kenya; reduction of journey times to below 30 days; multiple products using the port including avocados, pineapples and flowers (specifically carnations, roses, chrysanthemums and summer flowers) with avocados representing around 3,000 containers per year and representing an import value in the Netherlands of € 46.2 million. The key fresh produce exported in order of volume exported are Avocado- Mombasa to Europe/Middle East, Pineapples- Mombasa to Middle East (one farm ships 20-30 containers per week from Kenya); and Flowers- Mombasa to Europe (3-4 years ago was 2 containers per week and is now at 8 per week with the expectation is that will shortly be 20).



SGR Terminal at Port of Mombasa

Source: EKN, Hortiwise, [A study on sea freight for Kenya's agricultural exports](#), 2021

Current Sea Freight Processes

The sea freight process (See [Figure 19](#) below) is much more complex than airfreight. The process is quite lengthy and laborious. It takes approximately 5 days to arrange a sea freight movement. The first attempt to move fresh produce by sea was made in 2013 by Hortiwise to move roses from Kenya to the Netherlands. The main challenge was on the transshipment risk at the port of Salalah in Oman. Currently, there are very few direct connections to Europe from Kenya, which increases the risk of fresh produce in the event of delays at the transshipment port.

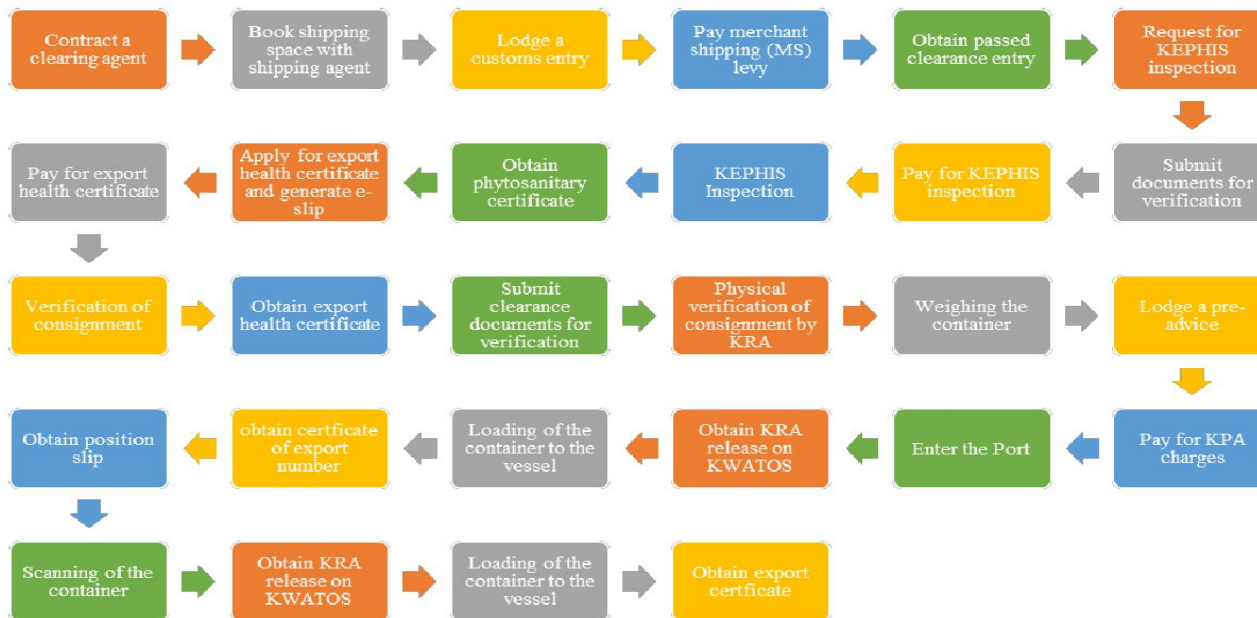


Figure 19: Sea Cargo Shipment Process Map

According to the FPEAK Fresh Produce Logistics [report](#) (2021), the number of shipments by sea from between 2015 and 2021 as reflected in the [Table 9](#) below, increased up to 2017 when it started to decline. This was also true for the number of products shipped by sea. As for destinations, the pattern was similar but the decline began in 2019 and exacerbated by the COVID 19 pandemic in 2020 and 2021.

Table 9: Fresh Produce Shipments by Sea 2015 – 2021

YEAR	NUMBER OF SHIPMENTS	NUMBER OF DESTINATIONS	NUMBER OF PRODUCTS
2015	91	14	16
2016	99	21	18
2017	126	25	19
2018	93	26	19
2019	88	26	10
2020	68	21	15
2021	62	19	8

Source: FPEAK Fresh Produce Logistics 2021 Report

With respect to the shipping lines, the top four have been CMA, Maersk, MSC, and Messina as reflected in the **Table 10** below inclusive of destinations, transshipping, travel days (ideal schedule, realistic schedule, and disaster schedule), and respective remarks.

Table 10: Options of Sea Freight Routes

Best option sea freight routes						
Shipping line	Destination	Trans shipping	Travel days			Remarks
			Ideal schedule	Realistic schedule	Disaster schedule	
CMA	Rotterdam	Jeddah	28	35	35	-Weekly sailing to Rotterdam -Frequently miss connections or have blank sailings -Mombasa port is the cause of some delays
	Marseille	Jeddah	25	32	32	
	Genoa	Jeddah	22	29	29	
Maersk	Rotterdam	Salalah & Algeciras	24*	38	38	-Weekly sailing -Dedicated berth in Mombasa for Maersk
	London Gateway	Salalah	28-29*	35	42	
MSC	Rotterdam	King Abdullah Port	24-28	31-35	42	-Not weekly sailing
Messina	Genoa	Direct	21	21	31	-A sailing every 10 days

Source: EKN, Hortiwise, [A study on sea freight for Kenya's agricultural exports](#), 2021

Retailer Timeframe Implications

The retailers in Europe are open to sea freight but noted the success of sea freight will be judged on shelf life on arrival and the ability to operate at scale. Potential product opportunities for sea freight in Kenya include: Beans- Mange Tout (snow peas), Sugar Snap Peas, Podded Peas. These are shipped from Zimbabwe and Zambia by road to Cape Town and then by sea; Flowers- chrysanthemums, alstroemeria, roses, carnations, summer flowers; Fruits- Mango (Dec to March) and Avocado (March- July); and other vegetables – sweet potatoes, baby corn, tender stem broccoli.

Total transit times from harvest on farm in Kenya to arrival at the flower packer in the Netherlands vary depending on shipping route and demands from the shipping lines for early cut off at the port prior to sailing. The Kenya Ports Authority insist on a cut off at the port of 2-3 days prior to vessel departure, plus 1 day journey time to Mombasa and time spent packing on the farm gives a total time in Kenya prior to vessel departure of at least 5 days from harvest. The sea transport itself can take anywhere between 21 and 35 days. In the European port, the flowers have to be discharged and cleared before the receiving party can process and transport them to their customers, adding probably another two days before the flowers are at the packhouse to be processed. This way, the fastest route from harvest to packhouse is 30 days for Rotterdam delivery.

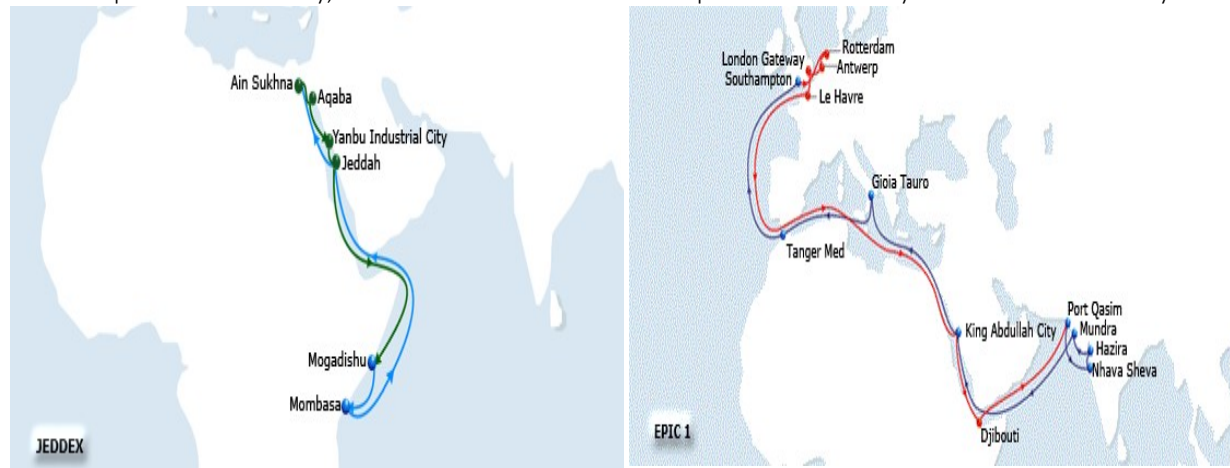


Figure 20: The Maersk Route

Source: CMA, Maersk, Exporters, 2021* The Maersk route runs from January 2021, previously 35 day

As has been demonstrated above, Kenya's competitive position has been changing/improving over time in regards to export to the EU and UK resulting from the Economic Partnership Agreement (EPA). However, there have also been some challenges ranging from weak farm level competitiveness to need for streamlining of firm level export operations. In addition, it has some transportation cost disadvantages compared to Northern African countries for both air and sea freight, and the Southern African countries for sea freight.

Kenya signed an Economic Partnership Agreement (EPA) with the United Kingdom and Northern Ireland based on the EAC-EU EPA. It is intended to take effect at the end of the [Brexit Transition Period](#) (or as soon as possible thereafter). The 17 December 2020 [Agreement](#) scrutiny period was scheduled to end on 10 February 2021. In terms of logistics index in Africa,

comparatively South Africa has the highest score of 3.8, ranking 33 globally. Rwanda and Tanzania have the highest score of 2.97 within the region, whereas Ethiopia has the lowest score as reflected in **Figure 21** below.

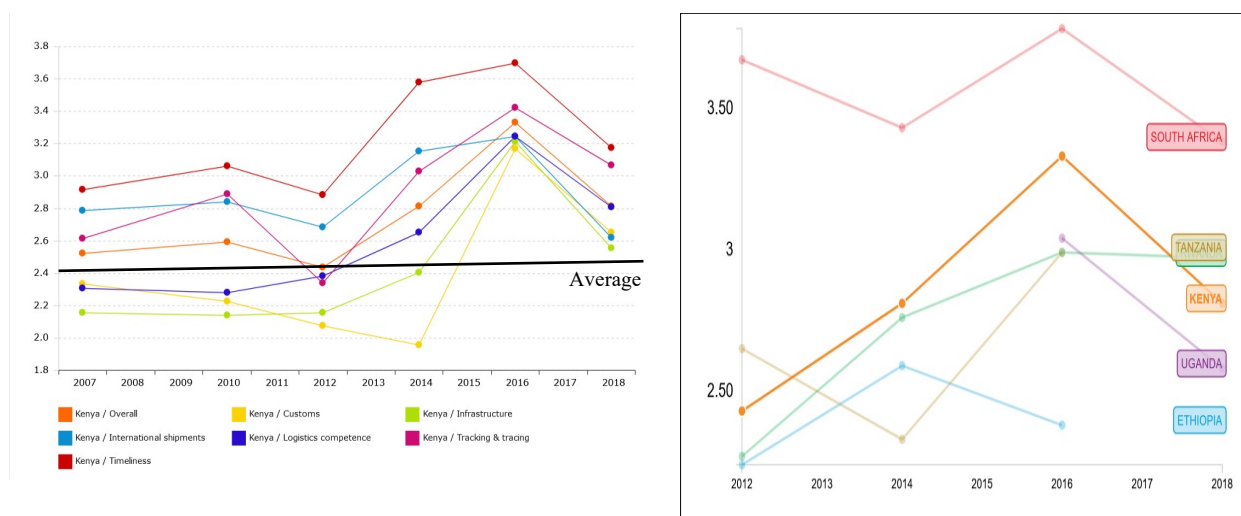


Figure 21: World Bank Logistics Index EAC Region from 2012 - 2018

Transport and Delays Cost Implications

With respect to cost implications, Kenya must benchmark itself with South Africa and Ethiopia. For example, cut flower top export countries in Sub-Saharan Africa to Netherlands in 2019 were Kenya (US\$329m) and Ethiopia (US\$92m). Trade flows of avocados in Sub-Saharan Africa to Netherlands in 2019 were South Africa (\$51.9m) and Kenya (\$32.1m). With respect to airfreight, given that 99.7% of Kenya’s fresh produce from 2016 to 2021 was shipped by air, i.e., 2 million shipments compared to 568 shipments by sea, and shipment by road to neighbouring countries at 62, there is need to enhance sea freight as an opportunity for low cost fresh produce expansion and effectiveness on sustainability. Air freight cost is typically priced 4–5 times that of road transport and 12–16 times that of sea transport. Airfreight rates generally range from US\$1.50–US\$4.50 per kg from Kenya to Europe. Thus, commodities shipped by air must have high values per unit or are very time sensitive, such as perishable vegetables, fruits and flowers.

Table 11: Airfreight Transport Cost - Nairobi to Amsterdam

Product	Weight per Container	Airfreight \$Cost per KG	Total Airfreight \$Cost	Indicative Sea Freight \$Cost
Light Roses	7,500	2.00	16,500	14,142
Heavy Roses	10,000	2.00	22,000	14,142
Carnations (no controlled atmosphere no dipping.	12,000	2.00	24,400	11,442

Source: Mott McDonald (2021) [Business Partnership for Global Goals](#) (Sept 2021)

As for the sea freight, depending on the shipping route, the cost of sea freight is around \$11,000 to \$13,000. As an example, by breaking up the costs into the various cost components, **Table 12** below is based on an actual case shipping roses by sea via the Mombasa – Rotterdam route.

The Messina line is the only direct vessel from Kenya to Europe- it takes 21 days to Genoa, 2-3 days clearing, 2 days transport to the Netherlands giving a total journey time of 26 days at best. But the cost of sea freight from Kenya is almost double that from South America. Avocados from Peru can be shipped by sea for half the cost as those from Kenya, and with a shorter journey time the quality / shelf life is better as well. Mange Tout, Sugar Snap and Asparagus are shipped by sea from Peru with a journey time of 12-15 days to Europe, and beans from Egypt in 8-10 days. A Costa-Rican exporter confirms a 16-day transit direct to UK or Rotterdam for melons and avocados.

Table 12: Example costs per container of end-to-end Mombasa to Rotterdam by sea.	
Cost components	Costs per container
Consolidation	\$ 1,680
Inland freight	\$ 2,828
Passive CA	\$ 1,500
Sea freight	\$ 4,005
Clearance	\$ 441
Inland freight	\$ 988

Total	\$ 11,442
--------------	-----------

Table 13: Cost of sea freight comparison			
Export port	Destination	Inland cost	Sea freight cost
Mombasa	Rotterdam	US\$ 3,000 (490km)	US\$ 4,600
Costa Rica	UK/ EU	US\$ 1,000	US\$ 3,500
Cape Town	EU	US\$ 2,400 (2,000km)	US\$ 5,500

Source: Mott McDonald (2021) [Business Partnership for Global Goals](#) (Sept 2021)

In both air and sea freight cases, there is need to the enhance logistics environment for the Kenyan horticulture industry for it to improve on its competitiveness.

4.5. Chapter 4 Takeaways

The two key takeaways include: a) the growing trend of fresh produce transport for export; and b) how to balance between airfreight higher speed and lower product perishability versus sea freight lower financial cost and lower carbon footprint.

There has been an **upward trend** in the fresh produce exports since 2017. Between 2017 and 2020:

- The number of products increased by 64%.
- The number of destinations increased by 18% from 125 destinations to 147 destinations
- The number of shipments increased by 66%.

Also, at the minimum, there have been 9 key documents required for transport of fresh produce from Kenya to other countries are: Phytosanitary Certificate, Export Certificate, Certificate of Origin, Export Health Certificate, Customs Release Report/Clearance, Unique Consignment Document, Airway Bill, Invoice, and a Packing List.

Air freight has been preferable since fresh produce constitutes more than 60% of Kenya's total air freight.

- Unlike complications in sea freight, airfreight typically has four broad steps: 1) farmhouse to packhouse; 2) packhouse to exporter; 3) exporter to airport shed; 4) from airport shed to airline freighter
- Airfreight system has two main transport means, i.e., by cargo airlines which are the majority or belly carriers where a few carriers participate

However, **Sea Freight** has been emerging where:

- The Port of Mombasa Container Terminal has six dedicated container berths with a capacity of 1.6 million TEUs. The Second has two berths with a quay length of 560 metres and an annual capacity of 550,000 TEUs.
- Investments in new technologies include use of more advanced "Active" Controlled Atmosphere (CA) systems to slow down respiration and extend product life; use of mobile data services to provide accurate container information on temperature and gas levels in real time; and use of post-harvest dips of the flower heads prior to packing which helps avoid Botrytis.
- However, sea transport itself can take anywhere between 21 and 35 days including delays at the port of Salalah in Oman since there are very few direct connections to Europe from Kenya.

Comparatively, there are 2 million shipments by air compared to 568 by sea. However, air freight cost is typically priced 12–16 times that of sea transport. In addition, sea freight has lower carbon foot prints. Hence, there is need to enhance sea freight as an opportunity for low cost fresh produce export and sustainability.

5. Sustainable sourcing of fruits and vegetables from Kenya

5.1. Introduction

There is growing evidence that climate change will globally affect the production of fresh fruits and vegetables in the coming decades. These changes inevitably also have consequences for the sourcing of such commodities. Accordingly, there is a need among supply chain partners and other stakeholders to better understand how climate change, sources of energy, shortages of water, land, biodiversity, decent work for workers and farmers interact with sustainable sourcing ambitions, as affected by strategic decisions and activities of individual actors.

In 2012, the Sustainable Trade Initiative (IDH), Dutch retailers, traders in the sector and civil society organizations signed a covenant, which aimed to make imports of fruits and vegetables from Africa, Asia and South America 100% sustainable in 2020 (Wageningen, 2016). This covenant was to put into practice the SIFAV program (Sustainability Initiative Fruits and Vegetables). As part of its activities, SIFAV was to provide support to local farmers in creating a more stable and sustainable production environment.

This chapter is guided by the principles and scope developed in this [Wageningen](#) and [Rabobank](#) studies which covered key potential sustainability intervention points ranging from Agriculture, logistics, export, wholesale, retail to consumer as reflected in the [Figure 22](#) below.

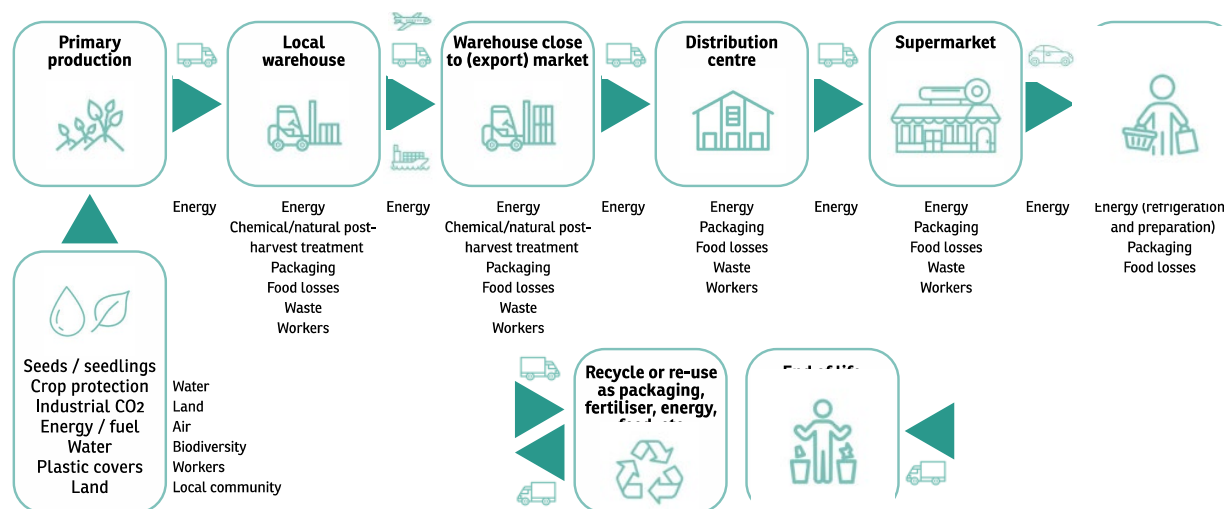


Figure 22: Sustainability impacts along the fresh fruit and vegetables supply chain (not exhaustive)

Source: RABOBANK, 2020

With the changing weather patterns ahead, there is need among supply chain partners and other stakeholders to better understand how climate change interacts with sustainable sourcing ambitions, as affected by strategic decisions and activities of individual actors.

The argument is that climate change and sustainable sourcing of agricultural products have a dual relationship. First, there is clear evidence that climate change will affect agricultural production in the coming decades. Changing weather patterns may lead to shifts in growing seasons, changes yield levels and yield quality, or even lead to structural changes in cropping and farming systems. Secondly, greenhouse gas emissions are generated by supply chain activities and climate changes impact on these sourcing activities. For instance, we can think of soil management affecting the CO₂-buffering capacity of the soil, energy use during storage and transport, and consumer preferences influencing the demand for fresh produce from particular regions. Ultimately, there is an interaction between the supply chain and sustainability, which covers issues such as resource conservation, product quality and workers' conditions. While sustainability is primarily determined by the activities in the supply chain, particular sustainability interventions may induce stakeholders to switch to more sustainable practices.

Therefore, there is a need for identification of potential impacts of climate change, and the possible actions that stakeholders can take in anticipation of these impacts. This is particularly true for supply chains of fresh produce, due to its relatively short shelf-life, high quality requirements, and seasonality of supply.



Image: Jani Fresh

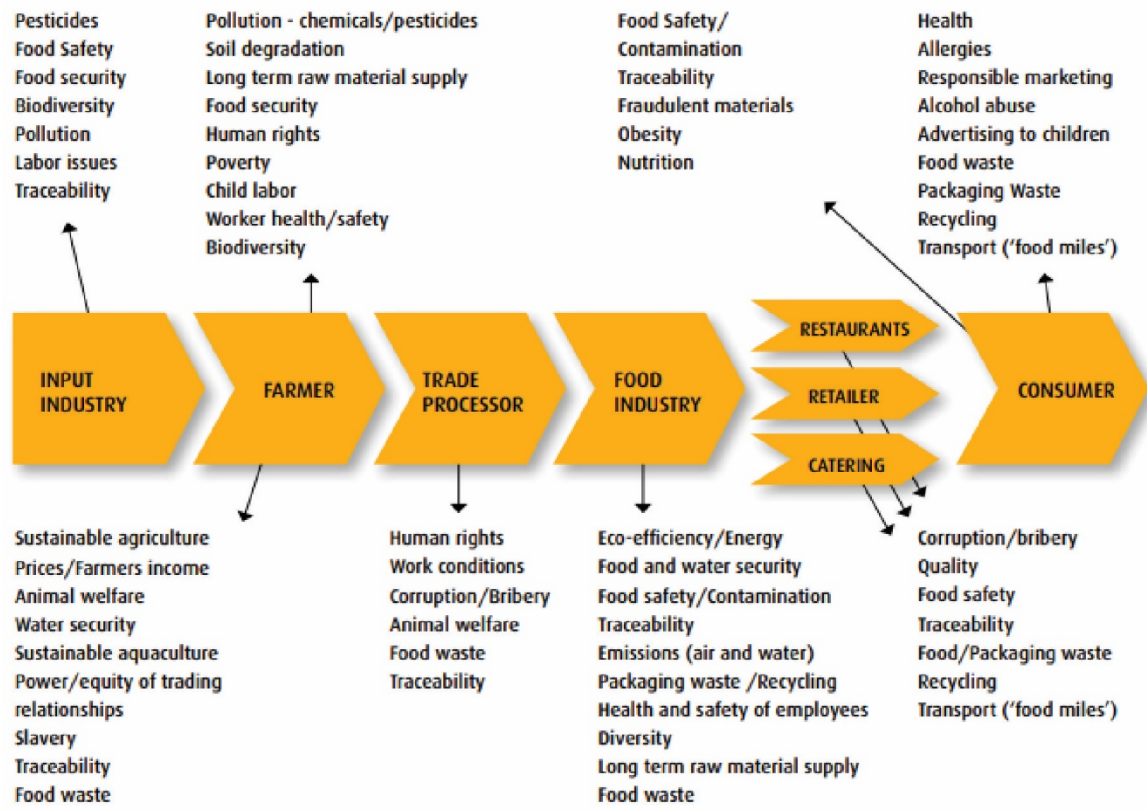


Figure 23: Challenges that impedes sustainability sourcing along typical fresh produce supply chain
 Source: ITC, 2013

Sustainability practices and indicators

Based on the findings in this scoping report, this chapter will summarize a sequence of four supply chain sustainability intervention point activities and respective indicators ranging from production to export. These include: Production process, Procurement process, Transport, logistics process and Case studies. The Activities, Practices and Indicators are presented in Table 14. Thus, the extent to which respective activities (column 1) are performed to meet best sustainability practices (column 2) are being met, will be measured against sustainability indicators (column 3) to meet societal expectations defined by certifications and permits required towards balancing of planet, people and profit (PPP) objectives. The most important anticipation to climate change should be made (e.g. though trainings and education) at the starting point (Input industry + Farmers) where the major challenges are in sustainable sourcing.

