AFA YEAR BOOK OF STATISTICS

2023

Contents

Introduction

The AFA Year Book of Statistics is an annual publication of the Authority. The publication provides various crop statistics on agricultural and market performance.

It also includes a summary of the performance of the national economy as well as weather forecast highlights in the year under review.

AFA Year Book of Statistics 2023 is the 3rd edition of the annual statistical bulletin produced in furtherance of the Authority's mandate under the AFA Act 2013 and the Crops Act 2013. The Year Book of Statistics is produced by AFA's Department of Corporate Planning, Strategy and Enterprise Risk Management (PSR) and is compiled using data and information from AFA directorates.

This publication is a useful agricultural statistics resource for policy makers, donor agencies, dealers of scheduled crops, researchers and analysts as well as the general public. It is divided into seven chapters with each chapter giving detailed statistics as relates to the various scheduled crops administered by the different directorates.

Under the Constitution of Kenya 2010, Agriculture is devolved to the County government. Efficient and effective methods of data collection have to be enhanced in order to capture data from farm level production to marketing of agricultural commodities. This will not only give accurate, real-time data but also support the decision-making process.

Forward

Transforming the agricultural sector to be more productive, vibrant, profitable, and sustainable can be a mitigating factor for the problem of rising food scarcity in the country caused by rapid climate change, the growing population, and dwindling arable and productive land. The agricultural sector is a dominant segment that contributed to about 21.2 percent of the overall GDP in 2022 (Economic survey 2023). In order to combat this threat, which has resulted in the loss of numerous lives and acute malnutrition among many citizens, extensive research and development in this field is essential in developing strategic and outcome-based solutions.

Collaboration between the Authority and other organizations such as KALRO, universities, and other research centers will produce new findings that will serve as the catalyst for innovation, new business prospects, new value-added products, new research findings, and their dissemination to the industry and the general public, will thereby improve the value chains of the scheduled crops.

Conclusively, accurate and reliable data remains essential for planning as we work to realize the Bottom-Up Economic Transformation Agenda 2022-2027, particularly on the government priority areas in agriculture like increasing agricultural productivity and improving market access and value addition. Furthermore, an informed data-driven decision-making process solely depends on the availability of accurate data; therefore, improving the data collection and collation methodologies is required. AFA is teaming up with the County Governments, MoALD, and other stakeholders to build a national one-stop agricultural databank that will include all the agricultural data pertaining to all the scheduled crops.

Willis Audi

Director General

Agriculture and Food Authority

Acknowledgement

I would like to thank the management of Agriculture and Food Authority through the Director General for his leadership and support in making this publication a success.

Sincere gratitude goes to the Directors of various Directorates for the continued support in the facilitation of statistical officers in the collecting, collating and the dissemination of agricultural data from their respective directorates.

I also acknowledge the coordination role of Corporate Planning, Strategy and Enterprise Risk Management (PSR) team, as well as the efforts of the Directorates' technical team, who worked diligently to validate the data and produce this 3rd edition of the AFA Yearbook of Statistics.

As the team leader of the statistical team, I wish to specifically acknowledge the following officers who worked extra hard to produce this publication.

Name	Designation	Directorate/Department
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Executive Summary

Agriculture and Food Authority is mandated by the Crops Act, 2013 to facilitate marketing and distribution of the scheduled crops through monitoring and dissemination of agricultural market information. Moreover, article 8(j) of the Crops Act mandates the Authority to devise and maintain a system for regularly obtaining information on current and future production, prices and trade movements, thus the production of AFA Year Book of Statistics.

This AFA Yearbook of Statistics 2023 provides in a single volume a comprehensive compilation of regionally and international statistics on major scheduled crops, from 2018-2022.

Coffee: The 2021/22 coffee year can be described as historic. There was an increase in coffee production by 50.24 percent which was the highest crop recorded per year in the last two decades in Kenya. The national production increased from 34,512 MT in coffee year 2020/21 to 51,853 MT in coffee year 2021/22

The auction volumes increased from 25,126 MT (407,432 bags) in 2020/21 coffee year to 38,890 MT (630,646 bags) in the 2021/22. The value increased by 4.3 percent to USD 227.33 million at an average price of USD 293.03 per 50 Kg bag compared to USD 141.24 million at an average price of USD 281.07 per 50 Kg bag in the previous season.