Table 14: Sustainability Practices and Indicators

Activity	Range of Practices	Sustainability Indicators
Production process	From land preparation to harvesting	Pertinent Certifications and Permits Related to Meeting the Planet, People, and Profit (PPP) Requirements
Procurement process	Costs and Quality, & CSR	
Transport Logistics and Packaging		
a) Local Transport	From farmhouse to packhouse	
b) Processing and Packaging	From packhouse to exporter	
c) Port Preparations	From exporter to Port shed	
d) Shipment	From Port shed to freighter (air/sea)	
Case Studies	TESCO, Unilever,	

Sustainability standards began to emerge in the 1980s when it became clear that the sustainability objectives desired by companies (like retailers) and NGOs would not be achieved or enforced by governments, especially in developing countries. Therefore, voluntary sustainability standards like GlobalGAP, Fairtrade International, Leaf, SMETA, BRC, Rainforest Alliance became a form of ‘governance without government’. Sustainability labels and logos in store and on packs give consumers an opportunity to consider a food product’s sustainability at the point of purchase. For companies, standards are a valuable way to identify business partners that can achieve a certain level of performance. Naturally, there are (transaction) costs involved with the certification schemes: registration fees, auditing charges, costs associated with collecting information, documentation and so forth. The amount accumulates if different customers require different certificates ranging from production to consumption level as reflected in the right side of **Figure 24** below.

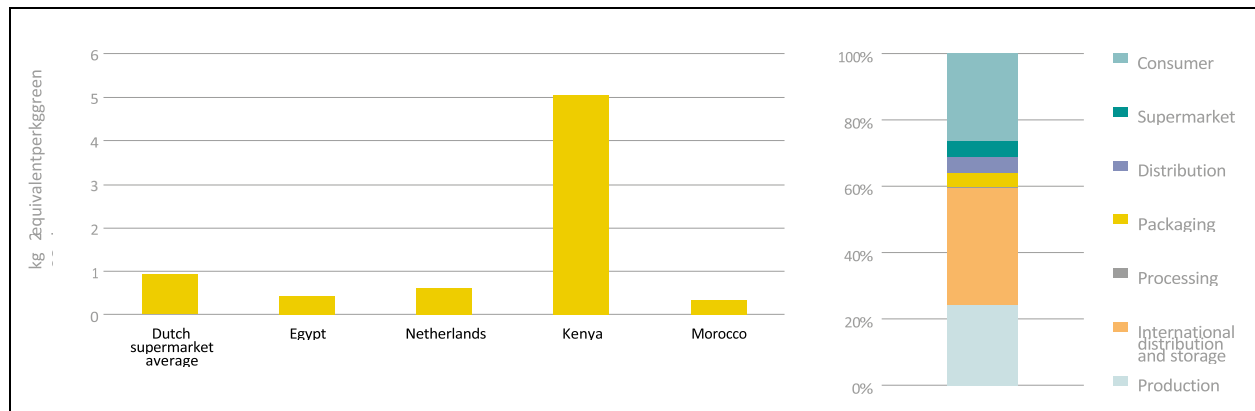


Figure 24: Carbon Footprint of Green Beans sold in Dutch supermarkets

Source: RABOBANK from Consumentenbond, Blonk Consultants, 2018

5.2. Production Related Sustainability Practices.

Sustainable sourcing starts with sustainable production that is resilient to climate change. For farmers to anticipate on climate change in a responsible manner, they need to have local access to, and be trained to use technologies and varieties that are tailored to the (future) local climatic circumstances. Farmers should be offered financial buffers (e.g. loans, insurance) to allow for strategic decision-making which pays off in the longer run, but requires investment in the short run. Increases or shifts in demand for natural resources, notably water, land and energy, need to be managed in an appropriate way to maintain or increase resource use efficiency. Farmers and workers need to have access to decent work, reasonable living wage and be able to reduce post-harvest losses at the farm gate. For a secure, safe and increasing supply, fresh produce must be grown and sourced in a sustainable manner taking full account of environmental, social and economic considerations. Doing this effectively calls for changes in managerial mind-sets and specific knowledge and skillsets.

5.3. Sustainable land and water use

Only about 16% of Kenya's landmass is of high and medium agricultural potential. This potentially arable land is dominated by commercial agriculture with cropland occupying 31%, grazing land 30%, and forests 22%. About 84% of Kenya is arid or semi-arid and is not suitable for rain-fed farming. The National Environment Management Authority (NEMA) has an [Integrated National Land Use policy](#) which spells out guidelines on protection of ground water, rivers, lakes and wetlands, Protection of coastal zones, Management of environmentally significant areas (esas), Protection Of historic and cultural resources, protection of hilltops, hillsides, mountains and forests, conservation of biological diversity, management of invasive alien species, energy management, preservation of agricultural and pastoral lands, mining and quarrying, hazards and disaster management and zoning rural communities and urban developments.

Land in Kenya is either government trust land, privately owned land and community land, while government and private land protection is clear, access to and acquisition of community land is complex. [The Community Land Act](#) exhibits deficiencies placing communities at risk of their lands not being as secure and puts unsuspecting potential investors in conflicting paths with communities. It is therefore important that any investor seeking to acquire land undertake due diligence to understand the ownership structure of the land and the implication of the acquisition on host communities and familiarize themselves with the Integrated National Land Use policy.

5.4. Organic production and marketing of fresh organic fruits and vegetables in Kenya

The agriculture sector in Kenya is largely dominated by conventional agricultural practices; however, organic agriculture offers option for ensuring agricultural sustainability. [Biovision](#) has stressed that organic agriculture practice and conventional agriculture practice can co – exist in ensuring food and nutrition security for Kenya but will require strong policy and regulatory frameworks to guide the pathways to impacts for each of the practices. Countries in East Africa play a pioneering role: Uganda is the African country with the most organic producers (210,000), followed by Ethiopia with 204,000 and Tanzania with 149,000. Kenya is in sixth place with 37,000.

- There is a strong presence of many non-governmental organisations (NGOs) in the development of the ecological organic agriculture (EOA) subsector in Kenya. The Kenya Organic Agriculture Network (KOAN), the Participatory Ecological Land Use Management (PELUM) Association, Kenya and many non-governmental organisations (NGOs) among others have played critical roles in the development of the subsector. Particularly in the development of a draft National Organic Policy, which is yet to be gazetted and announced by the relevant authority.

- There is an increasing awareness for health food, especially among the growing middle-class population in cities like Nairobi resulting in a high domestic demand for organic agriculture products. This rising demand and more demand in emerging new export markets can hardly be met due to operational capacity problems. Farmers' convention and compliance costs are also unbearable for majority of smallholder producers.
- There is need to speed up the enactment of the National Organic Policy that will help in developing the value chain of organic products to ensure market differentiation between organically and conventionally produced crops. Increased public awareness, sensitization and advocacy are required to push this policy to success. The endorsement of the East African Organic Product Standards (EAOPS) by the East African Community (EAC) places Kenya at a major advantage in the development of the sector since the demand for EOA products locally and internationally will be greatly enhanced.
- In addition, the quality of the activities and procedures of organic certifying bodies is reviewed by the EU. Kenyan certification bodies provide declarations to small holders that all their crops on a plot of land were 'organic' because they were cultivated without pesticides in the past. This was the historic way of farming and besides small holder had no money to by chemical pesticides. Kenyan certifiers were criticised for reducing the conversion period from 2 to 0 years.



5.4.1. Organic Crop Area and Production

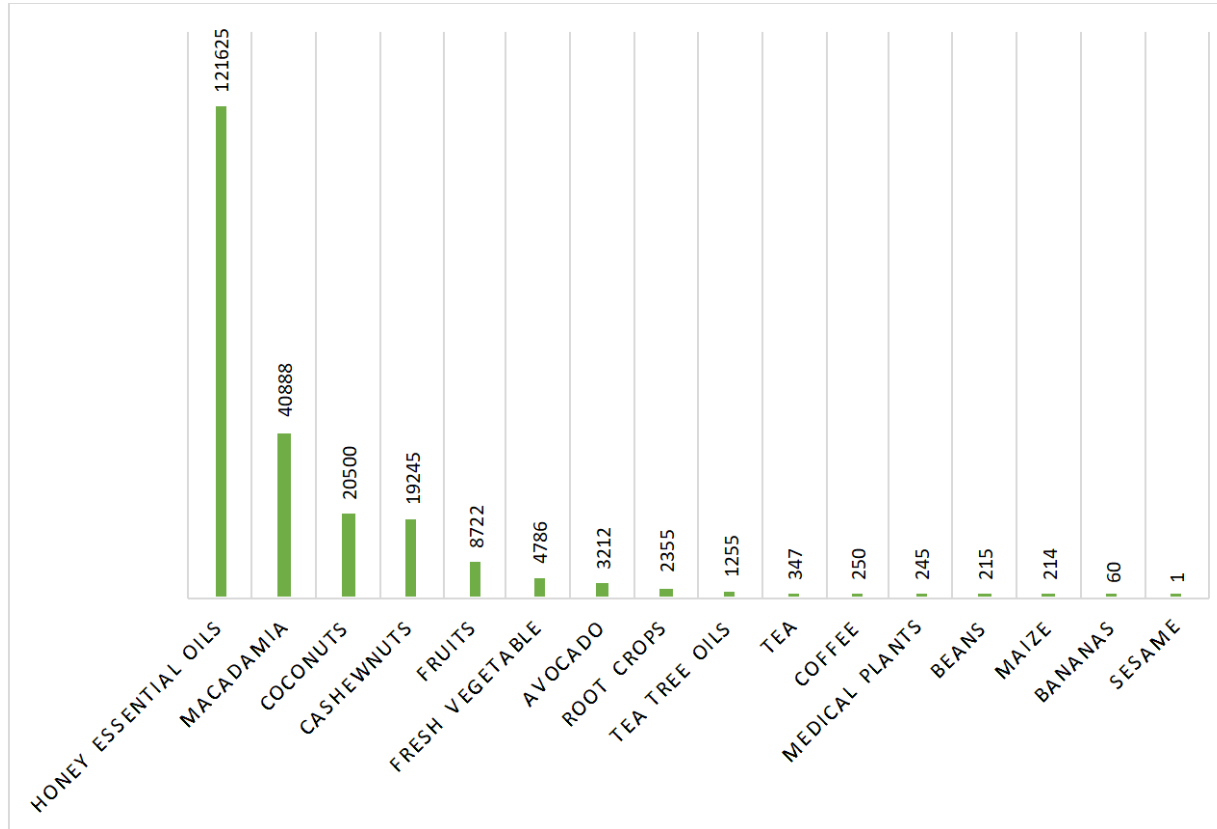


Figure 25: Produce and acreage under organic farming

Kenya has approximately 141,934 hectares of land under active organic farming management. Honey, essential oils, Macadamia, Coconuts, Cashew nuts, Fresh Fruits, Fresh Vegetable, Avocado, Root crops and Tea tree are the leading organic products produced. Except for the ban of honey of Kenya honey in European markets due to SPS standards, Kenya has a strong potential for Honey, essential oils, Macadamia, Coconuts, Cashew nuts, Fresh Fruits, Fresh Vegetable, Avocado exports in the European markets.

5.4.2. Overview of export of organic fruits and vegetables from Kenya

Kenya roughly doubled its volume of organic agricultural items exported to the European Union in 2020. Nearly 9,500 metric tons of organics were exported to the economic area that year, against some 4,500 metric tons in 2019. Avocados constituted the main organic export to the EU, accounting for over 70 percent of total organic exports. The main international markets for organic produce from Kenya are the EU and the USA who import organic coffee, the two markets account for 56% importing 104,841 tonnes of produce worth KES 105 million in the year ending 2017. Kenya also exports to regional markets including Burundi, Rwanda, Tanzania and Uganda who jointly import 53,700 tonnes organic produce which is 29% of the market share while local markets consume 15% of the produce.

Market Supply summary

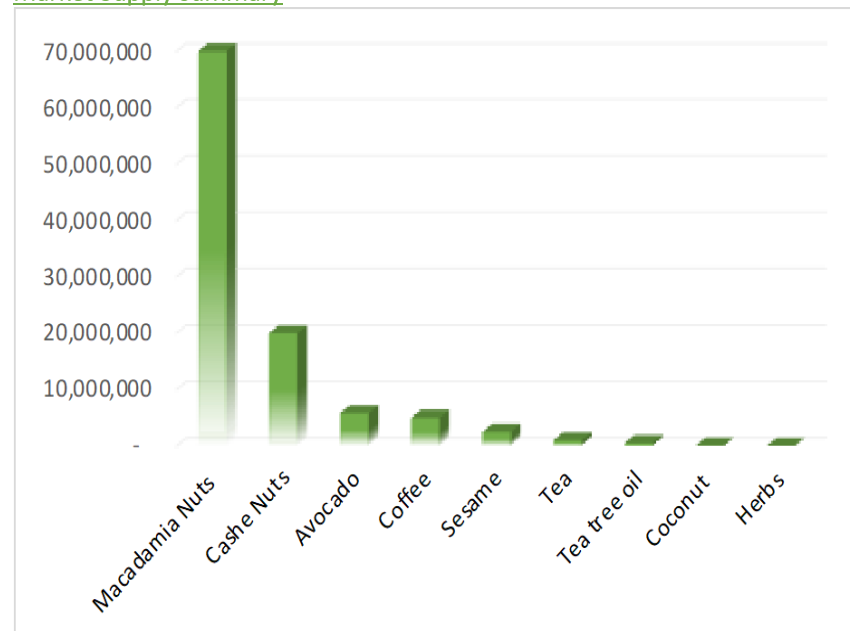


Figure 26: Estimated international markets supply

Macadamia and Cashew nuts are the most exported organic produce followed by avocado, Kenya exported a total of 70,000 metric tonnes of organic Macadamia, 20,000 tonnes of cashew nuts, 5,789 metric tonnes of avocado and 2 tonnes of herbs. As indicated earlier, these are among the produce with high potential.

Globally, organic markets continue to grow. Consumers are more aware and interested in healthy and sustainably produced food and the expenditure on organic food is rising. There is a growing market for organic products in the EU which valued EUR 43.7 billion in 2019 and is expected to grow further in the coming years. Consumers are demanding organic products as they wish to avoid products with synthetic pesticides and related chemicals. Organic certification is often perceived as a sign of quality, better taste and longer shelf life. Sales of organic products in Europe have been increasing since the COVID – 19 outbreak and the trend is likely to continue. There is an increase in buying direct from local organic farmers as well as larger shelf space in supermarkets.

There is a growing demand for organic [hibiscus](#) due to substantial issues with quality and contamination of hibiscus in the last few years. European buyers are increasingly demanding certified organic products because they are a sign of quality.

5.4.3. Examples of successful sustainable production and marketing of organic fresh produce from Kenya

Production of organic food in Kenya is still relatively small, but increasing fast. According to KOAN, in 2020 over 141,934 hectares of land were under organic management accounting for 0.69% of the total agricultural area in Kenya. Consumers are more and more interested in healthy and sustainably produced food and expenditures on organic food are rising. Many consider organic agriculture an interesting option for smallholder farmers in Africa because it offers a unique combination of low inputs, environmental conservation and it provides access to premium price markets. The growing demand for organic produce in the EU and the UK has led to a rising number of local and foreign direct investments (FDIs) in organic agriculture in Kenya.

Box 5.1: Koppert Biologicals Systems Sustainable farming initiative in Kenya (also see PEAR Project)

a) Pheromone Trap System: While tomato is one of the key vegetables grown by farmers in Kenya for income, production is constrained by insect pests, which farmers tend to manage with pesticide sprays with associated risks to the environment, food safety and the health. CABI and Koppert Biologicals Systems, with funding from the Netherlands Ministry of Agriculture, Nature and Food Quality (MinLNV), implemented a project to demonstrate the use of biological control options and Integrated Pest Management (IPM) for the management of tomato leaf miner (*Tuta absoluta*) in Kenya. The IPM regimen employed the use of a predatory mirid Macrolophus pygmaeus (Mirical), the pheromone trap system (Tutasan + Pherodis) and good agricultural practices.



Field demonstrations and training were done to create awareness of these practices and available biological methods for controlling and managing tomato leaf miner to both farmers and extension workers who were to in turn to train other farmers in their areas.

b) Panoramix: On September 21st 2017, Koppert Kenya officially launched Panoramix, a unique and innovative seed dressing product for use in cereals such as maize and wheat. Panoramix has been proven to increase crop resilience, improve yield and quality of cereal produce such as maize and wheat, thereby increasing farmer income. We believe that if adopted widely, the product has the potential to positively improve food security in Kenya.



The launch was held in Eldoret, a region also known as “the food basket” of Kenya, during the Eldoret Agribusiness Fair at the University of Eldoret. Attending the event were key stakeholders comprising of the medium and large-scale farmers, input distributors, officials from both private and public institutions, central and county governments, research institutions and seed companies.

c) Aflasafe: Farmers in Kenya can now fight aflatoxin in food crops, thanks to Government initiative to strengthen marketing and distribution of Aflasafe a natural product that fights aflatoxin. The Agriculture Principal Secretary (PS), confirmed that the government has contracted a biological crop protection company – Koppert Biological Systems – to distribute the farm input to all farmers in the country.. Health experts and local scientists have blamed the high presence of the aflatoxin to liver cancer, suppresses the immune systems, and retards growth and development of children, among other health problems

Box 5.2: Health Green Choices

Bert Jan Ottens, is [Green Rhino's](#) founder who has worked on and off in Kenya since the 1990s, started first ProFound and later Green Rhino, a compliance company that assists in creating new business models to develop safe foods and organic farming in Kenya. Through Green Rhino's flagship project called Healthy Green Choice ([HGC](#)) Green Rhino is developing a new market and new channels that promote responsible products and responsible farmers. This market is based on compliance to compulsory and voluntary certifications, standards and agreements such as the Paris Climate Agreement and the Sustainable development goals (SDGs). In essence HGC project is developing an inclusive, demand driven model for food safety by introducing different ways towards agricultural produce that place protection of produce and biodiversity at the core. HGC works through partnerships with other (private) organizations that share the vision and importance of food safety.

From the moment Green Rhino was established many stakeholders expressed a serious interest to join HGC initiative to professionalize organic agriculture in Kenya. Green Rhino is expanding its impact by collaborating with other development organizations. Sourcing managers of supermarkets and restaurant chains are increasingly requesting Green Rhino to help them with the development of compliance trajectories. Green Rhino's cooperation with committed partners across the chain is crucial in producing, transporting and delivering safe and sustainable food to the market.

Although Green Rhino is not export oriented company, it promotes sustainable standards. The goal of HGC is to improve producers' competitive position through compliance with compulsory and voluntary certification standards, including:

- Good Agricultural and Collection Practices (GACP)
- Global GAP (Incl. 1758 standard)
- Hazard Analysis and Critical Control Points (HACCP)
- ISO 22000 – a certified system for Food Safety
- EU- organic
- Fair principles
- FairWild

Through placing these criteria at the core of the marketplace, HGC is promoting products that protect forest ecosystems and restore degraded lands. This is in line with the 2030 Sustainable Development Goals and the Paris Climate Agreements that aims to ensure that global temperature rises do not exceed the 2°C mark.

Box 5.3: Imarisha Naivasha—sustainable development around Lake Naivasha

This multi stakeholder collaboration provides a landscape approach for sustainable development around Lake Naivasha addresses wildlife management, fishing, farming, solid waste, reforestation, water, and more, and operates from the lake level to the upper catchments. The Lake Naivasha basin is a very significant landscape at the local, national and international levels from both ecological and socio-economic perspectives. It is also a complex entity with a broad spectrum of stakeholders and diverse though sometimes conflicting interests. The entire basin is faced with numerous challenges influenced by the increasing human population and the scramble for natural resources to sustain community livelihoods and investments. The resultant effects of these challenges have been major impacts on water availability, quality and provision of other ecosystem services.

Box 5.4: VegPro—recycling initiative

With over 35 years' of trading experience, VegPro Group is now at the forefront of fresh produce, flowers and logistics, with multiple operations across Kenya, Ethiopia, Ghana & Tanzania. Becoming more vertically integrated, VegPro has moved into all aspects of production from breeding to having their own marketing operations in major markets. With extensive composting and biomass power production, along with food donations to schools in Nairobi or feed for cattle, nothing goes to waste. An award-winning company, they offer a leadership development program to develop in country talent.

Box 5.5: Kenya's Goshen sees value in leaving mangoes out to dry

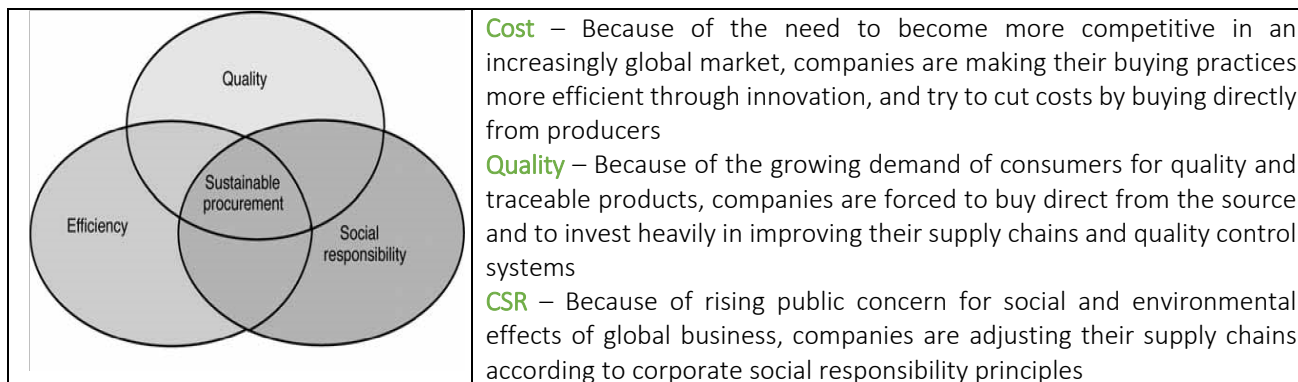
Goshen is a grower, processor and exporter of Kenyan fruit and vegetables. The company was founded in 2010 by Alex Muli, who at the time was still a university student starting a small horticultural farm. As the company has evolved, its clients in Kenya and abroad have come to require higher volumes, prompting Goshen to begin sourcing from other growers. At present, the company works with hundreds of smallholder farms to source the necessary volume of mangoes, avocados, passion fruit and fine beans. These farms range between a quarter hectare and 7ha in size.

As a result of that expansion, however, Goshen ran into a major issue, specifically the terrible level of waste in Kenya's fresh mango supply chain. Roughly two-thirds of all mangoes harvested were reportedly lost or wasted before reaching the consumer. So, in 2018, Goshen invested in a facility to dry the fruit. This meant that fewer mangoes were being wasted

and smallholder farms could sell a notably larger volume, generating a bigger income as a result. The company is now exploring opportunities for other items like dried pineapples, as export demand for dried fruits is growing fast. **Source:** RABOBANK, 2020

5.5. Sustainable procurement of fruit and vegetables

In addition to traditional strategic procurement elements of costs and quality, Corporate Social Responsibility (CSR) has become a third element influencing global procurement strategies among Western companies in developing countries (Boomsma, 2008).



Source: Boomsma (2008)

For example, European retailers have developed a social auditing system, the Business Social Compliance Initiative (BSCI). A BSCI certificate is evidence of suppliers' high social standards. And under the influence of their shareholders, suppliers and clients, their own management and the wider public, Dutch businesses are increasingly adapting themselves to these three trends.

Many organizations, consultancy firms, businesses, academic institutions and government agencies have begun work on sustainable procurement. As a result, several multi-stakeholder initiatives, covering producer alliances, companies, NGOs, scientists, unions, governments, etc., have been established. One example is the Roundtable for a Sustainable Cocoa Economy, which aims to enhance sustainability in the cocoa sector worldwide. Another is the Roundtable on Sustainable Palm Oil, which promotes cooperation within the palm oil supply chain and open dialogue with its stakeholders. As a result, there are many certifications that emerged focusing on sustainable procurement such as those indicated in **Box 5.6** below.

Box 5.6: Examples of Sustainability Certificates

1. **BSCI:** The Business Social Compliance Initiative is an association of European retailers that aims to improve labour conditions of members' suppliers in high-risk countries. The BSCI code requires members to monitor child labour, forced labour, working hours, wages, discrimination, occupation health and safety and freedom of association and collective bargaining. BSCI is based on the labour standards of the International Labour Organization. Suppliers can achieve an SA 8000 certification of their social accountability. (www.bsci-eu.org)
2. **EKO:** EKO is a certificate for organic products. It is certified and owned by Skal, an inspection body for organic production in the Netherlands. (www.eko-keurmerk.nl, www.skal.nl)
3. **GlobalGAP:** Formerly known as **EurepGAP**, this is a system which provides guidelines for good agricultural practices (GAP), including the use of chemicals and other production inputs. All major retailers in Europe use this system to ensure safety and health standards. (www.globalgap.org)
4. **Fairtrade certificates** guarantee that a product is produced in a socially responsible manner and that producers get a minimum 'fair' price for their output. On top of this minimum, a premium must be paid that is invested by the producers in programmes to enhance social, economic or environmental development. Payments need to be made partially in advance, if needed, and contracts must enable producers to plan in the long term and produce sustainably. These certificates are issued by labelling initiatives in importing countries (such as **Max Havelaar** in the Netherlands). The system is coordinated by a worldwide umbrella organization, Fairtrade Labelling Organizations International. (www.fairtrade.net)
5. **Eco-label:** Eco-label is a voluntary scheme run by the European Union to encourage businesses to market ecologically friendly goods and services. (www.milieukeur.nl). **Milieukeur** is the Dutch variant. (ec.europa.eu/environment/ecolabel/, www.milieukeur.nl)
6. **Rainforest Alliance:** This US-based organization certifies farms that fulfil certain standards to protect wildlife, wild lands, workers' rights and local communities. The certification scheme also covers forestry and tourism. (www.rainforest-alliance.org) **Tesco Nature's Choice** (TNC) is a certification system for suppliers of fruit and vegetables to Tesco, a big British supermarket chain. It is carried out by Control Union Certifications, a specialist company. The standard is similar to GlobalGAP but is more stringent on several points. (www.controlunion.com)
7. **UTZ Certified:** This is one of the world's largest coffee certification programmes. A UTZ certificate assures consumers that coffee was produced and sourced in a responsible way. It also creates opportunities for farmers to improve their business practices and meet market expectations. (www.utzcertified.org) Source: Boomsma (2008)

5.6. Sustainability Practices in Supply Chain Transport Logistics and Packaging

Logistics related to processing raw materials from agricultural products are called agroindustry logistics, which includes actions to manage the planning, control of production, storage, transportation, and information, between agricultural producers and consumers (Yusianto, *et al.*, 2020). Thus, in horticultural logistics, traceability is very important for producers, distributors, and consumers. Logistical support from cultivation to post-harvest is needed to increase productivity, quality, and business institutions as well as improving post-harvest practices. Logistics can be categorized into two perspectives, namely *internal* and *external*, both of which focus on time and cost efficiency. Internal perspective discusses the efficiency of material flow, while external discusses flow throughout the logistics chain to its distribution.

At the supply chain level, traders and other stakeholders involved in transport, processing and distribution of products can contribute to global resource efficiency by sourcing products from regions where they can be produced most efficiently. This requires strategic decision-making based on likely and foreseen shifts in production regions caused by climate change and other drivers.

It has been argued that sustainability issues could significantly impact decisions at the supply chain level (Kariuki *et al.*, 2021). While some social or environmental initiatives may provide financial benefits such as managing energy usage efficiently, there are other factors that could undermine the financial performance directly or indirectly. However, the implications of social and environmental aspects in decision making are now more essential than before. Indeed, many senior managers state that sustainability issues will be critical for their business' future success, as per the report published by the UN Global Compact and Business for Social Responsibility.

Box 5.7: Sustainable Supply Chain Practices in Horticultural Sector in Kenya

A study of sustainable supply chain practices and competitive advantage in the horticultural sector covering 236 horticultural firms in Kenya found that there was significant positive relationship between green purchasing and competitive advantage in the horticultural industry in Kenya. In terms of reverse logistics, there was a significant positive influence of reverse logistics on competitive advantage in the Horticultural Industry in Kenya. Hence, the study concluded that:

1. Green purchasing is positively related to competitive advantage in the horticultural industry in Kenya.
2. Reverse logistics is positively related to competitive advantage in the horticultural industry in Kenya

Ultimately, the study recommended that management of the horticultural companies should improve on their green purchasing practices. This can be done by applying flexible sustainable supply chain practices through research so as to understand the changing environmental needs and remain relevant in the market. The study also recommends that the companies should ensure that their reverse logistics are properly structured. This would ensure that customer needs are met. Ensuring customer loyalty and makes it difficult for competitors to imitate simple services that are geared towards value creation and the environment. **Source:** Kariuki, *et al.*, 2021

The four main focus areas here for transport logistics and packaging with respective certifications are presented, i.e., local transport related sustainability practices; processing and packaging related sustainability practices; port preparations related sustainability practices; and shipment related sustainability practices. **Figure 27** below presents these activities with respective certifications.

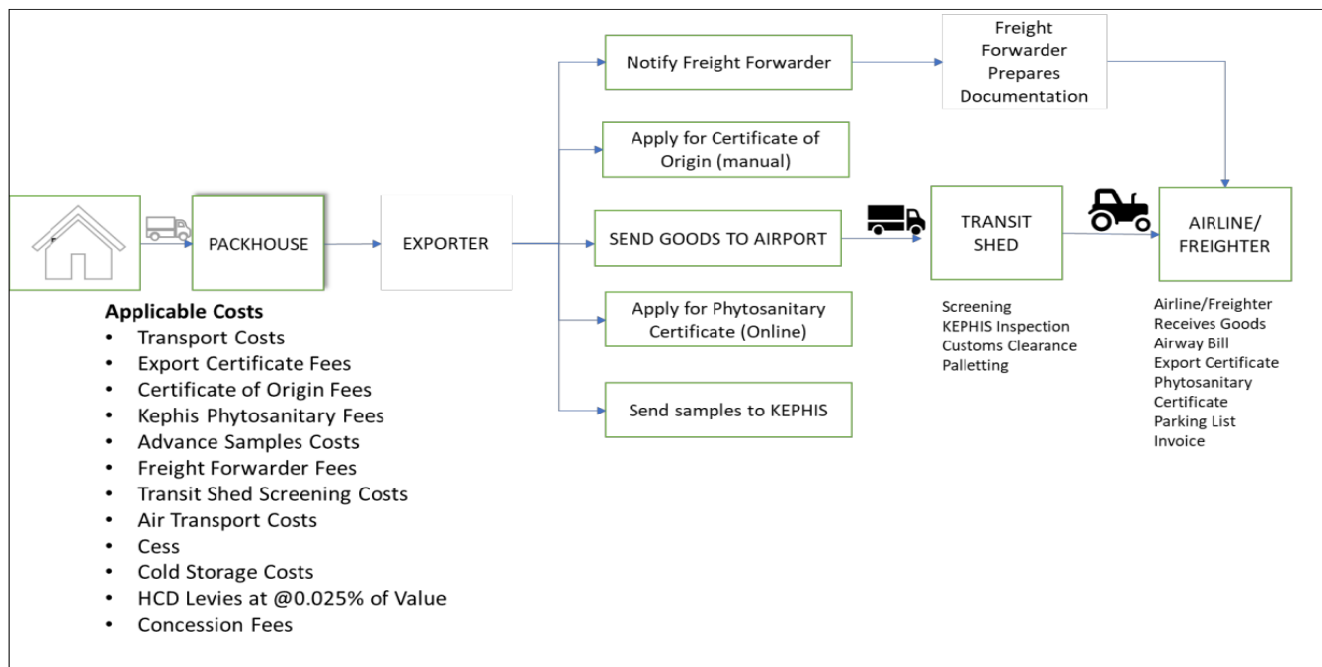


Figure 27: Logistics and transport activities and respective certification

According to the COLEACP [Study](#), airfreight of fresh fruit and vegetables and flowers connects some of world's poorest producers and workers to some of world's most discerning consumers via powerful branded retailers. It is true to say that per kilo transported, airfreight of produce has a higher environmental impact than other modes of transport. Yet its impact is currently not included in IPCC GHG balance sheets by country. However, with respect to African horticultural produce, the following should be taken into consideration:

1. African FFV air freighted to the UK account for a maximum of 0.1 per cent of total UK GHG emissions
2. An estimated 60 to 80% of airfreight produce is carried in the belly hold of passenger planes
3. The average Kenyan's carbon footprint is thirty times less than the average Briton
4. Kenya has spare carbon – i.e., if the emissions associated with Kenyan FFV (Fresh Fruit and Vegetables) export to the UK were allocated entirely to Kenya's emissions budget, they would account for an extra 5% of total emissions for Kenya, still below the natural carbon sink capacity and leaving Kenya with significant 'ecological credit'.

A sample case in point is the Air Miles Case Study of Kenyan roses narrated in [Box 5.8](#) below

5.7. Supply Side and Demand Side Sustainable Standards and Certifications

Box 5.8: Air Miles Case Study - Kenyan roses are by far the greener option

Food, flowers and other agricultural products that are grown near to the equator tend to have a lower carbon footprint than those produced locally under artificial conditions. studies have shown. Roses grow naturally in Kenya, but in the Netherlands, they must be grown in greenhouses under artificial heat and light. This makes the production process in the East African country 123 times more carbon efficient than in the Netherlands, according to one study. Transportation of the Kenyan flowers is far more carbon intensive and levels out the difference, but it's still clear that Kenyan rose production is greenest: the entire process was calculated to be six times more carbon efficient than the Netherlands, when transport to Europe was included.

Increasing energy efficiency and renewable energy use in the Netherlands is forecast to close this gap in the future, but there is still a long way to go. Exact figures from the study can be found in the table below, which show the CO₂eq emissions from comparable flower farms.

Supply chain section	Kenya (kg CO ₂ eq)	Netherlands (kg CO ₂ eq)
Production	300	36,900
Packaging	110	160
Transport to airport	18	0
Airfreight from airport to airport	5,600	0
Transport to distribution centre from airport/production site	5.9	50
Total	6,034	37,110

Emissions are based on a functional unit of 12,000 marketable cut stems and are shown as Global Warming Potential (GWP) expressed in kg of CO₂ equivalents using the IPCC (2001) conversion factors. GWP and CO₂ emissions from Kenya include the IPCC altitude factor. [Source: Williams, 2007](#)

Production and Export of Fresh fruits and vegetables in Kenya are guided by legislation including; Crops (Horticultural Crops) Regulation of 2012, Agricultural Food Authority Act of 2013, Crops Act of 2013, The Agriculture Produce (Export) act 2012, The Plant protection act of 2012, The Biosafety Act of 2009, The Biosafety (Import, Export, and Transit) regulation of 2011 and The Environmental (Impact Assessment and Audit) Regulations, 2003. Fees and Levies are provided by the plant protection (fees) rules 2009, and The Miscellaneous Fees and Levies Act of 2016.

5.7.1. Supply Side

Production Certifications

Production - Supply side producer certifications include HCDA Producer Certification, KEPHIS Phytosanitary and Sanitary certification, The National Environment Management Authority Environment Impact Assessment Certification, and Food hygiene licensing

Organic certifications

The **East African Organic Products Standard (EAOPS)** for promoting organic agriculture production and has influenced the development of other regional standards.

The new **organic regulation (EU) 2018/848**: for organic production, labelling and controls and import rules. All products labelled as organic and sold in the EU must be produced under these regulations. This set of rules will change soon. After a long revision process, this new organic regulation (EU) 2018/848 was published in June 2018. It will apply from 1 January 2022 (See changes in detail in [Annex 4](#)).

The main organic certification bodies present in Kenya include Control Union, Ceres, EcoCert, EnCert and Soil Association and their details are included in [Annex 5](#).

Handling and Packaging Certifications

- **Global GAP Certification** such as AfriCert, EnCert, and Bureau Veritas Kenya.
- **Brand Recognition Through Compliance Standard (BRCGS)** formally (BRC) is a standard created by British retailers to create a framework that covers internationally accepted food safety standards and help improve food safety including;
 - BRC Global Standard for Agents and Brokers
 - BRC Global Standard for Food Safety
 - BRC Global Standard for Packaging and Packaging Materials
 - BRC Global Standard for Storage and Distribution.
- **International Featured Standards (IFS)** – for packers and processors focus on food safety and the quality of processes and products. IFS has two certifications (Logistics Certification) and Food standards which concerns food processing companies and companies that pack loose food products. IFS Food applies when products are “processed” or when there is a hazard for product contamination during primary packing. The Standard is important for all food manufacturers, especially for those producing private labels, as it contains many requirements related to compliance with customer specifications.
- **Euro 1 Certificate** also known as “movement certificate”, at a reduced rate of import duty under trade agreements between the Kenya and the EU, issued by the Kenya Revenue Authority.
- **SQF (Safe Quality Food)**

5.7.2. Demand Side

Export Certifications

Exporter certifications include registration with the Horticulture Crops Directorate (HCD) and Phytosanitary certificate for fresh produce by KEPHIS. Government related legislations include: Crops (Horticultural Crops) Regulations; Agricultural Food Authority Act; Crops Act; Agriculture Produce (Export) act; Plant protection act; Biosafety Act; and Biosafety (Import, Export, and Transit) regulation.

In EU - Demand side producer certifications include Global GAP, BRC and others as specified by individual retailers such as Marks and Spencer (M&S) field to fork certification, the Albert Heijn protocol and the TESCO Food Manufacturing Standard (TFMS).

- **Marks and Spencer (M&S) field to fork certification** is a requirement for the suppliers that supply the commercial chain of fresh products from the British supermarket Marks and Spencer, the certification ensures that the production process has been carried out following the code of good agricultural practices and respecting the environment, focusing mainly on reducing the use of pesticides, avoiding contamination of food and the use of approved agricultural products.
- **The Albert Heijn protocol** lays down the contracting requirements to guarantee the full application of the legislation in EU-MRL and ARfD-NL for fresh produce, the protocols monitor the levels of residues at source: the producers and packaging stations of suppliers.
- **The LEAF Marque standard** certification stands for environmental sustainability and is held by farm businesses that meet their sustainable farming practice.
- **The TESCO Food Manufacturing Standard (TFMS)** is a required benchmark for all food & drink-related companies that currently supply products, ingredients, or packaging materials to TESCO supermarkets.
- Partners with their suppliers and their facilities globally, to mitigate risks, drive remediation and improve standards for workers via their risk-based **ASDA Responsible sourcing Approach** approach. Suppliers are expected to operate responsibly through abiding by applicable labour and employment laws and adhering to their Standard for Suppliers.

Regulation (EU) 2020/625 of 6 May 2020 which subjects to mandatory 10% sampling checks on the residue levels, a departure from 5% sampling for horticulture produce enter into EU.

5.7.3. Across Board Standards

Social Standards

- **Fairtrade** Standards are designed to aid the sustainable development of smaller producers and agricultural workers in third world countries, the farmer cooperatives have to strictly comply with the standards laid down by Fairtrade International FLOCERT.
- **The Sedex Members Ethical Trade Audit (SMETA)** monitors the health and safety of workers, and signal zero tolerance of human rights abuses such as child and forced labour, an auditor physically visits suppliers' sites for assessment, once an audit is complete, traders are either certified or if any non-compliance is detected, the businesses are given the opportunity to work together and address any issues, based on a Corrective Action Plan (CAPR).
- **GRASP GLOBALG.A.P Risk Assessment on Social Practice (GRASP)** is mainly based on document checks to ensure that agricultural products are produced according to internationally established labour requirements as well as relevant legislation.
- **Ethical Trading Initiative** is a voluntary certification where companies commit to ethical trade by adopting a code of labour practice that expects all their suppliers to work towards it.
- **Fair For Life (FFL)** a certification programme for fair trade in agriculture, manufacturing and trade. It is a tool that enables the valorisation and protection of supply chains, where stakeholders have chosen to act responsibly by implementing good economic, social and environmental practices.

Sustainability Standard

- **The Sustainability Initiative of South Africa NPC (SIZA) Environmental Standard** for fresh produce industries is focused on addressing environmental risks at a farm (on the land) and post-production level (packhouses).
- **The Rainforest Alliance** certification promotes collective action for people and nature to ensure that food is produced using methods that support social, economic, and environmental sustainability.

- **Kenya Standard 1758:2016 (KS 1758) code** of practice for the horticulture industry for handling and marketing of flowers & ornamentals, fruits, vegetables, herbs and spices required of all operators in the horticulture value chain, i.e., breeders, propagators, producers, consolidators, traders, shippers, and cargo handlers for local, regional and international markets.
- **FSSC 22000** is certification based on ISO 22000 which is a voluntary food safety international standard to enhance communication between organizations both upstream and downstream in the food chain.

5.8. Sustainable horticulture export trade initiatives in Kenya

Sustainability has become one of the most important topics in the world, due to the risk of global nature loss in a short time. It seems that the good intentions of many people and organisations to save the planet were not enough to bring the expected change. To speed up the change, the European Union set official policies to become the world's first climate-neutral continent by 2050. Those policies are called the [European Green Deal](#) and include the [Farm to Fork Strategy](#) and [Biodiversity Strategy](#), both influencing food production and trade.

[CBI](#) stresses that since environment, climate, biodiversity and social responsibility are global issues, Europe cannot achieve sustainability standards alone. The European Union (EU) will support developing countries in their transition to sustainable food systems. One of the actions will be the addition of a sustainability chapter, including on food, in all the EU's bilateral trade agreements. It is expected that EU will provide stronger support for smallholder farmers and small-scale food producers to introduce sustainable agricultural and manufacturing practices. Such support comes from Sustainability Initiative Fruit and Vegetables (SIFAV), a sustainability initiative focusing on fruits and vegetables hosted by the Sustainable Trade Initiative (IDH).

Sustainability Initiative Fruit and Vegetables (SIFAV): The companies united in the SIFAV as set-up and hosted by the Sustainable Trade Initiative (IDH), have launched their new collaborative sustainability strategy for 2025. The new ambitions focus on reducing the environmental footprint across the supply chain, improving working conditions, wages and incomes, and strengthening due diligence reporting and transparency. In Kenya [Mara Farming](#) and [Eosta](#) are part of the SIFAV, focusing on the key sustainability challenges in the horticulture sector in Kenya. This platform includes all key players sector players who have committed to the SIFAV covenant, aimed for 100% sustainable sourcing by 2020. One of the focus areas of this initiative are the working conditions and livelihoods of farmers, which initiated the dialogue about living wages in the global supply chain, and specifically at an international trading company like Eosta.

5.9. Challenges and Recommendations

- Extension service:** Lack of harmonized operational programmes by all extension providers has led to poor service delivery and non-standardization of extension messages affecting productivity in many areas. Hence, need for specialized extension approach due to its dynamism and industry needs.
- Integrated Pest Management (IPM):** Pests (arthropods, pathogens and weeds) cause about 30% crop yield loss at farm and market levels in Kenya. Particular attention should be given to the development and promotion of ecologically sound integrated crop health management strategies, involving appropriate combinations comprising of host plant resistance, use of bio control agents (bio pesticides and natural enemies), cultural environment modification, seed quality management, and judicious use of chemical pesticides.
- Agronomical and phytosanitary**
Other challenges facing production, particularly fruit production is inadequate quality planting materials, poor orchard management, pre-mature harvesting, and prevalence of pests and diseases and poor post-harvest handling practices. There is need for generating protocols for nursery management to enhance quality assurance procedures in

availing clean planting materials, and for integrated management practices.

d) **Cold chain 3PL**

Most Kenyan exporters do not have cold chain infrastructure from farm to export gate and thus most of them are focusing on less perishable products such as fresh legumes and avocados. There is need to enhance cold chain infrastructure including encouragement of third-party logistics (3PL) services.

5.10. Case Studies

Tesco is working with supplier to reduce the wage gap in their supply chains

Take the [recent example of Tesco](#) as a case in point. Working with the IDH [Living Wage Roadmap](#), Tesco has developed an understanding of the living wage gaps in their banana supply chains. With that information, Tesco has been able to make quite bold commitments on the factors that they can control – their own purchasing practices. This includes:

1. As of January 2022, Tesco commits to paying the living wage gap to banana producers (equivalent to the volumes Tesco sources).
2. Tesco shall ensure that producers have in place a time bound commitment to pay all workers a living wage.
3. Tesco will reward suppliers who continue to make progress on closing living wage gaps with higher volumes as part of a balanced scorecard.
4. Tesco ambition is that from January 2024, it will only source from banana producers who pay a living wage to all workers no matter the volumes sourced by Tesco.

In the announcement, Tesco acknowledges that their forward-thinking purchasing practices will have limited impact unless other retailers sourcing bananas from the same producers also play their part. That's why IDH working with several top UK retailers to look at their banana supply chains, understand the living wage gap, and work together to close it.

Box: Unilever promoting biodiversity, reducing pesticides, preserving water and applying regenerative principles

Unilever can't make its foods without high-quality vegetables and fruits from all over the world. Securing a sustainable supply is a priority for Unilever's business. A reliable supply of the best ingredients is essential to the long-term future of food brands that people can trust on taste, nutrition and sustainability. Unilever buys significant quantities of tomatoes, onions, pumpkins, leeks, green beans, mushrooms, potatoes, celeriac, peas and carrots, as well as herbs such as basil, parsley and chives. Most of the vegetables bought are used in the soups, sauces and other food products made by Unilever Knorr brand.