The Direct sales volumes increased from 10,444 MT (174,806 bags) to 11,841 MT (197,341 bags) in current coffee year while the value increased by 23.9 percent to USD 84.55 million at an average price of USD 357.04 per 50 Kg bag compared to USD 68.24 million at an average price of USD 326.69 per 50 Kg bag.

Coffee exports during the same period were 42,858 MT valued at USD 298.6 million (KES 34.4 billion) compared to 41,797 MT valued at USD 292.3 million (KES 27.07 billion) in the previous season. The closing stocks amounted to 15,072 MT equivalent to 251,205 (60 Kg bags) as at the end of September 2022.

Sugar: The total sugarcane milled increased by 13.5 percent to 8,676,181 MT in 2022 from 7,647,224 MT in 2021 resulting in an all-time high production of 796,554 MT of sugar, 13.8 percent up from 700,241 MT produced in 2021. The increase is attributed to improved sugarcane supply in all sugar zones.

Pyrethrum: In the period under review, the total acreage under the crop was 4,000 acres an increase of 223 acres from 3,777 acres recorded in 2021. Pyrethrum Dry flowers delivered increased by 88.2 percent from 500,564 Kgs in 2021 to 941,872 Kgs in 2022 attributed to planting material distribution efforts.

Fibre Crops: The total area under cotton dropped by 19 percent, from 10,640 Ha in 2021 to 8,585 Ha in 2022 attributed to late disbursement of planting materials (cotton seed) and pesticides to farmers.

Despite the decrease in area under cotton, the total production of seed cotton increased by 2,462 MT from 1,300 MT recorded in 2021 to 3,762 MT in 2022. The increase in production was as a result of good agriculture practices by the growers.

In conclusion, the agriculture (agriculture, forestry and fishing) sector directly contributed about 21.2 percent to the country's GDP in 2022 while the growing of crops constituted 15.2 percent down from 15.3 percent recorded in 2021 (Economic Survey 2023).

Acronyms and Abbreviations

ABC	African Birds Eye Chilly
ADC	Agriculture Development Corporation
AFA	Agriculture and Food Authority
ALV	African Leafy Vegetables
ASAL	Arid and Semi-Arid Land
ATDC	Agriculture Technology Development Centers
Bt	Bacillus thuringiensis
CC	Clean Coffee
CIF	Cost, Insurance and Freight
COMESA	Common Market for Eastern and Southern Africa
EAC	East African Community
EPZ	Export Processing Zone
EU	European Union
FOB	Freight on Board
FTA	Free Trade Area
GBE	Green Bean Equivalent
GDP	Gross Domestic Product
GoK	Government of Kenya
HCD	Horticultural Crops Directorate
Ha	Hectares
ICPI	Integrated Coffee Productivity Initiative
ISO	International Sugar Organisation

KALRO	Kenya Agricultural & Livestock Research Organization
KES	Kenya Shillings
KIBOS	Kibos Sugar and Allied Industries Limited
KNBS	Kenya National Bureau of Statistics
KSA	Kenya School of Agriculture
LB	Pound
MoALD	Ministry of Agriculture and Livestock Development
MPOICD	Miraa, Pyrethrum and Other Industrial Crops Directorate
MRPD	Market Research and Product Development
MT	Metric Tons
NCE	Nairobi Coffee Exchange
NOCD	Nuts and Oil Crops Directorate
Non-FTA	Non-Free Trade Area
RCN	Raw Cashew Nuts
RNI	Raw Nuts in Shell
SME	Small Medium Enterprises
SONY	South Nyanza Sugar Company
TC/TS	Tons of Cane / Tons of Sugar
PSR	Corporate Planning, Strategy and Enterprise Risk Management
PRE	Pyrethrum Refined Extract
UAE	United Arab Emirates
USA	United States of America

USD	United States Dollar

COFFEE

Chapter 1. Coffee Industry

Introduction

Coffee is mainstay of about 1.5 million households most of whom are in the rural areas and hilly terrains. Rural areas are characterized by high level of poverty, low income, low education levels and key resources available that needs management. According to the Kenya National Population Census 2019, about 500,000 households were engaged directly in producing coffee at the farm level.