Knorr is sold in around 90 countries. It's our largest food brand and one of the world's largest brands. While Knorr has worked closely with farmers for 183 years, for the last decade it's been working to make a positive change across the food system – from the way food is grown to the way it's consumed. Through its [Sustainability Partnership Fund](#) Knorr is supporting suppliers and farmers to make change on the ground. Knorr's Sustainability Partnership Fund supports sustainable farming projects with suppliers around the world. Knorr will invest 50% of any agreed project budget for initiatives that help nature such as promoting biodiversity, reducing pesticides, preserving water or applying regenerative principles. The other 50% is matched by the supplier or grower. The idea of the fund is to help suppliers try out new ideas and tackle complex sustainability projects that they may not be able to handle alone.

5.11. Chapter 5 Takeaways

There is growing evidence that climate change will globally affect the production of fresh fruits and vegetables in the coming decades. These changes inevitably also have consequences for the sourcing of such commodities. Accordingly, there is a need among supply chain partners and other stakeholders to better understand how climate change interacts with sustainable sourcing ambitions, as affected by strategic decisions and activities of individual actors.

Tips:

- That sustainable sourcing projects are not 'stand-alone'. It concerns a participative project that takes 3 years or more before it is running well
- It is crucial that the project should somehow fit into the development plan of the region/county concerned. Local NGOs should be involved, but with consideration.
- An important part of the budget must be allocated to regular trainings of local experts or foreign experts for specific topics.
- Good communication and full transparency are crucial for success.
- Whether climate change affects the relative competitiveness of sourcing countries, and in which direction, depends on many other factors, some of which are at least as important as climate change.
- The adaptive capacity of a supply chain to climate change is mainly determined by knowledge and technology transfer, political environment, and financial capacity. Timely anticipation of possible impacts requires cooperation and organisation that is robust to the dynamic environment.
- How do you communicate your sustainable sourcing efforts to consumers and other external stakeholders? To get maximum traction on your investment in terms of time, energy resources and achievements, a company's efforts to 'go sustainable' are generally communicated to a wide audience from consumers, to NGOs, governments and the media. How you decide to communicate efforts and achievements relating to sustainable sourcing depends on your firm's philosophy and tradition.



6

ANALYSIS OF THE BUSINESS ENABLING ENVIRONMENT

6. Analysis of the Business Enabling Environment

In his paper, “A ‘Private-sector Success Story’ - Uncovering the Role of Politics and the State in Kenya’s Horticultural Export Sector”, [Tyce \(2020\)](#) shades great light on factors contributing to an enabling environment in the horticulture industry. He apportions this into five phases, i.e., 1963-1974 when ‘the government did not think there was any money in horticulture; 1975-1989 when there was “growing coordination and support”; 1990-2000 which was a period of “liberalisation”; 2001-2007 which were “the golden years”; and 2008-present facing “reduced and erratic growth”. The main thrust for the enabling environment was 1975-89 growing coordination and support where many of the private and public sector organizations emerged to direct the industry as outlined in the table below. In addition, the tax environment of the 2001-2007 “golden years” and the 2018/19 tax laws presented below have had further influence. Therefore, three key areas of interest would be policies and regulatory framework, the taxation regime, and the freight transportation environment.

6.1. Policies and Regulatory Framework in Kenya

The main policies and legislations, which influence horticulture value chains in Kenya are summarised in [Table 15](#) below.

Table 15: Policies and Regulatory Framework

1. Policies	
	Main thrust
Agricultural Sector Transformation and Growth Strategy 2019 – 2029	<ul style="list-style-type: none"> To enhance sustainable agricultural transformation and food security in Kenya anchored in the belief that food security requires a vibrant, commercial and modern agricultural sector that sustainably supports Kenya’s economic development, national priorities, and commitments to the Malabo Declaration under the Comprehensive Africa Agriculture Development Programme (CAADP), and the United Nations Sustainable Development Goals (SDGs).
National Food and Nutrition Security policy	<ul style="list-style-type: none"> The policy thrust is to achieve good nutrition for optimum health of all Kenyans; to increase the quantity and quality of food available, accessible and affordable to all Kenyans at all times; to protect vulnerable populations using innovative and cost- effective safety nets linked to long term development.
National Agricultural Sector Extension Policy (2012)	<ul style="list-style-type: none"> The main objective is to empower a pluralistic extension clientele through sharing information, imparting knowledge and skills and changing attitudes to enhance technology and innovation adoption. In this regard, linkages and partnerships with extension agents are crucial for deployment of comprehensive outreach strategies for the purpose of creating value.
National Agricultural Research System Policy (2008)	<ul style="list-style-type: none"> The Policy aims at facilitating the prompt application of agricultural research results and services to enhance productivity and economic growth; and promoting private sector and non-state institutions engagement in research and technology transfer.
National Land Policy (2007)	<ul style="list-style-type: none"> The policy aims to guide the country towards efficient, sustainable and equitable use of land for prosperity and posterity. Key issues the policy addresses are constitutional, land tenure, land use management, land administration, and land issues requiring special intervention. The Land Act (GOK, 2012c) mandates the National Land Commission to reorient the use of land as a productive asset, rather than a prestige title. This could increase access to land through renting for productive purposes and innovations.

National Horticulture Policy (2012)	<ul style="list-style-type: none"> The broad objective of the policy is to accelerate and sustain growth and development of the horticultural industry in order to enhance its contribution towards food security, poverty reduction as well as employment and wealth creation. Specific policy objectives are to: facilitate increased production of high-quality horticultural produce; enhance provision of the sub-sector's support services like finances, insurance and technical advisory services; promote value addition and increase domestic and external trade; develop and improve infrastructure to support the horticultural industry particularly in major production areas; and promote horticultural investment in the ASALS.
The National Seed Policy (2010)	<ul style="list-style-type: none"> Outlines the intervention measures to be implemented by the seed sub sector to provide guidance to the industry to sustainability avail adequate high-quality seed and planting material to the users and harmonizing all seed related activities.
Agricultural Sector Development Strategy (ASDS) (2010 – 2020)	<ul style="list-style-type: none"> The overall national strategy document for the agricultural sector ministries and other stakeholders in Kenya. The main objectives include: increasing productivity; commercialization and competitiveness of agricultural commodities and enterprises; and developing and managing key factors of production.
National Agri-business Strategy (2012)	<ul style="list-style-type: none"> The objective is to bring about a highly productive and efficient agribusiness sector, competitive both locally and internationally. The strategy emphasises the need to encouraged private sector organizations in development of diversified agricultural and food products, which are essential for improving the competitiveness of the sector.
Sustainability Strategy for Regional Development Authorities (2010)	<ul style="list-style-type: none"> The goals include promoting integrated economic development through sectoral value chains and spatial concentration of infrastructure facilities and stronger linkages between zones; to enhance productivity and skills as well as firm competitiveness and expansion of export markets and diversification of export products.
2. Legislation	
A. Input Related Legislation	
Seed and Plant Variety Act Cap 326	<ul style="list-style-type: none"> Regulate transactions in seeds, including provisions for seed testing and certification; establishment of an index of names of plant varieties; control on introduction of new varieties; seeds importation; to authorize measures to prevent injurious cross-pollination; management of proprietary rights to breeders or discovering and developing new varieties; and arbitration on seed matters.
Fertilizer and Animal Feedstuff Act Cap 345	<ul style="list-style-type: none"> Regulates the importation, manufacture and sale of agricultural fertilizers and animal foodstuffs and substances of animal origin intended for the manufacture of such fertilizers and foodstuffs, and to provide for matters incidental to and connected with the foregoing.
Pest Control Products Act (Cap 346)	<ul style="list-style-type: none"> Regulate the importation, exportation, manufacture, distribution and use of pests control products and bio-control products of plant and animal origin.
B: Production and GAP related	
Agricultural Act Cap 318	<ul style="list-style-type: none"> Governs agriculture production including conservation of the soil and its fertility and to stimulate the development of agricultural land in accordance with the accepted good land management and agricultural practices.
Crop Production and Livestock Cap 205 (1948), Act No. 47 of 1949	<ul style="list-style-type: none"> Provide for the control and improvement of crop production and livestock, and the marketing and processing.

Plant Protection Act Cap 324	<ul style="list-style-type: none"> • Governs prevention of the introduction and spread of pests and disease destructive to plants.
Crops Act (No.16 of 2013)	<ul style="list-style-type: none"> • Developed in 2013 to consolidate and repeal various statutes relating to crops; and to provide for the growth and development of agricultural crops and for connected purposes.
Biosafety Act 2009 (CAP 321 A)	<ul style="list-style-type: none"> • Regulates activities in genetically modified organisms, to establish the National Biosafety Authority, and for connected purposes
Environmental Management and Coordination Act) (EMCA) (CAP 387 No. 8 of 1999	<ul style="list-style-type: none"> • Constitutes the legal and institutional framework for the management of the environment and for the matters connected therewith and incidental thereto.
Irrigation Bill (2015)	<ul style="list-style-type: none"> • An Act of Parliament to amend and consolidate the law relating to sustain able development and management of irrigation for the socio- economic development in the country; to align existing irrigation laws to the Constitution of Kenya 2010, to repeal the Irrigation Act, Chapter 347 Laws of Kenya; and for purposes incidental thereto and connected therewith
Kenya Standard 1758: Part II Fruits and Vegetables	<ul style="list-style-type: none"> • This is the Horticulture Code of Practice that specifies the requirements for legal compliance, the responsible procurement of inputs, safe production, handling and marketing of fresh fruits, vegetables, herbs and spices. It applies to all players in the industry including but not limited to growers, propagators, plant breeders, seed merchants, consolidators, transporters, shippers and cargo handlers.
C: Aggregation & Quality related	
The Crops (Horticulture Crops) Regulations, 2019	<ul style="list-style-type: none"> • The purpose of these regulations is to promote, develop and regulate the growth of the horticulture industry to ensure growers and dealers meet produce quality and safety standards.
Crops (Food Crops) Regulations, 2019.	<ul style="list-style-type: none"> • The purpose of these Regulations shall be to promote the development and regulation of food crops and food produce to provide for registration of growers, growers' associations, and any other dealer in food crops or food produce including: licensing of an operator; issuance of export clearance; certification of a market; assurance of safety and quality; marketing of food crops and food produce; promotion of best practices; collection, collating and maintaining of a database; and carrying out such other functions as may be necessary for the effective implementations of these Regulations.
Agricultural Produce Act (Export) Cap 319	<ul style="list-style-type: none"> • Provides guidance on the grading and inspection of agricultural produce to be exported, and generally for the better regulation of agricultural manufactured products.
Agricultural Produce Marketing Cap 320	<ul style="list-style-type: none"> • The Act aims to control and regulate the marketing of agricultural produce, establishment of marketing boards.
Food Drugs Chemical Substances Act Cap 254 (Rev. 2002)	<ul style="list-style-type: none"> • An Act of Parliament to make provision for the prevention of adulteration of food, drugs and chemical substances and for matters incidental thereto and connected therewith.
Public Health Act Cap 242 (Rev.2002)	<ul style="list-style-type: none"> • An Act of Parliament to make provision for securing and maintaining health.
D: Marketing and Export related	
Standards Act Cap 496	<ul style="list-style-type: none"> • Governs the standardization of the specification of commodities, development of standards for various commodities and codes of practice; and creation of the Kenya Bureau of Standards for the management of the same.

E. Business Support Services	
AFA-Integrated Management Information System (AFA - IMIS) 2021	<ul style="list-style-type: none"> The system automates issuance of import and export services provided by the Agriculture and Food Authority of Kenya (AFA), the government regulatory agency. It's an 8-in-1 Single Window Information for Trade (SWIFT) system covering the certification and licensing of trade in cash crops including tea, coffee, nuts, oils, sugar, horticulture, flowers, cotton, sisal, pyrethrum, food crops and other industrial crops
The food crops industry bill, 2020	<ul style="list-style-type: none"> AN ACT of parliament to provide for the regulation, development and promotion of the food crops industry, to provide for the establishment, powers and functions of the Food Crops Regulatory Authority to promote best practices in, and regulate, the production, processing, marketing, grading, storage, collection, transportation and warehousing of food crops produce and products as may be provided for under this Act.
Science and Technology (Amendment) Act, Cap 250, 1979	<ul style="list-style-type: none"> The Act was established to coordinate matters relating to scientific and technological activities as well as the coordination of research and experimental development. The Act establishes the National Commission for Science, Technology and Innovation (NACOSTI) charged with the responsibility of advising the government on a national science policy, the scientific and technological requirements for the conservation of the natural and social environment and the transfer of technology into agriculture and industry.
The Export Processing Zone (EPZ) Act, Cap 517, 1990, revised 2012 and 2015	<ul style="list-style-type: none"> The Act created the Export Processing Zones Authority (EPZA) as the regulatory body. Investors in EPZs benefit from a range of fiscal incentives. These include a 10 years' tax holiday followed by a 25 percent at tax for the next 10 years; exemption from all withholding taxes during the first 10 years; exemption from import duties on machinery, raw materials, and inputs; no restrictions on management or technical arrangements; and exemption from stamp duty and from the VAT on raw materials, machinery and other inputs.

Source: Horticulture scoping study 2017 and updated by authors October 2021

6.2. Updates on Horticulture Taxation in Kenya

According to [Tyce \(2020\)](#), taxation in the horticulture industry flourished during the 2001-2007: 'the golden years'. The next phase seems to have been the 2018 Act. The recent tax laws, i.e., amendment (Act, 2018 and Finance Act 2018), contain measures that are of interest to the agribusiness sector of "zero-rate," products where the law does not impose VAT on outputs/sales of the product, but allows business credits for the VAT paid on inputs/purchases. In contrast, an "exempt" product does not attract VAT, but businesses engaged in the product are not allowed credits for the VAT they pay on inputs/purchases.

However, the 2018 law was a continuation of efforts to: a) reduce the spread of exemptions and zero-rating; b) increase government revenue; and c) contribute to the government's Big 4 development agenda.

- Agricultural pest control products:** In the Act 2013, agricultural pest control products were exempt from VAT. This might increase access to sustainable technologies. In the 2017 amendment, the products became zero-rated.
- Exemptions:** Exemptions applied on Equipment for Construction of Grain Storage and Raw Materials for Manufacture of Animal Feed.

Horticulture export levy

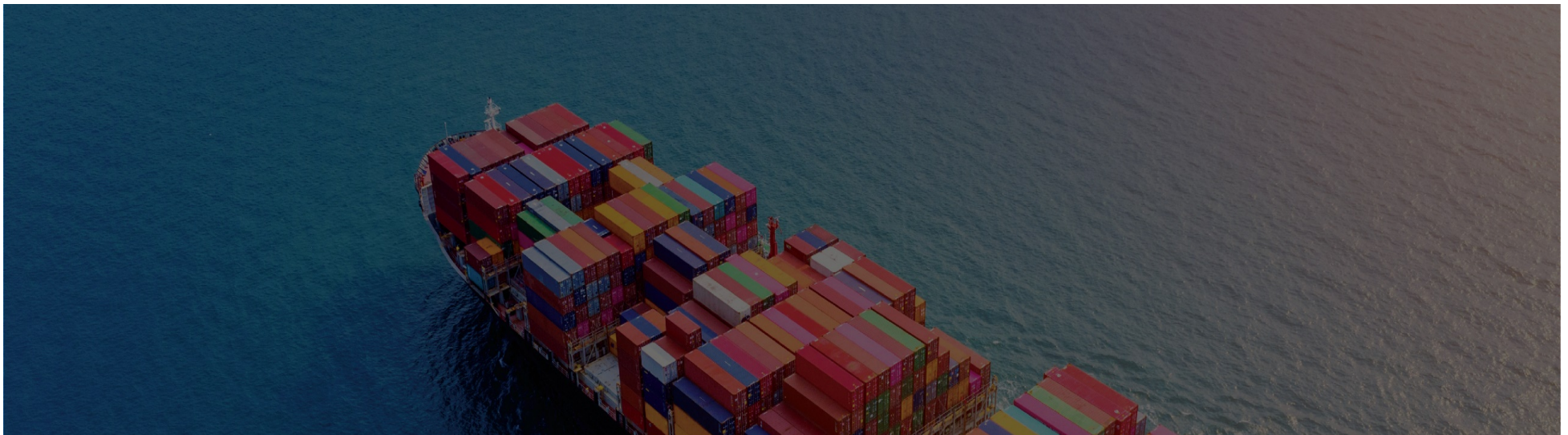
Stemming from Horticultural Crops Regulations 2019, the Horticulture (crops) Regulations' 0.25% [export levy](#) gazetted in June 2020 is expected to cut farmer's earning by over KES350 million. It is four times higher than the previous Agricultural Produce Cess and is charged based on the value of free on board (FOB) consignment. This increases taxes and thus resulting in an annual average of KES90 million to KES377 million annually and its projected that over 40 percent of horticulture export firms will be pushed out of business.

[Narok County horticulture levy](#): Meanwhile, a number of horticulture firms have been leaving Narok County after the regional government imposed a KES100 duty on a crate of French beans that is produced there. The county introduced the levy through its financial bill recently, pushing up the unit cost of producing the crop in Narok, especially given that large firms normally lease land in the country for production of horticultural produce.

However, due to COVID 19 pandemic, a [Presidential directive](#) for Kenya Revenue Authority to expedite VAT refunds to businesses came as a great relief. The Agriculture Sector Network (ASNET) lauded the directive which estimated that the horticulture sector was owed in excess of KES 12 billion with the Kenya Flower Council estimating that the flower farms were owed KES 9 billion.

Freight transportation enabling environment

As indicated earlier, the main means of transport to EU markets is by air or by ship. But due to shipment challenges, most of the horticulture freight (99.7%) is by air. Hence the need to create a strong air freight enabling environment, especially in areas of customs, border processes and regulations, and trade facilitation. The 2017 Air Trade Facilitation Index (ATFI), with respect to facilitating air cargo, ranked Kenya at position 69 out of 124 countries on customs, border processes and regulations; position 77 out of 136 on E-Freight Friendliness Index and enabling trade facilitation on the free flow of goods over borders and to its destination. The E-Freight index measures the actual penetration of electronic transactions and documents in air cargo shipments. The ranking shows that Kenya as a country requires to continue its quest to improve trade air trade facilitation by addressing the bottlenecks affecting the movement of goods by air.



6.3. Chapter 6 Takeaways

The two key takeaways are:

- a) the growing policy efforts to enhance the sector while meeting the global standards and,
- b) the role and effects of taxation.

With respect to **growing policy efforts**, the chapter provides a range of policies; presents the policies and regulatory framework in Kenya including input legislations, production and GAP related legislations; and other process related policies including Aggregation & Quality related, Marketing and Export related, and Business support services.

The **horticulture taxation** in Kenya has also been enhanced, where the 2018 law aimed to:

- Reduce the spread of exemptions and zero-rating
- Increase government revenue
- Contribute to the government's Big 4 development agenda.

However, there have been concerns about the negative impacts of taxation. For example:

- The national taxes such as the Horticulture (crops) Regulations' 0.25% export levy gazetted in June 2020 expected to cut farmer's earning by over KES350 million and four times higher than the previous Agricultural Produce Cess
- The county taxes such as Narok County KES100 duty on a crate of French beans.

Not surprising, the Presidential directive for Kenya Revenue Authority to expedite VAT refunds due to COVID 19 came as a great relief.

- The Agriculture Sector Network (ASNET) lauded the directive which estimated that the horticulture sector was owed in excess of KES 12 billion
- The Kenya Flower Council estimated that the flower farms were owed KES 9 billion



Image: Jani Fresh



7

**EMERGING DEVELOPMENTS AND
SUPPORT PROGRAMMES/INITIATIVES
IN HORTICULTURE IN KENYA**

7. Emerging developments and support programmes/initiatives in horticulture in Kenya

Kenya horticultural industry is very dynamic and there are numerous on-going development initiatives that are highlighted here.

7.1. Herbs and spices are gaining interest

According to the Export Promotion Council (EPC), the European Union (EU) market is the second largest market for seasonings, spices and herbs in the world, accounting for Euros 1.2 billion. According to the 'Centre for Promotion of Imports from Developing countries (CBI), 95% of EU imports from non-EU countries come from developing countries during the winter season. In that effect, the farming and trading in herbs and spices in Kenya are on the rise due to the increased demand in both the local and international markets. There are many spices and herbs that are in demand. These include: Pepper, Parsley, Paprika, Marjoram, Capsicum (chillies and cayenne pepper) Oregano, Pimento (allspice), Thyme, Coriander, Bay leaves, Cinnamon, Rosemary, Ginger, Basil, Nutmeg, Mint, Caraway, Savoury, Turmeric, Dill, Cumin, Tarragon, Cloves, Sage, Mace, Cardamom, Anise or badian seeds, Fenugreek, Saffron, Vanilla, Fennel seeds and Juniper berries. AFA deliberately promotes the following herbs and spices for exports from Kenya:

- **Herbs:** (Chives, Rosemary, Dill, Marjoram, Basil, Mint, Parsley, Coriander, Curry leaves & Celery).
- **Spices and Chillies:** (thin, long, bullet & birds' eye).

According to CBI, imports of spices and herbs in the EU from developing countries have grown significantly in recent years, by 6.1% annually from 257,000 tonnes in 2012 to 326,000 tonnes in 2016. Therefore, the EU constitutes a critical market to focus in the development and promotion of herbs and spices for exports. Equally important is the global market, which CBI projected to grow by 5.1% between 2017 and 2021.

Challenges in the Herbs and Spices subsector in Kenya

Despite huge opportunity to produce and export herbs and spices in Kenya; MARKUP Project herbs and spices [factsheet](#) has highlighted a number of challenges facing this sub-sector including:

- Lack of networking arrangement between small-scale producers, and medium and large-scale exporters/ producers for aggregation;
- Weak farmer organization structure, especially in small-scale production – unregistered groups;
- Lack of suitable finance and credit facilities to farmers;
- Inadequate good quality seed and other planting materials and other farm inputs;
- Inadequate resources (financial and human resource) to support research and development of herbs and spices production, processing and postharvest management;
- Low adoption of research outputs in support of herbs and spices & horticultural development for export.

Through MARKUP project that is funded by EU and implemented by UNIDO herbs and spices farmers and marketing associations are empowered to achieve high net investment index and accelerate industry growth. The project is also strengthening cohesion among smallholder farmers aiming at enhancing their negotiating power with traders, and increased opportunities to build long-term relationships with buyers. MARKUP project is collaborating with the Government of Kenya at national and county levels and other stakeholders in implementing policy reforms to create an enabling environment for competitive production and marketing of herbs and spices.

Box 7.1 **Subati Farmforce:**

Exporting high-quality herbs across Europe, Subati operates from an expansive greenhouse complex in southern Kenya. From its launch in 2016, Subati has rapidly grown their herbs operation, realizing in 2017 that in order to maintain the highest food safety standards, quality certifications and full traceability through production, a digital farm management system was required. The Agribusiness Advisory Team at the International Finance Corporation (IFC), part of the World Bank Group, was already in discussions with Subati and was keen to support testing out agricultural technology solutions. IFC strives to enable the development of agribusinesses in emerging markets, facilitating competitive access to global markets. Some of the key areas of support include:

1. Reducing MRL risks, properly responding when they occur, i.e., they do standard testing to check for any chemical residue.
2. Digital trouble shooting and issue resolution, i.e., determine source of contamination, such as locating a valve in the irrigation system where the chemical was getting 'stuck' and staying in the irrigation system even after the chemicals were flushed out.
3. Quality certifications to access markets, i.e., extensive application, audit and quality control processes with highest levels of food safety, staff training and responsible input use with a robust traceability system.
4. Customer confidence in reliable system, i.e., robust digital traceability system for reliability about specifics in the production backed up by transparent data
5. Farmforce ROI and ways forward, i.e., leveraging the digital data to better track year-on-year production and performance.



BOX 7.2: Emerging of herbs and spices farming for export to EU



Mace foods, a large-scale producer of dehydrated spices, herbs, vegetables and chillies based in Eldoret-Kenya is in the value-added market place where they engage small, medium and large scale farmers in the farming, production and processing of chillies for export. Founded 17 years ago, the company specializes in two main segments of the agribusiness industry, spices and ethnic foods offer world-class processing of five varieties of hot chillies for both pharmaceutical and food industries and Ethnic/Indigenous segment where they produce, process and market African leafy vegetables and assorted indigenous foods, has ready market access not only in the country but also abroad.

Mace foods has managed to extend its market to Europe; specifically, Germany, Italy, UK and Spain. Most of the chillies they export to these areas are African Bird's eye chillies which are a hot commodity on the global market, premium-grade and top product for high-quality conscious customers. Small scale chilli farmers always find it hard to meet their full market potential, especially in the global space. Market inefficiencies and supply constraints impede the farmers from accessing lucrative markets yearly. Mace foods have made this easier for these farmers through the delivery of technical expertise and support. They have developed processing and marketing systems needed to meet high-value market standards, and now farmers can demand a high price for their produce.

The company has received financial support from Kenya Climate Ventures (KCV), a branch of Kenya Climate Centre that deals with impact investing to purchase the machinery, construct a new factory, rebrand all company products and hire consultants to help in various needs.

Mace foods relies on KCV continuous support to enabled the company to growth and prosper expanding their market to France after Centre for the Promotion of Imports from developing countries (CBI) noting that Kenya is one of the medium to large suppliers of chilli to the European Union majorly Germany, Italy, UK and France.

7.2. Concerns about sustainable harvesting methods and cultivation of MAPS

The trend towards health and environmental protection has led to an increase in the consumption of medicinal and aromatic plant (MAP) products. The market for MAP products is influenced by consumer behaviour; however, most of these plants are harvested from forest and their promotion might increase deforestation. According to a 2010 [report](#), almost one third of medicinal plant species could become extinct, with losses reported in China, India, Kenya, Nepal, Tanzania and Uganda. Greater losses are expected to occur in arid and semi-arid areas due to factors such as: climate change, erosion, expansion of agricultural land, wood consumption, and exploitation of natural vegetation, increased global trade in natural resources, domestication, selection and grazing among other factors. As demand for medicinal plants continue to accelerate, species preservation is perceived to depend on sustainable harvesting methods and cultivation. For instance, the importance of Prunus Africana in pharmaceutical industry in the west and its consequent depletion in the wild has caused it to be popularised as a "cash crop" in African countries particularly Cameroon and Kenya.

7.3. Superfoods' export market growth

The global superfoods² market exhibited moderate growth during 2015 – 2020. Looking forward, [the market of superfoods](#) is expected to grow at a CAGR of around 6% during 2021 – 2026.

² Superfoods are nutrient-rich food products that help in maintaining good health and wellbeing. They contain a rich amount of minerals, vitamins, antioxidants, fibers, fatty acids, etc.

BOX 7.3: Live Love Well Limited

is the Moringa Tree Specialist: Live Love Well is a nutraceutical company focused on Agriculture in combination with Health & Wellness, developing nutraceutical products using Moringa, which is considered by many to be 'The Superfood of All Superfoods' offering serious nutrition that radically benefits overall health. Live Love Well IVS is a Danish company with subsidiaries in Kenya and USA. Live Love Well has been in the nutraceutical and cosmeceutical, ingredient industry since 2017 and has been providing European, American and Japanese Organic Food markets with Superior Quality Organic Ingredients and Botanical Oils.

Live Love Well was established by Talitha Hogebrug and Poul David Videbaek with a mission to ignite and accelerate sustainable business in Africa. The team behind Live Love Well has more than 35 years' experience with building businesses in Africa within food manufacturing, fast moving consumer goods (FMCG) and generic medicines.

Live Love Well specializes in supplying the cleanest, highest nutritional value, premium quality Organic ingredients and branded products, promoting healthy lifestyle by distributing top quality organic products to international markets USA, Europe and Japan. Ingredient manufacturers, brand owners and commodity buyers' value Live Love Well's consistent supplies and competitive partnership deals on industrial scale, in export quality and completely adhering to 100% Organic Farming Good Agricultural Practices.

Live Love Well is fully integrated across the value chain, assuring the Impact Customers and Partners their Moringa is responsible, safe and highly nutritious: Farm: grown on our own farms and with contracted smallhold farmers. Traceability: Agritech from farm to plate. Processing in state-of-the-art certified processing facility the same day. Quality checked according to USA and EU regulations Bulk: sell to brand owners and commodity buyers in Europe, USA and Japan. Live Love Well partners include Moringa Partnership, France; MESPT Micro Enterprises Support Programme Trust, Denmark and Kenya and TKS Co-Pack Manufacturing LLC, USA

Box 7.4 : Moringa is agroforestry fit

Kilifi Moringa Estate ([KME](#)) is a company that propagates moringa trees along the Kenyan coast and processes and sells moringa based products internationally. KME is trying to diversify the local economy especially along the Kenyan coastal region, an area that has been heavily affected by the prolonged drought and high poverty levels due to the collapse of the tourism industry. KME offers transformative drivers of food security, economic growth, health and social security by engaging previously underutilized land while simultaneously increasing tree cover. Moringa shows great promise as a tool to help overcome some of the most severe problems in the developing world—malnutrition, deforestation and poverty. The plant grows in the tropics in semi-arid climates (low rainfall, sandy soils, high sunlight), making it a viable solution for areas affected by drought. Moringa is capable of growing in difficult climatic conditions. It is a cash crop as well as a food crop (leaves eaten as vegetables) and hence increases the capacity of the population to cope (from an income as well as nutritional point of view) with the effects of climatic changes. It is essentially a tree and therefore has a good agroforestry fit.

KME production model is a hybrid of small-holding rural farmers – an out-grower community – backed by the strength of a plantation-scale Estate and processing facility. The two modes secure each other: the out-growers guarantee early and continuous seed production, while the Estate guarantees purchasing, processing, quality and through its integrated marketing, market-access.

Box 7.5: Agriprocity: democratizing nutrition through affordable and healthy superfoods

[Agriprocity](#) is a globally focused agricultural advisory and investment company and began operations in Kenya in 2018. The idea for the Kenyan business is a result of Nicole's five years of participation as a private sector delegate in the United Nation's Committee on Food Security (UNCFS). Agriprocity is building a B2B platform that will produce food based

natural supplements, using fruit and vegetable crops that have high levels of waste and are easily produced but lack strong market opportunities. Agriprocity is targeting Vitamin A, Vitamin K and iron deficiency, which are part of what UNICEF calls the 'Hidden Hunger' epidemic. Deficiency in these micronutrients does not yield immediate negative symptoms but over time leads to stunting, decreased cognitive abilities, poor eyesight, and poor immunity to diseases. An estimated 30% of children in Kenya have vitamin A deficiency and addressing this issue has become one of the priorities of the Kenyan Government.

Agriprocity has built their first pilot for a line of supplement powders, using iron and vitamin A rich kale and spinach, which are crops largely produced in Kenya with high rates of postharvest losses, that would otherwise yield little to no revenue for a small farmer. Agriprocity processes these crops rurally at farm gate, creating locally food-based nutrition supplement powders. Early processing of green leafy vegetables into powders unlocks the rich natural nutritional elements of a crop before it's wasted. These nutritional attributes are present regardless of the taste or appearance of the crop. Once dried and processed, these crops can be more easily shifted into the hands of households with poor or little access to fresh produce. Traditionally parents in low income markets focus on filling up little tummies with dense foods like porridge made of grains or maize. By adding a 15-gram dose of an Agriprocity's product, this staple meal will be more complete.

Food safety certification, traceability, and certified origin are other essential components of the company's value proposition, for which InspiraFarms provided the right fit in terms of technology. After this initial pilot project, it is Agriprocity's aim to replicate to build scale, deploying multiple processing units throughout Kenya and neighbouring African countries. As such, we wanted to build a facility that would easily comply with global food safety regulations. InspiraFarms allowed us to standardize our facility build process so as to not contend with uncontrollable variables, such as electrical systems, and local contractors. The modular and prefabricated InspiraFarms technology allowed us to focus on the commerciality of our business, identify our processing technologies and build relationships with our buyers and farmers." In the future, Agriprocity intends to scale the program into the export market.

7.4. Agribusiness technology development

To reduce postharvest loss, especially for long distance exports, various technologies have been developed in the horticulture sector which Kenya can benefit from. Logistics technologies, in particular in relation to horticulture can be categorized into five types, i.e., a) Sensor Radio Frequency (RF), b) GPS Systems for Location and Navigation, c) Internet of Things (IoT) and, d) Mobile Applications. Three types of smart logistic systems in horticulture include: **Spatial Logistics** which utilize spatial data, mapping, GIS and geospatial. Spatial logistics are used to produce interpolation maps of food producing regions. Key types include GIS and geostatistical, global positioning, global navigation, regional mapping, spatial prediction, and spatial DSS. **Logistics Traceability** which maintain the safety and quality of horticultural food by increasing revenue and reducing costs. Typical types include RFID, fuzzy, ANN, IoT, control sensing, real time tracking, advance tracing, GPS, geoinformatics. **Smart Logistics** which apply ICT to improve performance in automating work from production planning to distribution. Typical types include Smart logistics, green logistics, agro-logistics, spatial modelling, soft computing, Wireless Sensor Networks, spatial DSS, RFID GPS and GSM based logistics, real-time tracking and shelf life. For the future developments, there is anticipation for a systematic smart logistics that applies intelligent spatial logistic DSS to maintain the logistics system.

7.5. Growing value addition to fruits and vegetables prior to export

Value addition can be an effective strategy for mitigate some of the horticulture post-harvest losses due to export destination distance and limited or expensive conducive transport technology. While Kenya is a net importer of juices and other processed fruit and vegetable products; there are some exports of some processed fruit and vegetable products from Kenya mainly pineapple juice, mixed juices and orange juice is growing. In 2020 the most exported juices include pineapple juice (67%), mixed juices (26.4%) and orange juice (3.92%).

- **67%** (15.7 million US\$): **200949** - Pineapple juice (excl. of 2009.41)
- **26.4%** (6.15 million US\$): **200990** - Mixtures of juices including juice of any single fruit/veg. (excl. of 2009.11-2009.79)
- **3.92%** (910 thousand US\$): **200919** - Orange juice, not frozen (excl. of 2009.19)
- **2.68%** (344.18 thousand US\$): **200979** – Other juices

Top export destinations of fruit juices from Kenya in 2020 were:

- Netherlands with a share of **21%** (US\$5.07 million)
- USA with a share of **13.7%** (US\$3.19 million)
- Spain with a share of **11.1%** (US\$2.59 million)
- Greece with a share of **7.83%** (US\$1.82 million)
- Dem. Rep. Congo with a share of **6.99%** (US\$1.62 million)
- South Sudan with a share of **5.77%** (US\$1.34 million)
- Cyprus with a share of **5.05%** (US\$1.17 million)
- Qatar with a share of **4.14%** (US\$962 thousand)
- Zimbabwe with a share of **3.99%** (US\$927 thousand)
- Rwanda with a share of **3.06%** (US\$712 thousand)

EU countries, specifically the Netherlands, Spain and Greece accounted for about 45% of all exported fruit juice from Kenya in 2020. This trend is anticipated to increase Kenyan horticultural exports while reducing post-harvest losses.

7.6. Post BREXIT UK – Kenya EPA

Brexit was the nickname for the ‘British Exit’ from the European Union (EU), the economic and policy union that the United Kingdom (UK) had been a member of since 1973 and to which it transferred all authority for its trade agreements. That changed when the UK voted to leave the EU in 2016 and formally left on 31 December 2020. This ‘exit’ has prompted changes to the way in which the UK trades with the rest of the world. Once the UK formally exited the EU, all rights and obligations under EU various agreements ceased to apply. Previously signed trade agreements with the EU needed to be reconsidered in a post-Brexit world, resulting in several newly signed [agreements](#) with various countries and trade blocs.

Post-Brexit, the UK adopted the EU’s Generalised Scheme of Preferences (GSP), which gives 35 African countries reduced or zero tariffs for exports to the UK and has further signed post-Brexit trade deals with 16 African countries – known as economic partnership agreements (EPAs). Kenya is among the 16 African countries that signed EPA with the UK because Kenya was one of the UK’s top-five trading partners in 2019. This allows Kenya to continue to export tea, coffee and spices, as well as vegetables and flowers to the UK, without paying [duties](#).

After approval of this EPA by the respective parliaments (UK House of Lords and Kenya’s National Assembly) on 22 March 2021, both countries exchanged their instruments of ratification, marking the entry into force of the EPA and legally binding for Kenya and the UK; however, the agreement has been harshly criticized for risking the integration of the East African Community (EAC), a trading bloc which is also working to negotiate a post-Brexit deal with the UK. Importers of fresh fruit and vegetables into the UK through EU will

need to follow existing UK marketing [standards](#) and processes for Importing fruit and vegetables directly from non-EU countries to the UK.

Post Brexit highlights:

1. From 1 January 2021, alternative UK-only trade arrangements were in force, with the nature of these UK-only trade arrangements determining whether current duty-free/quota-free access to the UK market continues to be enjoyed.
2. Continued duty-free/quota-free access for least developed countries to the UK market is assured under UK's unilateral 'rolling over' of the EU existing EBA initiative.
3. Most African governments that have concluded Economic Partnership Agreements – EPAs with the EU have agreed to roll over the existing EU EPA as UK-only EPAs in order to secure duty-free/quota-free access.

7.7. Innovative finance instruments to support Kenya exporters of fruits and vegetables

[Kenya Climate Ventures Limited \(KCV\)](#), founded in 2016, is an investment management company that seeks to accelerate the development of climate smart solutions by providing tailored and targeted financial and managerial assistance support to innovative early and growth stage businesses. KCV invests in businesses/ business models in agribusiness, water, commercial forestry, renewable energy and waste management. KCV's focus is working with SMEs/ private sector companies whose growing commercial success will have a positive impact on target markets and communities in Kenya. KCV unlock the potential of private sector companies to deliver climate smart technologies/ solutions that transform underserved markets and create positive impacts to the lives of communities in Kenya. Since its inception KCV Limited has invested USD 4.01 million to 20 climate smart enterprises in Kenya.

[Equity Group Holdings](#) is a Pan-African financial services group based in Nairobi, Kenya with Bank subsidiary operations in Kenya, Rwanda, Uganda, Tanzania, South Sudan, and the Democratic Republic of the Congo which now enjoys the position of the largest financial services and banking group in Eastern and Central Africa by market capitalization. The Group's operations include a fintech company, Finserve Africa; as well as a networked health care provider, Equity Afia. The Group's corporate foundation, Equity Group Foundation (EGF), has delivered humanitarian programs in Education and Leadership, Food and Agriculture, Social Protections and Safety Nets, Health, Clean Energy and the Environment, and Enterprise Development and Financial Inclusion to millions in the region. Equity Group's primary conduit for financing innovation is debt financing to SMEs across all sectors of the economy. Deposits mobilized from households and firms are the key source of intermediate funds, with surpluses that amounted to US\$4.82 billion in December 2019. Financing for SMEs including exporters of fruits and vegetables who are integrated into the global value chains (GVCs) which drive export competitiveness in Kenya stood at 27% of the entire loan book being denominated in foreign currencies. This financing was mainly funded by foreign currency borrowings from development finance institutions (DFIs), such as the International Finance Corporation (IFC), European Investment Bank (EIB), KfW Group, and African Development Bank (AfDB), and stood at US\$567 million in December 2019, while remittances from Africans in the diaspora grossed US\$1.42 billion.

[Equity Bank working with horticulture smallholder farmers in Naivasha](#)

Equity Bank Naivasha Branch operates schemes such as Financial Access to SMEs & Rural Population (FAS-RAT) and Young African Works Kenya (YAWK). The bank offers a Kilimo loan at 13% per annum on reducing balance (with flexible repayment terms) and agri-insurance at about 4% of the value of the expected output. The basic requirements to access this credit, which is pegged at five times the saving amount, include having had an active account with the bank for at least six weeks, having experience in producing the target crop for at least one season, and having basic training in agriculture. The bank has partnered with input suppliers and exporters like FrigoKen and Kenya Fresh to train and offer credit for horticulture to farmers in the upper zone of the basin.

Other innovative value chain financing initiatives are emerging from non-bank financial institutions (NBFIs) active in the horticulture sector in Kenya including but not limited to [Bio Invest](#), [AgDevCo](#), Acumen Resilient Agricultural Fund ([ARAF](#)), [Blue Earth](#) Capital, [Okavango](#) Capital, [Elea](#), [AgriFI](#) and [Goodwell](#).

7.8. Chapter 7 Takeaways

The key takeaway in this chapter is the growing potential for further expansion of the Kenya horticultural exports resulting from the emerging initiatives. These include:

- **Herbs and spices gaining interest:** The MARKUP project funded by EU and implemented by UNIDO empowers herbs and spices farmers and marketing associations to achieve high net investment index and accelerate industry growth and strengthen cohesion among smallholder farmers
- **Cultivation of MAPS:** The trend towards health and environmental protection has led to an increase in the consumption of Medicinal and Aromatic Plant (MAP) products. The market for MAP products is influenced by consumer behaviour, but there is concern that their harvesting from the forest might increase deforestation.
- **Superfoods' export market growth:** These are nutrient-rich food products that help maintain good health and wellbeing. They contain a rich amount of minerals, vitamins, antioxidants, fibres, fatty acids, etc. whose global market is expected to grow at a CAGR of around 6% during 2021 – 2026.
- **Agribusiness technology development:** Various technologies have been developed in the horticulture sector to reduce postharvest loss, especially for long distance exports (also see chapter 4 Sea Freight).
- **Growing value addition prior to export:** An effective strategy to mitigate horticulture post-harvest losses due to destination distance and limited or expensive transport technology. For example, exports of processed fruit and vegetable products, such as export of pineapple juice (67%), mixed juices (26.4%) and orange juice (3.92%) in 2020.
- **Post Brexit UK-Kenya Economic Partnership Agreements (EPAs):** On 22 March 2021, both countries exchanged their instruments of ratification, marking the entry into force of the EPA and legally binding for Kenya and the UK; however, the agreement has been harshly criticized for risking the integration of the East African Community (EAC), a trading bloc which is also working to negotiate a post-Brexit deal with the UK.
- **Innovative financing** from commercial banks and NBFIs helps initiatives that promote horticulture production and marketing in Kenya.

A photograph showing a man in a light blue shirt on the left, smiling and placing his hand on the shoulder of a young boy in an orange shirt on the right. They are in a lush green garden setting. The man appears to be mentoring or supporting the boy. The background is filled with various green plants and foliage.

8

ON-GOING SUPPORT
INITIATIVES AIMING AT PROMOTING
HORTICULTURE INDUSTRY IN KENYA

8. On-going support initiatives aiming at promoting horticulture industry in Kenya

There are a number of on-going programmes and initiatives that support horticulture sector in Kenya as summarised in Table 16 below.

Table 16: On-going Support Programmes and Initiatives for the promotion of horticulture Industry in Kenya - 2021

S. No	Horticultural Project & Implementing partner(s)	Time	Approach and geographical coverage	Donors
1.	NExT (New Export Trade) programme, enhancing horticultural trade Implemented by: COLEACP	2021 – 2024	<p>Approach:</p> <ul style="list-style-type: none"> Increasing the contribution of the horticultural sector to Kenyan household incomes through the generation of employment opportunities and foreign currency. Improving food security, food safety and nutrition by increasing the resilience, inclusiveness and sustainability of Kenyan horticultural value chains. Seeking compliance with sanitary and phytosanitary standard (SPS) and food safety standards for countries exporting fresh produce to the European Union. <p>Beneficiaries:</p> <p><i>Business Member Organisations (BMOs):</i> The Fresh Produce Exporters Association of Kenya, (FPEAK), the Kenya Flower Council (KFC), the Fresh Produce Consortium of Kenya (FPC) and the Avocado Society of Kenya</p> <ul style="list-style-type: none"> Reinforcing capacities of BMOs in the sector, focusing on good agricultural practices; compliance with standards and market requirements; access to markets; market intelligence; access to finance, and business skills <p><i>Public Sector Actors:</i> Kenya Plant Health Inspectorate Service (KEPHIS), Pest Control Products Board (PCPB), Horticultural Crop Directorate (HCD) and the Kenya Agriculture and Livestock Research Organisation (KALRO)</p> <ul style="list-style-type: none"> Improve the capacity of the public sector, especially the competent authorities, to strengthen the competitiveness of products of Kenyan origin <p>Area: countywide – business enabling environment</p>	<p>European Union (EU)</p> <p>€5 million</p>
2.	Smallholder Horticulture Empowerment Promotion Project for Local and Up scaling (SHEP PLUS)	2017 - 2022	<p>The project aims to improve farmers' livelihoods.</p> <p>Approach: Training of farmers on a range of activities with a clear focus on market-oriented farming. The farmers' awareness and behaviour transform as a result of this package offered and they start commercial farming, as opposed to subsistence farming, to meet the market demand. The capacity development package ensures that the farmers keep motivated and acquire agricultural and managerial skills that are necessary to gain access to, and succeed in the competitive market</p>	JICA

	Implemented by: Ministry of Agriculture, Livestock, Fisheries and Cooperatives, (MALFC)		Area: 8 counties in Rift Valley and Central Kenya Regions	
3	Fit for Market: Strengthening sanitary and phytosanitary systems of the ACP horticultural sector (FFM SPS) Implemented by: COLEACP	2021 – 2024	Approach: COLEACP’s established cascade (training-of-trainers) approach to reaching producers is accompanied by coaching to put training into practice, as well as customized support to meet specific needs of individual companies and groups. Training modules, covering food safety, sustainability (social and environmental), and plant health, take market trends into account and evolve to help companies keep up-to-date and adapt to changing regulations, private standards and buyer demands. COLEACP’s existing crop protocols and guides cover 90% of EU–ACP horticultural export flows. They are maintained and updated to keep the ACP industry informed of changes to SPS regulations and international standards. Beneficiaries: FFM SPS works with smallholders, farmer groups and horticultural MSMEs to strengthen their ability to access local and international markets by complying with SPS measures and other market requirements. Activities cover all relevant stages from production through to processing, marketing and export. Indirect beneficiaries: include local and EU purchasing and retail companies (stimulating investments); local and EU consumers, and rural communities. Area: the entire ACP group of states	European Union (EU) ACP 11th EDF €15 million
4	Ecological Organic Agriculture Initiative (EOAI)	2014 – 2026 (SSNC) 2014 – 2024 (SDC)	EOAI is an African Union-led continental programme, started in 2011 and implemented under the guidance and oversight of the AU chaired Continental Steering Committee (CSC). EOA aims at instituting an African organic farming platform based on available best practices; and developing sustainable organic farming systems and improved seed quality. The mission of the initiative is to promote ecologically sound strategies and practices among diverse stakeholders involved in the production, processing, marketing, and policy-making to safeguard the environment, improve livelihoods, alleviate poverty and guarantee food security among farmers in Africa. The goal is to contribute to mainstreaming of Ecological Organic Agriculture (EOA) into national agricultural production systems by 2025 in order to improve agricultural productivity, food security, access to markets and sustainable development in Africa. Beneficiaries: all organic agriculture stakeholders Areas: Busia, Bungoma and Kirinyaga counties	SIDA through the Swedish Society of Nature Conservation, (SSNC) and SDC