Coffee is grown in 33 counties and the major coffee growing counties are Kiambu, Kirinyaga, Nyeri, Murang'a, Kericho and Bungoma. Summary of the coffee sub-sector is given on Table 1 below.

Table 1: Area under Coffee, Production, Yields, Exports, Imports and consumption from 2017/18-2021/22

Year	2017/18	2018/19	2019/20	2020/21	2021/22
Area (Ha)	115,570	116,193	119,675	108,199	**109,384**
Production (MT)	41,375	44,989	36,873	34,512	**51,853**
Yields (MT/Ha)	0.358	0.387	0.308	0.319	**0.474**
Exports (MT)	43,289.62	50,600.33	46,161.64	41,797	**42,858**
Imports (MT)	-	-	9.46	653.28	**3,762.53**
Consumption (MT)	**1,342.00**	**1,411.21**	**1,577.00**	**1,655.85**	**1,722**

Source: AFA-Coffee Directorate

1.1 Agriculture Performance

Area under coffee

The area under coffee increased from 108,199 Ha in the previous year to 109,384 Ha in the period under review translating to 1.1 percent rise which can be attributed to the acquisition of new planting areas totaling to 1,185 Ha as a result of Robusta seedlings distribution program by the Coffee Directorate. The coffee growing region with the largest newly acquired area under coffee was Narok County with 240 Ha followed by Baringo, Kirinyaga and Bomet at 92 Ha, 80.1 Ha and 72 Ha respectively. Narok County is accredited to a private developer – Maara Coffee – efforts by facilitating farmer groups with Batian coffee seedlings. For more details, refer to Table 2 below.

Table 2: Area (Ha) under coffee Production by Counties 2020/21 & 2021/22

S/no	County	Area (Ha) under Production -2020/21		Cumulative area (Ha) - 2020/21	Newly Area (Ha) planted		Cumulative New Area Planted	Cumulative Area under Coffee (Ha) - 2021/22
		Estate	Co-op	Total (Ha)	Estate	Co-op	(Ha)	Total (Ha)
1	Baringo	155.4	968	1,123.40	2	90	92	1,215.40
2	Bomet	30	171	201	0	72	72	273
3	Bungoma	1,010.00	6,650.00	7,660.00	5	60	65	7,725.00
4	Busia	-	150	150	-	50	50	200
5	Elgeyo Marakwet	46	98	144	5	5	10	154
6	Embu	338	6,535.00	6,873.00	-	8.9	8.9	6,881.90
7	Homabay	5	422	427	2		2	429
8	Kajiado	5	10	5	0.4		0.4	5.4
9	Kakamega	16	318	334	2	15	17	351
10	Kericho	714.8	4,043.20	4,758.00	4	80	84	4,842.00
11	Kiambu	11,724.00	8,585.00	20,309.00	35	25	60	20,369.00
12	Kirinyaga	1,599.00	8,410.00	10,009.00	-	80.1	80.1	10,089.10
13	Kisii	798	3,765.00	4,563.00	4	12	16	4,579.00
14	Kisumu	82	16	98	4	4	8	106
15	Laikipia	4	48	52	0	4.4	4.4	56.4
16	Machakos	1,708.00	6,265.00	7,973.00	25	15	40	8,013.00
17	Makueni	32	1,663.00	1,695.00	-	-	0	1,695.00
18	Meru	826	7,824.80	8,650.80	57.6	-	57.6	8,708.40
19	Migori	32	755	787	-	48	48	835
20	Murang'a	905	8,500.00	9,405.00	8	-	8	9,413.00
21	Nairobi	181	-	181	0	0	0	181
22	Nakuru	500	1,491.40	1,991.40	3	4.8	7.8	1,999.20
23	Nandi	172	1,673.00	1,845.00	20	50	70	1,915.00
24	Narok	60.2	37	97.2	0	240	240	337.2
25	Nyamira	791	1,917.00	2,708.00	-	2.5	2.5	2,710.50
26	Nyeri	1,029.00	8,800.00	9,829.00	-	12	12	9,841.00
27	Siaya		23	23	-	14	14	37
28	Taita Taveta	-	10	10	-	-	-	10
29	Tharaka Nithi	255	3,425.60	3,680.60	-	0.3	0.3	3,680.90
30	Trans Nzoia	1,797.00	361	2,158.00	30	10	40	2,198.00
31	Uasin Gishu	168	113	281	50	10	60	341
32	Vihiga	1	9	10	0	5	5	15
33	West Pokot	42	126	168	5	5	10	178
	TOTAL	**25,026.40**	**83,183.00**	**108,199.44**	**262.00**	**923.00**	**1,185.00**	**109,384.40**