5	Organic Market Development in Kenya: Developing a sustainable supply system for fruits and vegetables from smallholder farmers	2021 – 2026	<p>The project aims at addressing key challenges in marketing organic produce from smallholder farmers which include but not limited to: weak linkages between producers and traders, poor quality of produce reaching the market, low capacity for farmers/traders to organize logistics (handling, sorting, grading, packaging and transportation) for products to reach the market, poor organization and bulking of products from smallholder farmers whose scale of production is low and lack of cold chain which jeopardizes quality management along the chain, weak guarantee system, weak flow of market information and limited awareness of organic products.</p> <p>Approach: The project builds upon lessons learnt in previous marketing projects which include the need for strengthening supply logistics, cultivating strong relationships between supermarket and farmers, quality management along the value chain and developing a strong organic brand for higher visibility of organic products in the market.</p> <p>The project is designed not only to address issues on one side of the chain but takes a holistic approach to address challenges based on past experiences at different nodes of the chain. These experiences are from the chain actors and not one organization. The implementation of the project will also be participatory involving and working together with all the stakeholders.</p> <p>Beneficiaries: smallholder organic farmers</p> <p>Areas: Kiambu, Kirinyaga, Kajiado, Murang'a and Machakos counties</p>	SIDA through the Swedish Society of Nature Conservation, (SSNC)
6	The NTF III Kenya avocado project		<p>The NTF III Kenya avocado project seeks to improve the export performance of the avocado sector in Kenya, by increasing exporter competitiveness, thereby enabling low income farmers and SMEs to benefit from increased exports. The project will contribute towards poverty reduction by generating employment income. Overview of the Avocado sector in Kenya. The NTF III project works directly with 12 selected avocado exporters and farmers groups to increase the competitiveness of the sector. The project is focusing on farmers groups comprised of smallholder farmers that need the most support to increase their livelihoods.</p> <p>Approach: The project aims at enhancing export competitiveness of Kenya's avocado sector by 1) updating Avocado Commodity Business Plan, 2) increasing export capacity of exporting SMEs and farmer groups, 3) improving support services provided by Trade and Investment Support Institutions (TSI), and 4) improving sector positioning and business/technical linkages in markets.</p> <p>Beneficiaries: 12 selected avocado exporters and farmers groups and TSI namely Horticultural Crops Directorate (HCD), Fresh Produce Exporters Association of Kenya (FPEAK), and the Export Promotion Council (EPC).</p> <p>Indirect beneficiaries: Other companies and institutions, as well as Kenya as a country</p>	ITC Netherlands Trust Fund Programme Phase III (NTF III)
7	Market Access Upgrade Programme (MARK-UP)	2019 – 2022	<p>The Market Access Upgrade Programme (MARK-UP) is a regional development initiative that provides support to small and medium-sized enterprises (SMEs) in the East African Community (EAC). It aims to increase exports of agribusiness and horticultural products and promote regional integration and</p>	Funded by the European

	UNIDO is the implementation partner for Kenya		<p>access to the European market. In Kenya, the regional intervention is managed by the International Trade Centre (ITC) and UNIDO is the implementation partner. The MARKUP Programme aims to enhance market access and competitiveness of Kenya's plant-based products through the adoption of relevant international standards and improved food-safety regulation and enforcement in Kenya. Under the project, small scale farmers and SMEs from 12 counties will receive capacity building along selected value chains (green beans, snow peas, chilies, mango, passion fruits, macadamia, ground nuts, herbs and spices). In addition, services provided by national institutions such as the Kenya Plant Health Inspectorate Service (KEPHIS) and the Horticultural Crops Directorate (HCD) and the Kenya Bureau of Standards (KEBS) will be strengthened. This will ensure that all the agricultural exports meet the market requirements for both the export and domestic markets and are safe for public consumption. As part of the programme, UNIDO will also work with the private sector such as Fresh Produce Exporters Association of Kenya (FPEAK) and the Fresh Produce Consortium of Kenya (FPC Kenya).</p> <p>Approach:</p> <ul style="list-style-type: none"> • Strengthening Regulatory Frameworks and Capacities <ul style="list-style-type: none"> • Contributing to technical regulations, strategies and policies, and enhancing quality infrastructure services in priority value chains. • Supporting Smallholder Farmers and SMEs <ul style="list-style-type: none"> • Improving skills for compliance to market requirements in order to improve competitiveness and market access. • Outreach on Key Quality and Safety Issues <ul style="list-style-type: none"> • Increasing awareness on food safety, quality, and Sanitary and Phytosanitary (SPS) matters. <p>Beneficiaries: farmers in 12 counties and Kenya Plant Health Inspectorate Services (KEPHIS), the Horticultural Crops Directorate (HCD), the Kenyan Bureau of Standards (KEBS) and the Ministry of Agriculture, Livestock and fisheries; as well as two sector organisations namely Fresh Produce Exporters Association of Kenya (FPEAK) and the Fresh Produce Consortium of Kenya (FPC Kenya).</p> <p>Areas: 12 counties</p>	<p>Union (EU) as part of the 11th European Development Fund.</p> <p>€35 million</p>
8	<p>Youth employment in the agri-food sector in Western Kenya</p> <p>Lead executing agency: Ministry of Agriculture,</p>	2020 – 2022	<p>Objective: Rural youth are benefiting from improved training and employment opportunities in selected value chains of the agri-food sector.</p> <p>Approach: The project aims to improve the qualification and employment situation of small-scale producers and micro, small and medium enterprises (MSMEs) in the agri-food sector, especially for young men and women (18-35 years). Together with the global project "Rural Employment with a Focus on Youth (RYE)", funded by the special initiative <i>ONE WORLD - No Hunger</i> (SEWOH) of the German Federal Ministry for Economic Cooperation and Development (BMZ), it forms the "Agri-Jobs</p>	BMZ and GiZ

	Livestock, Fisheries and Cooperatives, (MALFC)		4 Youth" initiative. Their joint integrated approach looks to enhance youth employment prospects by better equipping them for the labour market and at the same time increasing the demand for labour and improving labour market functioning and matching mechanisms. Enhancing the capacities of governmental and non-governmental actors and the private sector means they can better respond to the needs of unemployed or underemployed rural youth. Supporting sustainable youth organisations and networks provides rural youth with important access to information, inputs, land or financing. Special attention is given to the needs of women and young adults (18-23). The project also promotes good governance in country (?) institutions and youth organisations to improve service delivery. It also addresses climate-related problems by promoting climate-smart agricultural technologies, innovations and green jobs for sustainable livelihoods, thus contributing to the objectives of the National Climate Change Action Plan (NCCAP).	
9	Enhancing market access for fresh produce through certification Implemented by TMEA Kenya	2020 – 2022	<p>Approach:</p> <ul style="list-style-type: none"> 750 farming groups will be trained and assisted to acquire the Global Gap Certification, in addition to training them on export requirements. The implementing partners will develop market intelligence reports and position papers that will guide various stakeholders to address existing challenges sustainably. <p>The project will support the Kenyan Horticulture industry to thrive and farmers to access markets. This will have an impact on jobs and the fight against poverty because the industry provides employment for 6 million people directly and indirectly. The industry also provides a huge market for pesticides, fertilizers and mechanization further elevating its influence in job creation.</p> <p>Beneficiaries: Farmer groups and pack houses in Kenya, FPEAK, FPC – K, and KFC.</p>	<p>Foreign Commonwealth Development Office – (FCDO)</p> <p>US\$ 485,000</p>
10	Standards and SPS Measures Lead executing agency: TMEA Implemented by multiple partners	2019 – 2023	<p>The aim is to bring the (National Bureaux of Standards) NSBs to a capacity level that can be trusted by all other NSBs in the region, removing the need for retesting, recertification and relabelling of regionally traded goods. SPS Agencies will be supported to carry out effective export inspections so that the certificates issued are deemed to be sufficient. Finally, national businesses, exporters and producers will be trained to acquire product certification so as to benefit from the faster standards-related border clearance when they trade industrial goods across EAC borders, and meet SPS requirements through certification so as to access priority export markets.</p> <p>Approach: Interventions for effective programme implementation will involve: 1) Technical Assistance delivered to national SPS agencies and standards bodies, culminating in improved institutional capacity. 2) Training will be delivered by private certification bodies and national bureaux of standards and to support private sector players meet SPS and standards requirements through product and system certification; 3) Studies and reviews to strengthen the case for TMEA’s interventions; 4) Peer reviews to facilitate building trust in their respective compliance assessment processes and; 5)</p>	<p>Funded by multiple donors</p> <p>US\$ 13.87M</p>

			workshop to enable dialogue and consensus building for any contentious measures with regard to regional trade. Beneficiaries: Burundi, Kenya, Rwanda, Uganda, South Sudan, Tanzania and Uganda (Regional)	
11	Smallholder Empowerment and Agribusiness Promotion (SHEP Biz) Implemented by: Ministry of Agriculture, Livestock, Fisheries and Cooperatives, (MALFC)	2020 – 2025	The SHEP Biz is the 4 th phase of the project implementing and promoting the Smallholder Horticultural Empowerment & Promotion (SHEP) Approach which was born in Kenya to realize "Market-Oriented Agriculture" and convert farmers' mindset from "grow and sell" to "grow to sell". The Project consists of the 2 components: the one called the SHEP component aiming for developing capacity of the actors who implement and expand the SHEP Approach such as County governments, educational institutions, private companies, etc., the other called the Agribusiness component aiming for identifying the bottleneck of the value chain and small and medium agripreneur (entrepreneur?) and validating the measures to overcome the bottleneck. In collaboration with Kenyan counterparts in the Ministry of Agriculture, Fisheries, Livestock and Cooperatives (MALFC), 3 JICA experts who stay in Kenya are working for the SHEP component and Japanese consultants' team is working for the Agribusiness component to enhance capacity of rural agribusiness support.	
12	She Trades Commonwealth Programme Implemented by the International Trade Centre (ITC)	OPEN	The SheTrades initiative aims to connect three million women to market by 2021 and rallies stakeholders around the world to work together on seven actions to address trade barriers and create greater opportunities for women entrepreneurs. It is supported by a web and mobile digital platform. Beneficiaries: over 3000 women-owned businesses from Bangladesh, Ghana, Kenya and Nigeria and expand your pool of suppliers. Some of Kenyan women beneficiaries include Grace Ngungi, the owner-manager/CEO of Karakuta Farm located in northern Kenya in Juja, specialises in avocado production. With support from SheTrades Commonwealth programme, Karakuta has been able to establish an efficient and very strict traceability system, but it is often disrupted by the vagaries of the weather. About 90% of Karakuta's avocados go to the UK, but the German market is upcoming potential market.	UK Aid and multiple donors
13	The Green Employment in Agriculture Programme (GEAP) Implemented by the Micro Enterprises Support Programme Trust (MESPT)	2021 – 2025	The Green Employment in Agriculture Programme is a 5 years' programme (2021 to 2025) funded by DANIDA. The programme seeks to contribute directly to Kenya's vision 2030 and to one of the Denmark-Kenya Strategic Framework on accelerated decent employment creation in MSMEs and improved competitiveness of targeted value chains in agriculture which will contribute to transforming the economy towards a greener and more inclusive growth. Beneficiaries: GEAP programme targets 40,000 smallholder farmers and will be implemented in 12 counties namely, Kilifi, Kwale, Nakuru, Nyandarua, Siaya, Kisii, Kakamega, Bungoma, Trans Nzoia, Uasin Gishu, Makueni and Machakos.	

			<p>Approach: The programme will facilitate increased commercialization, decent employment, and green transformation through targeted interventions in seven selected agriculture value chains that include, Dairy, Export Vegetables, Mango, Avocado, Indigenous Poultry, Coconut, and Aquaculture. Key workstreams include building the capacity of value chain stakeholders, increase productivity, facilitate market linkages and access to finance. MESPT will promote uptake of green technologies and services that will contribute to a greener economy as well as advocating for a regulatory environment in Kenya, promoting green transition in agriculture.</p> <p>To ensure a gender balanced approach women and youth prioritization will be mainstreamed into all relevant activities.</p>	
14	<p>The AgriFI Food Safety Programme</p> <p>Implemented by the Micro Enterprises Support Programme Trust (MESPT)</p>	2018 – 2023	<p>The AgriFI Food Safety Programme is an EU funded Programme whose focus is on Food Safety (Sanitary & Phyto-sanitary Standards), Plant and Animal Health. The programme’s interventions aim at addressing the food safety concerns for both domestic and international market.</p> <p>Approach: AgriFI food safety programme is a delegated cooperation arrangement between EU and the Royal Danish Embassy, where MESPT is the implementing partner. MESPT was then given the programme implementation responsibility due to an already ongoing engagement with DANIDA under Green Growth and Employment Programme as well as Strategic Sector Cooperation initiative on food safety that have similar focus as AgriFI.</p> <p>Target Value Chains: Dairy, Aquaculture and Horticulture (Beans, Mango and Avocado)</p> <p>Areas of focus: Kilifi, Nyandarua, Nakuru, Kisii, Bungoma, Kakamenga, Migori, Kiambu, Kirinyaga, Makueni, Machakos, Meru and Embu Counties</p>	€7 million
15	<p>Knowledge Centre for Organic Agriculture (KCOA)</p> <p>Biovision Africa Trust (BvAT) is the lead coordinating agency of the project in Eastern Africa with co-hosting arrangements with Participatory Ecological Land Use Management</p>	2019 – 2021	<p>The Knowledge Centre for Organic Agriculture (KCOA) Project in Eastern Africa is in its first phase of implementation for a period of 2 years (2019- 2021). It is part of the initiative by the German Ministry of Economic Cooperation and Development (BMZ) through its executing agency GIZ to support a network of regional knowledge hubs for organic farming in Africa.</p> <p>The Continental Digital Knowledge Platform is part of the KCOA project coordinated by the GIZ. The overall objective of the project is to introduce knowledge hubs successfully as an innovative strategy for promoting organic agriculture with actors in the regions of West, East, and Southern Africa.</p> <p>For Eastern Africa, the overall goal of the project is to ensure the integration of Ecological Organic Agriculture into the various countries’ agricultural systems. The KCOA Project aligns with the Ecological Organic Agriculture Initiative (EOA-I), an African Union-led continental undertaking with the oversight of the African Union Commission (AUC) Department of Rural Economy and Agriculture. The Commission provides oversight through the Continental Steering Committee of the EOA-I that it chairs. The initial implementation of KCOA Project in Eastern Africa will take place in 4 countries, including Kenya, Uganda, Rwanda, and Tanzania, in the first phase of the two years (August 2019-July</p>	Funded by BMZ

	(PELUM) Uganda.		<p>2021). The expectation is to later bring on board Ethiopia and Burundi.</p> <p>The project focus on three main action fields, namely:</p> <ol style="list-style-type: none"> 1. Collecting/preparing knowledge in organic agriculture: Validated technical and methodological knowledge for the promotion of organic agriculture, including processing, is prepared for the context of the participating countries and stakeholder groups. 2. Dissemination of knowledge to many users: Validated knowledge, strategies and good practices in the field of organic agriculture, adapted to the contexts of the countries participating in the regional knowledge hubs, are disseminated to various target user groups. 3. Networking within agricultural value chains: Key actors in the organic agriculture value chains of the participating countries in the three regions network in an exemplary manner for replication 	
16	<p>Climate Resilient Agri-Business for Tomorrow (CRAFT)</p> <p>Implemented by SNV (lead) in partnership with Wageningen University and Research, CGIAR Research Program on Climate Change, Agriculture and Food Security, Agriterra and Rabo Partnerships</p>	2018 – 2023	<p>The project will implement the following activities:</p> <ol style="list-style-type: none"> 1. Climate risk analysis of targeted value chains and identification of business opportunities that address climate change in agriculture; 2. Business case development and co-investment through the climate innovation and investment facility with private sector, SMEs, and farmer cooperatives; 3. Levering investments by facilitating access to finance in collaboration with financial institutions; 4. Policy influencing and operationalisation of climate plans; 5. Feedback of practical applicability of climate smart practices, technologies, models and climate services; <p>This project conducts climate risk analyses of targeted value chains and identification of business opportunities that address climate change in agriculture. Also, it develops business cases and co-investment through the climate innovation and investment facility with the private sector, SMEs and farmer cooperatives. Moreover, it facilitates access to finance in collaboration with financial institutions and influences policy and operationalisation of climate plans. Lastly, it provides feedback on the practical applicability of climate-smart practices, technologies, models and climate services. Knowledge sharing and learning is a cross-cutting element of CRAFT. The primary target groups of the project include small and medium-sized entrepreneurial farmers, SME agribusinesses and service providers to these SMEs, as well as financial institutions and government agencies that play a key role in creating an enabling environment that can foster large-scale roll-out of climate-smart agriculture in East Africa.</p> <p>Areas of focus: Kenya, Tanzania and Uganda.</p>	Funded by Netherlands Ministry of Foreign Affairs

Source: Compiled by MMA October 2021



9

**SUMMARY OF MAJOR TRENDS,
OPPORTUNITIES, CHALLENGES
AND ADVICE**

9. Summary of Major Trends, Opportunities, Challenges and Advice

A recent [report](#) by COLEACP has established that from 2002 to 2018 the main product developments in the Sub-Saharan African countries European Union trade (SSA–EU) trade in fruit and vegetables are as follows:

9.1. Major trends: Export of fruits from SSA to EU (including the UK)

- Downward trend in SSA exports to the EU seen in the 2000s turned into an increase around 2010 due to a steady growth in banana exports, the leading export fruit in volume terms, and a strong development of other exports such as mangoes, avocado, coconut, melon and watermelon (the main fruits exported in 2018), which compensated for the fall in pineapple exports due to the explosion of exports of the MD2 variety from Central America to the EU28.
- The volumes of pineapple and orange still exported come mainly from Côte d’Ivoire/Ghana and Zimbabwe/Eswatini, respectively.
- Grapes exported from SSA to the EU come exclusively from Namibia.

In addition to the volume effects, other market developments in the recent evolution of SSA fruit exports to the EU are more niche, namely export development for:

- Fruits from organic farming, in particular mangoes, papayas and limes, as well as exotic small fruits;
- Dried fruits;
- Pineapples exported by plane, and specific varieties such as the Victoria (baby) pineapple from Mauritius, Sugar Loaf from Benin and Togo, or the Baronne of Guinea.
- There is steady decrease in volumes of processed pineapple exported to the EU, consistent with the fall in the marketing of fresh pineapple, although pineapple juice (in bulk) seems to be holding up or even growing.

9.2. Major trends: Export of vegetables from SSA to EU (including the UK)

For vegetables, the main notable trends in SSA exports to the EU (including UK) are as follows:

- The fresh pea and green bean markets are mature in both volume and value;
- Vegetables and ethnic roots are no longer niche markets, but volume and developing markets;
- New markets have taken off such as broccoli and cauliflower (Kenya), sweet corn (Senegal) and sweet potatoes.
- The EU market continues to be attractive to vegetable exporters from SSA, not only for historical exporters such as Kenya, but also for others that have emerged in recent years such as Senegal (in volume terms) and more recently smaller exporters such as Rwanda.
- There is increase in exports of prepared beans, which reach more than 40,000 tonnes in 2018 (Kenya 31,473.5 tonnes; Madagascar 7,384 tonnes).
- Fresh “ethnic” vegetables (okra, bitter melon, African spinach, etc.) and fresh roots and tubers (yam, cocoyam, orchid tubers, Jerusalem artichokes, etc.) are also increasingly exported to the EU. This is linked both to demand from the African diaspora, and also the growing interest in ethnic foods in Europe.
- Today, roots and tubers are no longer limited to ethnic shops and restaurants, with large supermarket chains including them in their product range. As with other fresh ethnic vegetables, and between 2008 and 2018 the export volumes of ethnic roots and tubers to the EU from sub-Saharan Africa have doubled.

9.3. Major trends: Export of fruits and vegetables from EU and UK to SSA

- Sub-Saharan African countries import mainly temperate fruits from the EU.
- Apples account for more than half of all fruit imported by SSA (21 600 tonnes in 2018).
- Despite some successful tests in local production, apple production is not managing to take off even though demand continues to increase. Oranges, grapes and pears are the other fruits imported by SSA from the EU.
- There is gradual and steady decline of the first processed product traditionally imported by SSA from the EU, namely processed tomato (tomato concentrate); and increased imports of frozen potatoes.

9.4. Prominent Opportunities in the Horticulture Industry in Kenya

Kenya is the 10th largest mango producer in the world, with an annual production volume of 920 thousand metric tonnes in 2017; domestic mango production has increased by 13% p.a. from 2000 – 2017. Increase in both domestic consumption and international demand has driven much of the fast growth in the Kenyan mango. In 2021, Kenya lifted a self-imposed ban that was in force since 2004 opening up opportunities for Dutch exporters and processors.

In 2021, this ban was resumed among others by warm-water treatment and guarantees of mangoes from regions like Makueni county that can supply mangoes free of fruit flies. The EU has already approved the samples submitted for testing and the Kenyan plant health inspectorate is finalising the certificate protocols for the inspections to ensure the absence of harmful organisms. The Government introduced Pest Free Area (PFA) which are geographical area where a specific pest does not occur or as been completely eradicated. The establishment and maintenance of a PFA implies that no other phytosanitary (or plant health) measures specific for the target pests are required for host commodities within the PFA. Mango fruits originating from a PFA site is therefore accepted in the EU and other premium markets.

Domestically, horticulture is Kenya's second-biggest foreign exchange earner after tea, accounting for 21.4% of the total value of its exports (KNBS, 2018). The sector has undergone a transformation over the last 50 years garnering around 150 billion annually and contributing significantly to the Kenyan economy. The industry provides employment opportunities to about 350,000 directly and supports over six million livelihoods.

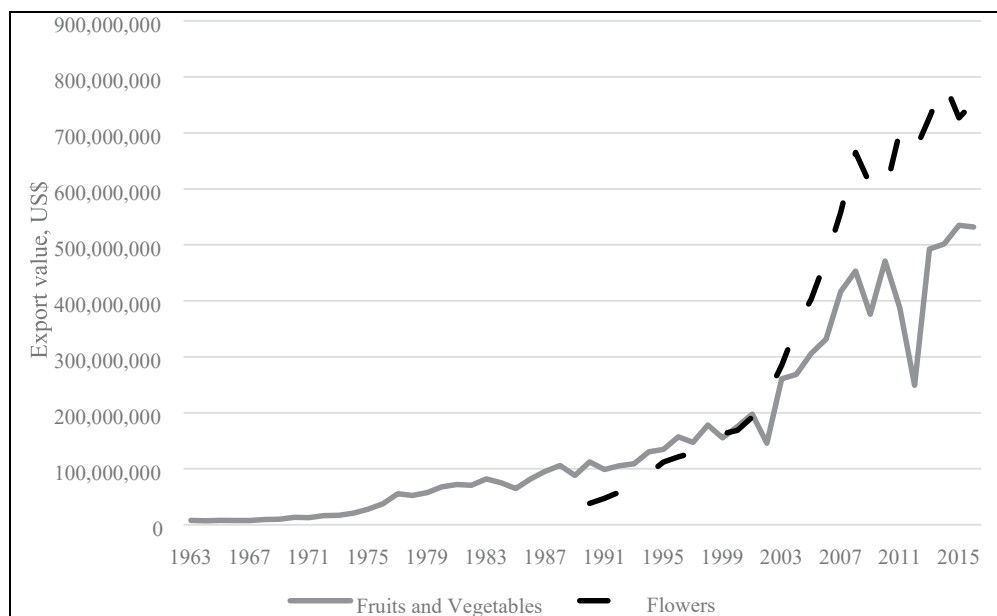


Figure 28: Value of Kenyan Horticultural Exports 1963 - 2016

Source: Teye, 2020³.

Ironically, only 4% of all the horticultural produce (Fruits and Vegetables) is being exported while 96% is being consumed locally. This implies an opportunity for local producers to increase exports, especially small-scale producers who produce over 90% of all the horticulture produce consumed locally. However, 95% of flowers grown locally are exported to various international markets. Recently, more opportunities have been created for Kenya horticultural farmers to access international markets like the UAE, USA and more.