Source: AFA-Coffee Directorate

Coffee Production

In 2021/22, coffee sub-sector recorded a 50.25 percent increase in production from 34,512 MT realized in 2020/21 to 51,853 MT of Clean Coffee (CC). The increase in production was attributed to favorable weather conditions, new plantings coming to production, improved prices and bi-annual production cycle of the coffee trees.

In recognition of the contribution of the coffee sub-sector to the country's overall foreign earnings, the Government of Kenya is promoting the development of the domestic market for locally produced and processed coffee products.

The four counties from the Mt Kenya region namely Kiambu, Kirinyaga, Nyeri and Murang'a contributed 31,795.36 MT (61.32 percent) of the total national production. Among the top competing counties, estates were dominant in Kiambu compared to Kirinyaga where smallholders dominated. Refer to Table 3, for more details.

Table 3: Clean coffee production (MT) by county 2020/21 and 2021/22

No	County	2020/21			2021/22			
		Estate	Co-op	Total	Estate	Co-op	Total	% Contribution
1	Kiambu	6,619.05	1,185.07	7,804.11	8,669.42	1,967.63	10,637.05	20.5
2	Kirinyaga	390.77	5,637.46	6,028.23	485.04	8,291.96	8,777.00	16.9
3	Nyeri	435.23	3,258.09	3,693.32	857.25	5,965.68	6,822.93	13.2
4	Murang'a	807.47	2,292.64	3,100.11	942.87	4,615.51	5,558.38	10.7
5	Kericho	500.43	2,464.85	2,965.28	802.33	3,524.00	4,326.33	8.3
6	Bungoma	59.27	1,837.77	1,897.04	81.27	2,886.87	2,968.14	5.7
7	Meru	171.55	1,450.76	1,622.31	205.14	2,301.08	2,506.22	4.8
8	Embu	163.54	1,429.16	1,592.71	219.64	2,124.19	2,343.83	4.5
9	Nandi	185.19	808.16	993.35	231.33	1,215.22	1,446.55	2.8
10	Tharaka Nithi	80.13	780.83	860.96	88.4	785.18	873.58	1.7
11	Nakuru	597.59	234.78	832.37	415.06	261.71	676.77	1.3
12	Trans Nzoia	688.55	97.39	785.94	685.95	97.61	783.56	1.5
13	Machakos	214.55	517	731.55	479.99	818.42	1,298.41	2.5
14	Kisii	283.4	264.63	548.03	704.05	512.7	1,216.75	2.3
15	Nyamira	138	157.27	295.26	335.79	465.19	800.98	1.5
16	Baringo	15.82	131.18	147	26.47	150.99	177.46	0.3
17	Nairobi	113.87	0	113.87	17.68	-	17.68	0.0

No	County	2020/21			2021/22			
		Estate	Co-op	Total	Estate	Co-op	Total	% Contribution
18	Uasin Gishu	95.49	8.87	104.36	80.71	25.82	106.53	0.2
19	Migori	7.38	92.78	100.16	7.41	58.22	65.63	0.1
20	Elgeyo Marakwet	27.45	46.88	74.33	35.5	59.47	94.97	0.2
21	Makueni	11.2	40.89	52.09	5.44	76.22	81.66	0.2
22	Kisumu	41.02	0.55	41.56	54.57	1.94	56.51	0.1
23	West Pokot	1.1	32.49	33.59	0.32	33.59	33.91	0.1
24	Bomet	10.54	20.63	31.17	24.49	18.54	43.03	0.1
25	Kakamega	4.83	13.67	18.5	11.45	16.71	28.16	0.1
26	Homabay	2.23	14.22	16.45	0.9	10.84	11.74	0.0
27	Narok	-	9.05	9.05	77.79	6.07	83.86	0.2
28	Kajiado	5.87	0	5.87	7.19	-	7.19	0.0
29	Laikipia	-	4.44	4.44	-	7.36	7.36	0.0
30	Busia	-	8.59	8.59	-	0.32	0.32	0.0
31	Vihiga	-	0.28	0.28	-	0.18	0.18	0.0
32	Siaya	-	0.25	0.25	-	-	0	0.0
Grand Total		**11,671.51**	**22,840.64**	**34,512.16**	**15,553.43**	**36,299.22**	**51,852.63**	**100.0**

Source: AFA-Coffee Directorate

The clean coffee grades produced by the millers in the year under review varied up to 19 different grades. The top grades produced in the country were AA (21.5), AB (40.5), C (15.1) and PB (4.9). For more details, refer to Table 4.

Table 4: Clean Coffee Production by Grade (MT) in 2021/22

No	Grade	Estate	Society	Grade Total	%-Grade distribution
1	AA	2,470.81	8,663.22	11,134.03	21.5
2	AB	6,237.93	14,768.65	21,006.58	40.5
3	C	3,136.30	4,718.31	7,854.61	15.1
4	E	34.37	81.67	116.04	0.2
5	HE	147.47	362.86	510.33	1.0
6	PB	733.61	1,787.85	2,521.47	4.9
7	SB	51.81	52.57	104.38	0.2
8	T	748.57	892.35	1,640.92	3.2
9	TT	367.07	755.57	1,122.64	2.2

No	Grade	Estate	Society	Grade Total	%-Grade distribution
10	UG	7.00	11.78	18.78	0.0
11	UG1	409.06	721.93	1,130.99	2.2
12	UG2	315.75	393.85	709.61	1.4
13	UG3	3.01	3.58	6.59	0.0
14	NH1	12.91	12.76	25.67	0.0
15	NH2	2.25	0.15	2.40	0.0
16	MH	629.32	2,019.66	2,648.98	5.1
17	ML	219.78	612.30	832.08	1.6
18	SRL	4.52	2.75	7.27	0.0
19	SRH	1.99	1.93	3.91	0.0
20	Bulk (not specified)	19.90	435.46	455.36	0.9
National Total		**15,553.43**	**36,299.20**	**51,852.63**	**100.0**

Source: AFA-Coffee Directorate

Reasons for production increase

- The year under review saw first harvests from additional coffee plantings areas undertaken in parts of West of Rift.
- More significantly, both the prices of coffee offered at the Nairobi Coffee Exchange and through direct sales remained consistently higher than those realized in the previous season.
- Observations in most coffee growing counties indicated that majority of the counties recorded above normal amounts of rainfall and this continued until end of the coffee year in September 2022.
- The increase in production was attributable to among other factors favorable weather, access to subsidized fertilizer and the recent improvement of coffee prices that made farmers re-invest in their coffee farms in terms of increased input application especially top-dressing fertilizers.
- The good weather during the first crop (main crop) which contributes 70 percent of the overall seasonal production volumes increased in volumes.
- The biannual cyclic nature of production of the coffee tree also had an effect on the increased production.

Coffee Yields per Ha

During the period under review, coffee yields for the estates was 0.61 MT per Ha compared to 0.43 MT per Ha for smallholder farmers. The average yield in MT per Ha was 0.47 in 2021/22 compared to 0.32 in 2020/21. Refer to Table 5, for more details.

Table 5: Average yield of coffee 2017/18 - 2021/22

Grower category		2017/18	2018/19	2019/20	2020/21	2021/22
Estate	Area (Ha)	25,155	25,349	26,049	25,026	25,300
	Production (MT)	10,994	14,103	10,972	11,671	15,554
	Yield (MT/Ha)	0.44	0.56	0.42	0.47	0.61
Co-operative	Area (Ha)	90,415	90,844	93,626	83,173	84,085
	Production (MT)	30,381	30,881	25,901	22,840	36,299
	Yield (MT/Ha)	0.34	0.34	0.28	0.27	0.43
Total	Area (Ha)	115,570	116,193	119,675	108,199	109,385
	Production (MT)	41,375	44,989	36,873	34,512	51,853
	Yield (MT/Ha)	0.36	0.39	0.31	0.32	0.47

Source: AFA-Coffee Directorate

1.2 Market Performance

Auction and Direct Sales

Coffee is marketed through both the Nairobi Coffee Exchange (NCE) and direct sales. Table 6 below shows marketed quantities and value for the past ten years. The general trends indicate that the volumes of coffee offered through direct sales have been increasing over years from 3,724 MT to present 11,841 MT.