³ Data for fruits/vegetables was from the FAO (<http://www.fao.org/faostat/en/#home>). Statistics for flowers was from UNCOMTRADE, using product code HS-06 (<https://comtrade.un.org>).

9.5. Lessons and takeaways from emerging trends

The trend in trade between the SSA and the EU leads to the conclusions that:

- The main reserve for developing trade in processed fruit and vegetables is in other markets, particularly in sub-Saharan Africa;
- As with fresh potatoes, the evolution of frozen potato imports is a sign of the existing opportunities in SSA for investment in this value chain;
- Similarly, the strong growth in imports of fruit juices reflects existing local and regional demand that could be served by local manufacturing units; an increase in fruit juices.
- Finally, in the case of processed tomatoes and fruit juices, a staple ingredient in many sub-Saharan African diets, local processing of tomatoes must also partly explain the drop-in imports from the EU.

Over the period between 2002 – 2018, the three (3) main highlights are as follows:

- The fruit and vegetable export landscape from SSA to the EU has remained broadly similar over the past 15 years;
- Senegal has emerged in the top five SSA supplier countries to the EU;
- Kenya and Senegal are emerging as efficient suppliers of non-banana fruit and vegetable exports.



Image: Jani Fresh

ANNEX 1: PRODUCTION (MT, KES) AND TARGET MARKETS FOR FRUITS, VEGETABLES AND HERBS – KENYA

Table 17: Trends of horticulture crops performance in Kenya 2016 – 2020

HORTICULTURE PRODUCTION DATA																		
Summary of Performance of Horticultural products per category for the years 2015-2020																		
	2015			2016			2017			2018			2019			2020		
	Area (Ha)	Volume (MT)	Value(KES) Million	Area (Ha)	Volume (MT)	Value(KES) Million	Area (Ha)	Volume (MT)	Value(KES) Million	Area (Ha)	Volume (MT)	Value(KES) Million	Area (Ha)	Volume (MT)	Value(KES) Million	Area (Ha)	Volume (MT)	Value(KES) Million
Fruits	160 968	3 292 200	56 107	170 607	3 189 178	55 687	186 928	3 226 451	59 307	185 491	3 371 491	63 807	206 854	3 907 177	79 301	223 866	4 357 627	84 099
Exotic Veg	267 417	3 815 853	66 630	117 541	1 887 880	37 908	134 466	2 250 298	47 072	141 421	2 412 681	52 220	158 198	3 212 944	65 846	136 066	3 256 964	62 066
Indigenous Veg	45 051	241 356	6 198	63 287	229 491	6 843	45 508	219 451	7 321	54 741	292 091	8 152	98 959	374 178	10 243	56 136	299 628	8 846
Aromatic/Herbs	8 702	90 256	3 257	12 382	124 642	5 791	12 942	160 448	7 395	14 731	180 841	7 164	14 896	175 953	7 662	11 330	184 767	7 037
Asian Veg	1 347	20 123	479	1 510	16 311	738	1 671	12 851	630	1 741	14 041	650	3 681	32 479	1305	3 258	33 926	1139
Medicinal crops	498	3,985	126	460	3,492	128	731	3,561	82	72	3,481	82	200	527	16			
Total	500,333	7,847,119	198,923	387,310	5,778,936	181,379	402,796	6,217,284	207,529	417,361	6,696,381	248,478	498,838	7,881,437	271,319			

Source: HCDA 2016 – 2019; *Provisional

Table 18: 5 Year Vegetables Export (Volumes in Kilograms)

		Volumes of Fresh Vegetables Exported				
No	Type of Fruits	2016	2017	2018	2019 ⁴	2020*
1	Mixed vegetables	29,533,334	30,545,851	31,010,079	35,710,305	35,730,604
2	Fine beans	20,100,179	20,208,846	22,098,505	18,416,900	14,495,698
5	Herbs	1,133,189	1,727,001	2,525,736	3,548,832	3,070,512
6	Snow Peas	2,666,583	2,332,652	2,154,385	2,296,582	1,910,130
4	Basil	214,552	445,408	987,924	1,716,753	1,980,395
9	Aubergines	1,357,063	1,176,129	1,176,377		
3	Bean Processed	20,463,614	26,964,246	29,299,814		
7	Snap peas	1,088,506	898,328	687,190		
8	Chilies	902,672	1,388,462	1,056,623		
10	Broccoli	467,548	672,025	574,602		
11	Garden Peas	258,549	296,343	22,938		
12	Chives	103,061	134,307	158,732		
13	Baby Corn	60,126	35,229	61,684		
14	Pepper	26,422	25,038	65,351		
15	Others	882,173	390,414	6,534,338		
	Total	79,257,571	87,240,279	98,414,278	61,689,372	57,187,339

Source: HCDA 2016 – 2019; *Provisional

⁴ Estimates from data provided by HCDA.

Table 19: 5 Year Vegetables Export (Value in Kenya Shillings)

Value of Vegetable Exported in Kenya Shillings						
No	Type of Fruits	2016	2017	2018	2019	2020*
1	Mixed vegetables	10,543,733,171	11,758,610,439	12,670,136,843	14,424,969,369	14,061,147,576
3	Bean Processed	4,277,472,739	2,883,807,927	3,272,807,303	5,651,615,992	4,726,721,606
5	Herbs	731,876,331	1,377,926,492	1,328,004,574	1,919,421,821	1,699,937,146
7	Snap peas	343,578,595	302,791,820	344,300,113	1,535,765,586	666,766,334
4	Basil	96,436,210	211,229,114	1,735,367,721	928,387,145	1,288,418,754
2	Fine beans ⁵	5,386,523,836	5,117,431,712	6,328,868,135		
6	Snow Peas	827,285,127	1,150,056,268	813,483,030		
8	Chilies	434,655,696	374,617,575	279,932,412		
9	Aubergines	394,019,334	287,962,343	269,743,906		
10	Broccoli	234,833,125	272,603,743	238,922,230		
11	Garden Peas	109,080,932	112,565,092	116,892,976		
12	Chives	51,048,691	61,954,063	87,902,729		
13	Baby Corn	23,558,438	15,601,039	38,666,645		
14	Pepper	11,247,542	10,062,258	26,590,126		
15	Others	135,650,383	127,420,544	133,572,611		
	Total	23,601,000,150	24,064,640,429	27,685,191,354	24,460,159,913	22,442,991,416

Source: HCDA 2016 – 2019; *Provisional

Table 20: 5 Year Fruits Export (Volume in Kilograms)

Volumes of Fruits Exported in Kilograms						
No	Fruits	2016	2017	2018	2019	2020*
1	Avocado	38,701,698	46,647,630	64,477,082	59,331,039	72,049,207
5	Pineapple ⁶	27,288	202,485	494,759	12,298,431	24,491,910
2	Mango ⁷	9,020,933	9,306,896	9,659,925	9,446,609	7,114,721
3	Passion ⁸	529,367	524,270	595,959	596,673	791,268
4	Raspberries	296,151	188,587	264,196	165,303	479,305
6	Custard	25,556	13,392	30,712		

⁵ Extra fine beans are in high demand but have high rejection chances, Importers in the European Union and the United Kingdom have specific size preference.

⁶ Not exported to the E.U and the U.K due to acidity levels.

⁷ Not exported to the E.U and the U.K. According to HCDA, Kenya has a self-imposed freeze due to fruit fly problems, the ban is set to be lifted starting January 2022

⁸ Kenya is a Net importer of passion fruits; smallholder farmers lack production capacity.

7	Strawberry	1,175	48	1,929		
8	Apple	2,674	6,776	14,671		
9	Pawpaw	7,282	1,592	8,558		
10	Passion J	410	390	3,305		
11	Lemon	2,455	2,212	574		
12	Banana	7,282	42,454	881		
13	Others	36,719	8,635	446		
	Total	48,658,990	56,945,367	75,552,997	81,838,055	104,926,411

Source: HCDA 2016 – 2019; *Provisional

Table 21: 5 Year Fruits Export (Value in Kenya Shillings)

Volumes of Fruits Exported in Kilograms						
	Fruits	2016	2017	2018	2019	2020*
1	Avocado	5,415,855,214	7,263,421,418	10,839,367,033	10,616,276,977	14,735,103,016
2	Mango	1,420,018,795	1,427,842,382	1,612,454,056	1,424,695,762	1,059,193,050
3	Passion	167,610,375	157,694,455	179,989,749	190,128,972	169,637,879
4	Raspberries ⁹	274,241,083	140,720,450	153,960,221	97,276,960	297,358,125
5	Pineapple	3,932,982	11,376,180	29,887,183	850,913,106	2,132,028,965
6	Custard	5,342,162	1,529,557	6,327,252		
7	Strawberry	218,049	19,600	3,371,615		
8	Apple ¹⁰	578,544	1,207,937	2,997,600		
9	Pawpaw	2,042,214	700,161	1,331,632		
10	Passion J	179,130	126,504	747,773		
11	Lemon	1,609,955	214,775	281,627		
12	Banana ¹¹	2,197,320	2,933,881	51,939		
13	Others	23,609,162	1,531,774	325,362		
	Total	7,317,434,985	9,009,319,074	12,831,093,042	13,179,291,777	18,393,321,035

Sources: validated report 2016-2017 (HCD, 2019), 2017-2018 (HCD, 2018) 2018-2019 (HCD, 2020) and Data received from HCD

⁹ Kenya is a net importer; smallholder farmers lack production capacity.

¹⁰ Kenya is a net importer of apples; it is a potential investment area.

¹¹ Not exported to the E.U but is a potential export product.

Table 22: Vegetables Exports by country (US\$ Thousand)

	2015	2016	2017	2018	2019
Pakistan	349,788.83	388,830.17	608,502.22	570,972.11	435,043.30
Netherlands	328,539.08	364,706.57	380,012.62	425,090.58	406,256.08
United Kingdom	355,372.63	346,701.86	343,905.50	370,922.67	360,999.10
Egypt, Arab Rep.	175,446.97	178,946.63	170,800.60	174,578.34	170,815.79
United Arab Emirates	175,560.49	152,284.81	150,785.11	166,982.50	112,119.10
United States	100,875.92	101,163.24	136,742.29	107,963.59	91,547.81
Germany	73,223.35	78,736.48	84,630.27	91,133.86	88,116.43
Uganda	43,679.01	69,707.69	83,435.04	93,389.11	110,684.52
Russian	74,877.79	63,804.44	73,317.03	80,581.90	58,971.85
Afghanistan	147,064.52	103,602.23	29,671.25	35,221.31	34,016.61
Yemen	39,853.62	44,759.83	59,997.73	47,378.39	47,402.75
Saudi Arabia	32,943.52	41,207.12	46,998.32	49,563.12	52,834.36
France	37,038.71	36,697.48	48,294.17	48,720.65	49,112.40
Sudan	49,624.47	42,554.25	48,896.66	43,708.33	35,076.87
Somalia	35,930.85	57,071.82	57,860.09	32,335.33	25,766.35
Belgium	27,818.75	24,013.75	29,306.32	28,773.28	46,131.14
Kazakhstan	28,989.54	29,802.29	32,793.83	28,996.28	31,513.56
India	41,800.98	65,618.76	13,266.14	20,854.92	9,675.69
Norway	21,731.56	24,119.17	29,891.18	30,484.43	31,842.58
Japan	24,009.07	22,210.11	30,681.45	25,564.49	29,154.92
Switzerland	24,202.97	32,326.27	25,247.03	29,292.99	19,928.62
Sweden	22,377.36	28,049.87	25,464.23	25,588.18	17,124.33
Australia	20,660.11	20,199.02	19,432.60	26,110.82	21,284.64
South Sudan	23,912.30	23,170.04	17,024.83	23,568.77	13,795.05
Poland	21,316.01	17,067.27	20,375.06	21,000.90	15,922.41
Tanzania	16,232.96	23,426.17	21,001.33	17,397.56	17,193.61
Korea, Rep.	13,525.59	16,998.78	17,201.52	24,921.57	19,178.95
Iran	10,944.44	16,540.20	13,539.43	19,743.22	20,777.25
Rwanda	16,900.13	10,898.52	12,057.95	13,541.73	22,258.13
Turkey	6,788.13	12,628.73	15,938.01	15,373.43	11,576.39
China	9,193.56	7,678.08	9,779.25	15,936.13	17,393.65
Nigeria	14,529.51	11,216.44	10,139.31	12,572.85	9,306.53

Ireland	13,113.41	11,599.27	11,680.07	9,864.91	9,118.74
Jordan	7,225.75	8,530.10	13,533.12	12,973.10	11,558.19
Spain	6,001.58	5,811.85	8,457.83	16,514.09	16,476.66
Canada	13,137.60	10,281.72	8,796.09	9,331.51	8,617.48

Source: HCDA 2016 – 2019; *Provisional

ANNEX 2: USEFUL CONTACTS

S/NO	NAME	DESIGNATION + ORGANISATION	E-MAIL	CONTACTS
1	MR ONESMUS MWANIKI	Head, Analytical Chemistry and Food Safety Laboratory, Kenya Plant Health Inspectorate Service (KEPHIS), KEPHIS Headquarters P.O. Box 49592-00100, Nairobi	omwaniki@kephis.org	+254 709 891 000
2	MR BERNARD OKONDA	Food Safety Auditor, Kenya Plant Health Inspectorate Service (KEPHIS), KEPHIS Headquarters P.O. Box 49592-00100, Nairobi	bokonda@kephis.org	+254 709 891 000
3	DR CHAGEMA KEDERA	Programme Coordinator NEXt (New Export Trade) Kenya Programme www.nextkenya.ke COLEACP	chagama.kedera@nextkenya.ke	+254 20 4938340
4	MS GRACE KYALLO	Manager, Technical & Advisory Services – AFFA HorticultureCrops Directorate (HCD)	gracekyallo@gmail.com	+254 722 619 530 +254 202 131 560
5	MS GLADYS MWAI	Technical Department, HorticultureCrops Directorate (HCD)	hcdtechnical@gmail.com hcdtechnical@yahoo.com	+254 202 012 422/231
6	MR MAINA KARUIRU	National project Coordinator, Market Access Upgrade Programme (MARKUP) KENYA United Nations Industrial Development Organization (UNIDO)	M.KARUIRU@unido.org	+254 711 152250
7	MS ANNAH MUSILI	Manager EMEA Food – Africa Operations. NSF International nsf.org	amusili@nsf.org	+254 722 387 826
8	MR OKISEGERE OJEPAT	CEO Fresh Produce Consortium of Kenya https://fpkenya.co.ke	ceo@fpkenya.co.ke	+254 722 408 210 +254 715 333 555
9	MR MICHAEL N KAMERO	Operations Manager – Kenya Fresh Produce Exporters Limited	kamero2011@gmail.com	+254 732 985 312
10	MR EUSTACE KIARIE	Chief Executive Officer (CEO) – Kenya Organic Agriculture Network (KOAN), CPA Centre, Thika Super Highway, P.O.	info@koan.co.ke	+254 728 772 805 +254 731 772 805

		Box 2893-00100, Nairobi, Kenya https://www.koan.co.ke		
11	MS REBECCA AMUKHOYE	Chief Executive Officer (CEO) Micro Enterprise Support Programme Trust (MESPT); MESPT Plaza, 01 Tausi Rd, Westlands, between Westlands Rd & Muthithi Rd. P.O Box 187-00606 Sarit Centre Nairobi Kenya https://mespt.org	info@mespt.org	+254 722 207 905 +254 735 333 154
12	MR JOSHUA OLUYALI	Head of Horticulture Unit Ministry of Agriculture Livestock Fisheries and Cooperatives Cathedral Road, P. O. Box 30028-00100 Nairobi Kenya www.kilimo.go.ke	Joshuaoluyali85@gmail.com	+254 722 551 795
13	MS MARYAM ADAM	Secretary to the National Horticulture Taskforce (NHT) Horticulture Unit , Ministry of Agriculture Livestock Fisheries and Cooperatives Cathedral Road, P. O. Box 30028-00100 Nairobi Kenya	maryamayanadam@gmail.com	+254 703 418 162
14	MS JOSEPHINE SIMIYU	Deputy Director, Regulations & Compliance, Agriculture and Food Authority (AFA)	jnatecho@afa.go.ke jnatecho@gmail.com	+254 203 532 897 +254 203 532 898
15	MS GRACE TEMBA	Assistant Manager, Rules of Origin Section, Kenya Revenue Authority (KRA)	grace.temba@kra.go.ke	+254 770 319 912
16	MS BRENDA OYIER	The Kenya National Chamber of Commerce and Industry (KNCCI); Heritan House, Ground Floor, Woodlands Road, Off Argwings Kodhek Road, Opposite Department Of Defence HQs, Hurlingham - Nairobi, Kenya	brenda.oyier@kenyachamber.or.ke	+254 111 050 600
17	MR BRIAN ABOOK	National Biosafety Authority (NBA) NACOSTI Building, Loresho, Off Waiyaki Way, P.O. Box 28251, Nairobi 00100	info@biosafetykenya.go.ke	+254 202 678 667

ANNEX 3: Some certification bodies active in in the fresh produce industry in Kenya

S/NO	NAME	PHYSICAL ADDRESS	WEBSITE	CONTACTS
1	NSF INTERNATIONAL	Stargrow Building, 21 Elektron Avenue, Technopark, Stellenbosch, 7600, South Africa	www.nsfAfrica.com	+254 722 387 826 amusili@nsf.org
2	BUREAU VERITAS	Nairobi Office, Delta Corner, Tower A, 5 th Floor, Along Waiyaki Way, Westlands P.O. Box 34378 – 00100, Nairobi	https://www.bureauveritas.ke/expertise-sustainability	Tel: +254 20 366 9000 Fax: +254 20 445 0565 contact.ken@bureauveritas.com

3	DNV GL	Solis Premium Serviced Office Suites, 6th Floor West End Towers, Waiyaki Way P.O. Box 1896-00606 Nairobi Kenya	https://africa.dnv.com/#	+254 724 418 978
4	CONTROL UNION	CUC & Inspections Kenya Limited, Githinji Investments House, 3 rd Floor, Room 303, Chambers Road off Murang'a Road, P.O. Box 1993-00600 Nairobi Kenya	https://certifications.controlunion.com/en/about-us/who-we-are	+254 722 570 823 kenya@controlunion.com
5	SGS Kenya Limited	Victoria Towers Kilimanjaro Ave Upper Hill Nairobi, 00200	https://www.sgs.co.ke	+254 709 633 000 +254 20 273 3690
6	AFRICERT Limited	Plaza 2000 1 st Floor, East Wing Mombasa Road P.O. Box 00200-74696 Nairobi Kenya	https://africertlimited.co.ke	+254 715 041 339 info@africertlimited.co.ke
7	ISACERT	Obrechtstraat 28 E 8031 AZ Zwolle, The Netherlands	https://www.isacert.com/en/home/	+31 88 472 2320
8	KEBS Certification Body	KEBS – CB Popo Road, Off Mombasa Road, P.O. Box 54974 – 00200 Nairobi Kenya	https://www.kebs.org	+ 254 (20) 694 8000 +254 722 202 137 +254 734 600 471/2 info@kebs.org
9	EnCert Limited Organic certification	P. O. Box 74510 - 00200, Nairobi	https://www.encert.co.ke/index.htm	+254 724 910 240 info@encert.co.ke

ANNEX 4: Update on the New EU Organic Regulation and Associated Implementing & Delegated Act

Background process

After several years of intense negotiations, on 28 June 2017 the European Parliament and the Council reached a preliminary agreement to overhaul the existing EU rules on organic production and labelling. The stated aims of the new regulation ([Regulation \(EU\) 2018/848](#)) are to encourage the sustainable development of organic production in the EU, guarantee fair competition for farmers and operators, prevent fraud and unfair practices, and improve consumer confidence in organic products.

An overhaul of the EU organic rules was considered justified for several reasons. Firstly, many of the existing provisions were over 20 years old and no longer fit for purpose given the major changes that have taken place in organic production and trade. Secondly, the “patchwork of rules and derogations in place (did) not give sufficient certainty and security to this highly important sector of European agriculture”. A lack of clarity in the rules was leading to a growing number of requests for legal interpretation of certain provisions, as well as inconsistencies in the application of the rules between Member States. Thirdly, there was also an increasing risk of formal complaints on the grounds of unfair competition. Finally, the current regulation was deemed not to be aligned with the Lisbon treaty.

The first draft of the new regulation was introduced by the European Commission (EC) in 2014, but was not finally published in the Official Journal until 2018. This long process reflects the often-contentious negotiations and the wide range of opinions and positions within European institutions, Member States, and the organic sector. The EU has aimed to achieve a balance between meeting the fundamental principles of organic production, and the need to maintain flexibility for operators. However, there were (and remain) several issues on which it has been difficult to find a compromise acceptable to all parties.

The original date of application was 1st January 2021. For a number of reasons, not least the COVID pandemic, the introduction of the secondary legislation has been delayed and the date of application is now postponed to 1st January 2022. At the time of writing, only 5 delegated acts have been published; a further 10 to 15 are expected to be in place before the end of 2021.

Farmer Groups and Sampling

Of most concern are the new rules on farmer groups and sampling procedures. The provisions for group certification have been very important in terms of enabling small-scale farmers in developing countries to become organic certified and access the EU market, but the new rules are likely to have a significant impact.

At the present time, only operators in developing countries can be group certified, and there are two types of farmer group organisation in operation:

- Organised farmer groups. These include cooperatives, farmer associations, and federations of cooperatives. The cooperative or association acts as the legal entity for the purposes of organic certification.
- Processor/trader managed groups. An exporter, processor or trader sets up and manages a group of affiliated farms, and is the legal entity.

In response to concerns in the EU about the quality of group certification, particularly in the case of very large producer groups, major changes have been made in the new EU regulation. The most significant rules are as follows (Article 36 of Regulation (EU) 2018/848):

1. Certification of farmer groups will no longer be restricted to developing countries, but can take place in any third country or within the EU
2. Group members must be farmers (though they may also be engaged in processing, preparing or marketing food or feed). Cooperatives, federations of cooperatives, and processors/exporters with affiliated farms will no longer be accepted as certifiable legal group entities
3. Maximum size of a group will be 2,000 members (*Article 4 of Regulation (EU) 2021/279*)
4. There will be strict limits to the scale of operation of group members. Each holding must be 5 ha or less (0.5 ha for greenhouses). Alternatively, individual certification cost of each member must be more than 2% of their turnover or standard output from organic production **AND** they must have a turnover of organic production of no more than €25,000 **OR** their standard output from organic production must be no more than €15,000 per year
5. The farmer group must have its own legal entity
6. Each group must operate a joint marketing system
7. All farmers within the group must be operating in the same geographical location
8. Each group must implement its own Internal Control System, with a nominated person or body who is responsible for ensuring that all members of the group are in compliance

Changes have also been introduced concerning the level of controls and sampling that will be done under third party inspections of farmer groups (*Article 7 (e) of Regulation (EU) 2021/279*). These require that for every group, a minimum of 5% of its members (and not less than 10 members) must be subject to a third-party inspection every year. Where a group has 10 members or fewer, all members must be inspected every year. Produce sampling and laboratory analysis must be applied to 2% of the total number of members.

There are some new requirements for the organic certificate. For example, a list of members must be included in the certificate.

Impact in ACP Countries

These changes to group structure and operations will affect many operators in third countries, and will create additional technical, administrative, and cost burdens that are particularly challenging for small- scale growers.

Groups of over 400 will face an increase in certification costs due to the new rules on external controls (inspections). The minimum 5% inspection rate will mean, for a group of 2000 members, an increase from 45 to 100 external inspections each year. A produce sampling rate of 2% for a group of 2000 will mean 40 samples, with associated costs.

Many small-scale organic fruit and vegetable growers in ACP countries currently operate in groups run by processors/traders (and benefit from their administrative and technical support). They will in future have to create and run their own independent groups. Groups with more than 2000 members will also have to split into two or more groups. Whenever new groups are established, they must create and register a separate legal entity according to the regulations in their country of operations. They must also put in place and implement their own Internal Control System and nominate a person or body who will be responsible for ensuring compliance.

Farmers that do not meet the criteria because they exceed the farm size or financial limits will have to leave a group and be individually certified. The 5ha holding limit may be problematic in some circumstances, for example in plantation crops, and in locations where farm size is generally larger than 5 ha, but with only small areas under cultivation.

Transitional Period

The EC recognises that there will be significant “administrative, legal and structural changes ... with regard to the maximum size of the group”, so there will be a transition period for operators to adapt to the new requirements. For those that are already certified as farmer groups on 1st January 2022, they will have 3 years to comply with the changes to group size (*Article 10 of Regulation (EU) 2021/279*). This means that they must have their own legal entity and internal control system by 1st January 2025.

In contrast, there is no specific reference to transitional provisions for the changes to group organisation outlined in Article 36 (Point 1) of Regulation (EU) 2018/848. Many organic growers in ACP countries operate under processor/trader groups; they will also have to reorganise and form separate groups, but planning for this major change is extremely difficult when the timescale is unknown.

One possibility is that the transition will be linked to control bodies (**IMPORTANT NOTE: this has not been officially confirmed by the EU authorities**). If this is this case, the new farmer groups must be legally formed and operational by the time their control body (responsible for their certification) is officially recognised by the EU. As long as the control body continues to operate under the equivalence system (as today), then the group can continue to operate as a processor/trader group. The transitional period for control bodies to make this change is until December 2024; this means that groups will have from between 0-3 years to reorganise, depending on the control body that certifies them.

An important message to all operators and farmer groups is that they will need to take full advantage of any transition period. In some countries, creating a new legal entity can be a time consuming and expensive process. Many groups will also need technical assistance and training to establish and implement an Internal Control System and this, again, will take time. All operators and groups affected should start to make the changes, and seek any necessary support, as soon as possible. It is also urgent for producers who are currently operating within cooperatives or trader-managed groups to find out how long they have to make these changes. Groups/group managers must talk to their control bodies and find out when they plan to change from the current equivalence system, to become officially recognised by the EU under the new system.

Organic reforms: production rules

Chapter III of Regulation (EU) 2018/848 lays down the general production rules, and Annex II gives the detailed rules (Part 1: Plant Production). In order to ensure harmonised implementation, additional rules are being introduced in secondary legislation. Annex 1 (Point 2) of this document lists the delegated and implementing acts with additional provisions that have so far been proposed or published. Production rules cover conversion; plant production; plant reproductive material; collection, packaging, transport and storage; and authorisation of products and substances.

Among items of significance are the changes to holding status. The risk of non-compliance with organic production rules is considered higher in agricultural holdings that also have non-organic units. To address this, under the new rules, entire holdings must be managed as organic, except under certain conditions (e.g. where there is clear and effective separation between organic, in-conversion and non- organic production units and the goods produced by those units). However, the wording of the Regulation for this requirement is unclear¹⁰ and appears to refer only to EU producers, but it is assumed that the requirement applies also to operators in third countries who are supplying the EU market (**IMPORTANT NOTE: this has not been confirmed by the EU Authorities**). The other area of major importance concerns the use of plant protection products.

Plant Protection Products

Article 24 of Regulation 2018/848 sets out the basic rules for the “Authorisation of products and substances for use in organic production”. The detailed rules have still to be finalised, but are presented in a draft implementing regulation that is currently awaiting approval. This draft regulation is accompanied by Annexes that list the authorised products and substances:

- Annex I : Active Substances Contained in Plant Protection Products Authorised For Use In Organic Production
- Annex II: Authorised Fertilisers, Soil Conditioners and Nutrients
- Annex IV: Authorised Products For Cleaning and Disinfection. Part B: Products for the cleaning and disinfection of buildings and installations used for plant production, including for storage on an agricultural holding. Part C: Products for cleaning and disinfection in processing and storage facilities. It is important to note that only substances approved in the “horizontal” EU pesticide legislation (for conventional agriculture) can be approved under the Organic Regulation, even when they are used in third countries (*Article 1 of the draft Implementing Regulation*). They can also only be used according to the conditions of use approved in the EU. They must:
 - (a) be authorised under Regulation (EC) 1107/2009 (*sale and use of pesticides in the EU*);
 - (b) be used only in accordance with the conditions for use specified in EU member state authorisations
 - (c) be used according to the conditions of use set out in the Annex of Regulation (EU) 540/2011 (*list of approved active substances in the EU*)

Restricting the range and use of plant protection products to the approved uses in the EU is problematic, particularly for tropical and sub-tropical countries where the pests, pest pressure, socio- economic and agroecological conditions are very different to those in Europe. It risks leaving producers without adequate solutions.

In the case of organic pineapple, for example, growers have no available option for floral induction. Calcium carbide is not listed as a growth regulator in the horizontal EU regulations, and ethylene will be restricted to use: “only on bananas and potatoes; it may also be used on citrus as part of a strategy for the prevention of fruit fly”. This will make extremely difficult to export organic pineapple to the EU.

A procedure is available for substances to be added to the list of organic approved substances when there are justified reasons (e.g. for a pest not present in the EU). However,

adding new substances or uses will be difficult if they are not already listed in the EU horizontal pesticide regulations; adding them here first will make it a very lengthy process.

The EC may also “grant specific authorisations for the use of products and substances in third countries ... taking into account differences in the ecological balance in plant or animal production, specific climatic conditions, traditions and local conditions in those areas ... for a renewable period of two years”. This provision is made (*Article 45, Point 2 of Regulation 2018/848*), but it is not yet clear how it will operate in practice.

These changes are likely to affect producers in third countries. Under the current equivalence arrangements, some flexibility is permitted in the use of plant protection products to adapt to local circumstances, but under the new regulation this will not be the case. Only products and substances approved for use in the EU can be used. Organic growers and exporters in third countries must familiarise themselves with these lists, and identify any areas where they will be affected and may need to adapt their production practices).

Organic rules in great Britain following Brexit

On 31st January 2020, the United Kingdom left the European Union. To ensure a functioning regulatory system from day one, Great Britain (GB) transposed all the EU organic regulations into its own legal system. This means that it continues to operate according to the current EU regulations (834/2007; 889/2008 and 1235/2008)¹³.

When the new EU organic regulation 2018/848 comes into effect in January 2022, it will not be adopted by GB (England, Wales and Scotland). Instead, a new GB organic regulatory system will be developed over the next 2 years. This is expected to maintain the principle of equivalence, and to develop its own system of authorising control bodies. In the meantime, the current EU organic regulations will remain in force, and existing rules covering production and controls will stay in place.

Northern Ireland retains the EU regulations and will continue to operate as if it were a member of the EU for the purposes of organics. From January 2022, Northern Ireland will implement the new EU organic regulation, and will continue to use Traces NT for imports from third countries.

Border Procedures

GB does not use Traces NT, but has a new import system with a GB Certificate of Inspection (COI). An electronic system will be developed in time, but at present imports operate using a paper-based system. Exporters have to pre-notify the GB port of entry direct, so that they are ready to clear incoming organic goods (it will not happen automatically, as it does with TRACES).

Copies of the new forms and guidance on the GB organic import system can be obtained from UK organic control bodies (such as the Soil Association¹²). There is also information on the gov.uk website. For each consignment, a paper-based GB COI must be issued before it leaves the country of origin. Paper COIs do not need to travel with the consignment, but must reach the GB Port Health Authority/Border Control Post by the time the consignment arrives. A signed digital copy sent to PHA/BCP will be accepted, but an original copy must be received within 10 days of clearance.

Trading Rules

The EU will recognise UK as equivalent for organics until 31 December 2023, and in addition, there is equivalence recognition of UK control bodies until 31 December 2021. The same equivalence recognition is applied by the UK with respect to the EU.

¹² <https://www.soilassociation.org/certification/preparing-your-organic-business-for-brexite/importing-after-brexite/>

With respect to third countries, the EU equivalence arrangements (with 13 countries) have been rolled over into UK law, so that the UK can continue to trade with them on the same basis as previous. Similarly, all control bodies listed in EU Regulation 1235/2008 are recognised in the UK, so organic goods from ACP countries will be recognised by the UK as they were pre-Brexit.

Of importance to note are the rules around triangular trade, whereby produce passes from the exporting country to GB via the EU (or to the EU via the UK). The EU-GB organic equivalence agreement is bilateral so it does not involve trade with third countries. This means that if produce is exported from an ACP country to GB via any EU country (e.g. Kenya-Netherlands-GB), and it clears customs in the EU, it will lose its organic status. The only way to avoid this is to export direct to GB, or to pass through the EU under customs supervision according to the Common Transit Convention (i.e. in transit).

ANNEX 5: Some organic certification bodies active in in the fresh produce industry in Kenya

S/NO	NAME	PHYSICAL ADDRESS	WEBSITE	CONTACTS
1	SOIL ASSOCIATION	Spear House, 51 Victoria Street Bristol, BS1 6AD England	https://www.soilassociation.org	Tel: +44 117 314 5000
2	CERES East Africa	Charles Walaga, Susie Plaza (2.1 & 2.2); Ggaba Road, Nsambya, P.O. Box 27317, Kampala, Uganda	http://www.ceres-cert.com/portal/index.php?id=2	Tel: +256 789 072 350 Tel: +256 776 509 731 walaga@ceres-cert.de
3	ECOCERT Southern Africa Pty Ltd	Unit 102, 1 st Floor, MO4 Bake Square, 14 De Beers Avenue, Paardevlei 7130 Somerset West, South Africa	https://www.ecocert.com/en/expertise/organic-farming	+27 21 883 2299 office.southafrica@ecocert.com
4	CONTROL UNION	CUC & Inspections Kenya Limited, Githinji Investments House, 3 rd Floor, Room 303, Chambers Road off Murang'a Road P.O Box 1993-00600 Nairobi Kenya	https://certifications.controlunion.com/en/about-us/who-we-are	+254 722 570 823 kenya@controlunion.com
5	ENCERT Limited	P.O Box 74510 - 00200, Nairobi.	https://www.encert.co.ke	+254 0724 910 240 info@encert.co.ke

ANNEX 6: Institutional Landscape of Horticulture Government Agencies and Sector Organisations

The institutional landscape of horticulture organisations include:

1. Private-sector players include the Fresh Produce Exporters Association of Kenya (FPEAK), the Fresh Produce Consortium of Kenya (FPC Kenya), the Kenya Flower Council (KFC), and the Agrochemicals Association of Kenya (AAK).
2. Government agencies include the Ministry of Agriculture, Livestock, Fisheries and Cooperatives (MALFC); the Ministry of Health (Public Health — Food Safety Unit), the State Department for Trade, and the National Treasury. Government agencies include the Horticultural Crops Directorate (HCD), Kenya Plant Health Inspectorate Service (KEPHIS), Pest Control Products Board (PCPB), Kenya Agricultural & Livestock Research Organization (KALRO), the Kenya Export Promotion and Branding Agency (KEPROBA) and the Council of County Governors.

These stakeholders are part of the public-private “National Horticulture Taskforce” that provides an enabling environment and consultative guidance for the horticultural sector. A sample of the main government agencies and private sector organisations are summarised in Table 23 below.

Table 23: Government Agencies and Sector organisations in Horticulture in Kenya

A: Government Agencies	
Ministry of Agriculture, Livestock, Fisheries and Cooperatives	The Ministry of Agriculture: leads in formulating policies related to fruits and vegetables in consultation with various stakeholders and provides most of the extension and training services. It also generates market information. https://kilimo.go.ke/
Agriculture Food and Fisheries Authority (MALF – AFFA)	<p>The Agriculture Food and Fisheries Authority (AFFA) is the successor of former regulatory institutions in the sector that were merged into Directorates under the Authority, with the commencement of Crops Act, 2013. According to AFFA Act, 2013, the Authority has the following mandate with regard to agriculture:</p> <ul style="list-style-type: none"> • To administer the Crops Act in accordance with the provisions of these Acts; • To promote best practices in, and regulate, the production, processing, marketing, grading, storage, collection, transportation and warehousing of agricultural products; • To collect and collate data, maintain a database on agricultural products, documents and monitor agriculture through registration of players as provided for in the Crops Act; • To be responsible for determining the research priorities in agriculture and to advise generally on research thereof; • To advise the national government and the county governments on agriculture levies for purposes of planning, enhancing harmony and equity in the sector. <p>AFFA is the secretariat to the Horticulture Competent Structure (HCS) a multi-institutional platform for collective action. HSC has been instrumental in addressing challenges in the horticulture industry, particularly the export sector with regard to interceptions. HSC and AFFA-Horticulture Crops Directorate with support from USAID Kenya Agricultural Value Chain Enterprises (KAVES) Project established a National Horticulture Traceability System (NHTS) in March 2015; an electronic platform to support management and sharing of critical data in monitoring</p>

	<p>food safety in the horticulture supply chains. https://www.agricultureauthority.go.ke/index.php/en/</p>
The Horticultural Crops Directorate (HCD)	<p>The Horticultural Crops Directorate (HCD) formerly known as Horticultural Crops Development Authority ('HCDA') was established under the Agriculture Act, Chapter 318. Initially, HCD focused on horticulture development and marketing, but currently its functions have evolved and include to:</p> <ul style="list-style-type: none"> ● Facilitate marketing of horticultural crops through monitoring and dissemination of market information. ● In consultation with relevant stakeholders, establish and enforce horticultural standards. ● Develop and review rules and regulations for the horticultural industry. ● Devise and maintain a system for collecting, collating, analysing and dissemination of horticultural statistics. ● Establish linkages with various governments and private research institutions for conduct of studies and researches designed to promote production, marketing and processing of horticultural crops. ● Provide benchmark for emerging technologies and catalyse adoption utilizing various extension tools. ● Promote and advise on strategies for value addition prior to export of crops from Kenya. ● Contribute towards provision of information to promote investment opportunities. <p>https://horticulture.agricultureauthority.go.ke/</p>
Kenya Agricultural and Livestock Research Organisation (KALRO)	<p>A corporate body created under the Kenya Agricultural and Livestock Research Act of 2013 to establish suitable legal and institutional framework for coordination of agricultural research in Kenya. KALRO has 16-commodity research institutions among them are the Horticulture Research Institute (HRI) locates in Kandara. The Institute is mandated to undertake research in all aspects of production, management, postharvest and value addition of horticultural crops. The outputs from research activities implemented are to support the national horticultural industry. The functions of the HRI include</p> <ul style="list-style-type: none"> ● Advise on, and develop appropriate systems to promote balanced, diversified and sustained horticultural development and to optimize horticultural production through adaptive and investigative research; and ● Facilitate the use of improved production technology, and to establish adequate feedback systems from horticultural producers in order to achieve and maintain national self-sufficiency and export capacities in horticultural products. <p>https://www.kalro.org/</p>
Ministry of Lands and Physical Planning	<p>The Ministry of Lands and Physical Planning: Is involved in securing land (registration, administration, valuation and survey services), whether from government or private owners under lease or purchase agreements.</p> <p>https://lands.go.ke</p>
Ministry of Industrialization, Trade and Enterprise Development	<p>The Ministry of Industrialization, Trade and Enterprise Development: has the mandate to promote Industrialization and Enterprise Development. The mandate of the Ministry is to promote Industrialization through: Industrial Policy and Planning; SME Policy; SME Financing Policy; SME/ Biashara Financing Policy; Buy Kenya – Build Kenya Policy and Strategy; To Promote Standardization in Industry and Quality Control; Promotion and Development of Micro and Small Enterprises; To Promote and Facilitate Domestic and Foreign Investments; Promotion and Oversight of the Development of Special Economic Zones and Industrial Parks; Kenya Property Rights Policy (Patents, Trade Marks, Service Marks, and Innovation); Promotion of Value Addition and Agro-Processing; Textile</p>

	Sector Development; Business Innovation and Incubation; Promotion and Development of the Cottage Industry; Oversight and Regulation of the Scrap Metal Industry; as well as industrial Training and Capacity Development; https://www.industrialization.go.ke/index.php
Ministry of Environment and Forestry	The Ministry of Environment and Mineral Resources: Provides inspection and clearance with respect to environmental impact. http://www.environment.go.ke/
Kenya Plant Health Inspectorate Services (KEPHIS)	Kenya Plant Health Inspectorate Services (KEPHIS): Government parastatal whose responsibility is to assure the quality of agricultural inputs and produce. Offers phyto-sanitation and inspection services before export and for those producing planting/propagation materials. https://www.kephis.org/
Kenya Bureau of Standards (KEBS)	Kenya Bureau of Standards (KEBS): A statutory body whose role involves setting and offering standards that provide a common reference point for the assessment of the quality of goods and services in Kenya for importers and exporters. https://www.kebs.org/
Pest Control Products Board (PCPB)	Pest Control Products Board (PCPB): A government body to ensure access to safe, quality and efficacious pest control products for animal, plant and human health while safeguarding their health and the environmental protection. https://www.pcpb.go.ke/
Kenya Revenue Authority (KRA)	The Kenya Revenue Authority was established by an Act of Parliament, Chapter 469 of the laws of Kenya, which became effective on 1st July 1995. KRA is charged with collecting revenue on behalf of the government of Kenya. The core functions of the Authority are: - <ul style="list-style-type: none"> • To assess, collect and account for all revenues in accordance with the written laws and the specified provisions of the written laws. • To advise on matters relating to the administration of, and collection of revenue under the written laws or the specified provisions of the written laws. • To perform such other functions in relation to revenue as the Minister may direct. https://www.kra.go.ke/en/
Public – private National Horticulture Taskforce (NHT)	The public-private National Horticulture Taskforce (NHT) has been strengthened to enable it to take a more active role in providing an enabling environment and consultative guidance to the horticultural sector in Kenya. Private-sector members of the taskforce are drawn from various organisations, including the Fresh Produce Exporters Association of Kenya (FPEAK), the Fresh Produce Consortium of Kenya (FPC Kenya), the Kenya Flower Council (KFC), and the Agrochemicals Association of Kenya (AAK).The government presence in the taskforce includes representation from the Ministry of Agriculture, Livestock, Fisheries and Cooperatives (MALFC); the Ministry of Health (Public Health — Food Safety Unit), the State Department for Trade, and the National Treasury. Government agencies include the Horticultural Crops Directorate (HCD), Kenya Plant Health Inspectorate Service (KEPHIS), Pest Control Products Board (PCPB), Kenya Agricultural & Livestock Research Organization (KALRO), and the Kenya Export Promotion and Branding Agency (KEPROBA). The Council of County Governors is also represented. The chair is Joshua Oluyali, Head of the MALFC Horticulture Division at the State Department for Crop Development and Agricultural Research. Representing the private sector as co-chair is Clement Tulezi, the CEO of KFC. The taskforce is supported by COLEACP through its EU funded NExT Kenya Programme and its operations are guided by the terms of reference agreed upon by its members in the interest of the stakeholders. Given the importance of horticulture, there are initiatives to have the taskforce established under the law within MALFC to give it a legal mandate. https://kenyngrown.com/

B. Sector Organisations	
Fresh Produce Exporters Association of Kenya (FPEAK)	<p>Fresh Produce Exporters Association of Kenya (FPEAK) is the main association representing exporters in Kenya. Historically it represented the small to medium-scale exporters, but today, due to its restructuring, it has attracted the large-exporters and horticultural producers for the domestic markets. The organization has now been restructured such that all members are well represented so that it focuses on the key issues at hand to address the challenges facing the horticultural industry. In this regard, it has maintained in constant consultation with the Government in order to drum up enough support for the horticultural industry especially in setting up conducive interventions and policies.</p> <p>FPEAK is run through levies paid by its members, which vary depending on the individual member's production capacity. It has the FPEAK Code of Practice, which guides its members. FPEAK, in collaboration with stakeholders have developed the Kenya GAP, which has been benchmarked against the Global-GAP. The document gives the codes a national outlook and enhances compliance to market requirements.</p> <p>Discussions with FPEAK revealed that various challenges continue to face the industry including:</p> <ul style="list-style-type: none"> • Agricultural policy – Devolution of agriculture functions to the County governments under the new Kenya Constitutions presents new challenges for the industry organization. Currently multiple levying - imposition of cess to agricultural produce on transit through the various counties to major urban areas and for export is having negatives effects of further increasing the cost of doing business. • Food regulations – the stringent regulatory and market requirements (non- tariff barriers) continue to hinder access to markets. Issues of MRL and harmful organisms e.g. False Codling Moth in chillies is subjecting the consignments to increased checks sometimes up to 100% checks. To enable this, consignments have to be forwarded way in advance for inspection before the products are delivered to the importing agencies. • Cost of production factors (e.g. energy, labour) are on the rise pushing up the cost of doing business. The labour movement in the horticultural industry recently signed a Collective Bargaining Agreement (CBA) that raised the wages of workers by 16%. Investors are of the opinion that this is high and unsustainable. The current CBA is gives workers' wages way above what is stipulated in Government regulations on minimum wages, and businesses are therefore relocating (e.g. pack houses) to production zones where labour rates lower. <p>https://fpeak.org/</p>
The Fresh Produce Consortium of Kenya (FPC Kenya)	<p>The FPC Kenya is a diverse membership organisation comprises of producers, traders and service providers for Kenya's fresh horticultural produce. FPC Kenya represents the interests of member companies (including family-owned, private and publicly traded businesses as well as local and regional companies) throughout the fresh produce supply chain.</p> <p>https://fpckkenya.co.ke/</p>
Kenya Organic Agriculture Network (KOAN)	<p>KOAN is membership organization with members across the country and unites producers, exporters, traders, NGOs and like-minded individuals and organizations in promoting Organic Agriculture in Kenya. The organization represents over 200,000 farmers, exporters and works with partners throughout the country.</p> <p>https://www.koan.co.ke/</p>
Seed Traders Association of Kenya (STAK)	<p>Seed Traders Association of Kenya (STAK): Provides quality seeds and planting materials to the horticultural farmers; oversight on the seed traders.</p> <p>https://www.stak.or.ke/</p>

The Agrochemical Associations of Kenya (AAK)	The Agrochemical Associations of Kenya (AAK): A private sector led umbrella organization in Kenya for manufacturers, formulators, re-packers, importers, distributors, farmers and users of pest control products (pesticides). https://agrochem.co.ke/
Kenya Association of Manufacturers (KAM)	Kenya Association of Manufacturers (KAM): The representative membership organization for manufacturing value-add industries in Kenya. https://kam.co.ke/
Export Promotion Council (EPC)	Export Promotion Council (EPC): The Export Promotion Council (EPC) is Kenya's premier institution in the development and promotion of export trade. https://brand.ke/
The Mango Producers and Marketing Organization	The Mango Producers and Marketing Organization: is a farmer led organization formed to lobby for the development of the mango value chain, especially in articulating farmer's issues. This is a newly formed organization that will require further capacity building to have an orderly development of the industry.
Avocado Growers Association of Kenya (AGAK)	Avocado Growers Association of Kenya (AGAK): coordinates the farmer groups and facilitates the linkage between producers and exporters. https://kenyaavocados.co.ke/

Source: Horticulture scoping study 2017 and updated by authors October 2021



Keystonee Park, Block B, 95 Riverside Drive
Nairobi, Kenya

Twitter: [@NLAgrKenya](#)

Website Agriculture: [Kenya](#)

Latest newsletter: [Kenya](#)

[Website for Dutch citizens in Kenya](#) & [Website for Kenyans citizens](#)