Coffee prices all over the world are characterized by recurring cycle of a brief period of high coffee prices followed by an extended period of low prices as can be seen in Table 6. This has been the case with Kenya since 2012/13 to date, the lowest auction prices were realized in 2012/13 and which recurred in 2018/19.

Prices rose temporarily in 2013/14 and gradually declined in the period between 2014/15 and 2015/16. This was followed by another increase in 2016/17 when the production was low. In the period between 2017/18 and 2018/19 production increased there was a sharp decline in auction prices to below USD 150. Since 2019/20 to present period, local prices have shown a significant rise.

Table 6: Auctions and direct sales volumes and values 2012/13-2021/22

YEAR	Auction Sales			Direct Sales			Total		
	Weight (MT)	Value (USD) million	Value (KES Billion)	Weight (MT)	Value (USD) million	Value (KES Billion)	Weight (MT)	Value (USD) million	Value (KES Billion)
2012/13	38,141	127.16	10.7	3,724	17.99	1.5	41,865	145.16	12.18
2013/14	40,928	174.15	15.0	8,282	42.99	3.7	49,210	217.14	18.76
2014/15	34,754	142.51	13.4	7,183	40.03	3.8	41,937	182.54	17.19
2015/16	38,376	148.93	15.1	7,544	41.05	4.2	45,919	189.98	19.30
2016/17	34,091	159.2	16.4	6,756	43.74	4.5	40,846	202.94	20.90
2017/18	35,676	145.22	14.7	7,962	44.98	4.6	43,638	190.2	19.32
2018/19	35,605	109.56	11.1	10,283	47.95	4.9	45,888	157.52	16.02
2019/20	24,531	92.76	9.7	13,521	68.28	7.2	38,052	161.04	16.90
2020/21	25,126	141.24	13.1	10,444	68.24	6.3	35,570	209.48	19.40
2021/22	38,790	227.33	26.2	11,841	84.55	9.7	50,631	311.88	35.90

Source: AFA-Coffee Directorate

Marketing of coffee is done through auction at the NCE complemented by the direct sales window. Seventeen marketers participated in marketing of coffee in season 2021/22. Table 7 below, shows that the combined volume sold through the two systems totaled to 50,631 MT and was worth USD 311.9 million.

Table 7: Combined auction and direct sales performances by marketers 2021/22

Marketer	Weight (Kg)	No 60-Kg Bags	Gross Proceeds (USD)	Average Price/50 Kg (USD)	Average Price/60 Kg (USD)	%-share
Tropical Farm Management (K) Ltd.	14,038,260.00	233,971	88,031,084.29	313.54	376.25	27.70
Coffee Management Services	12,458,837.00	207,647	78,654,212.06	315.66	378.79	24.60
Sucastainability (K) Ltd	7,313,525.00	121,892	44,341,823.88	303.15	363.78	14.40
Aristocrats Coffee & Tea	4,958,457.00	82,641	28,867,921.98	291.1	349.32	9.80
Oaklands Coffee Marketing	4,874,408.00	81,240	30,250,637.70	310.3	372.36	9.60
Sustainable Management Services	1,767,741.00	29,462	10,911,966.16	308.64	370.37	3.50
Thika Coffee Marketing	1,480,630.00	24,677	7,993,567.58	269.94	323.93	2.90
New KPCU Ltd	1,326,536.00	22,109	7,249,218.16	273.24	327.89	2.60

Marketer	Weight (Kg)	No 60-Kg Bags	Gross Proceeds (USD)	Average Price/50 Kg (USD)	Average Price/60 Kg (USD)	%-share
Kenya Cooperative Coffee Exporters	1,186,192.47	19,770	8,197,176.80	345.52	414.63	2.30
Meru County Coffee Marketing	509,255.00	8,488	2,576,095.58	252.93	303.51	1.00
Classic Coffee Ltd	321,122.00	5,352	2,095,729.36	326.31	391.58	0.60
Kipkelion District Co-operative Union Limited	268,800.00	4,480	1,816,320.00	337.86	405.43	0.50
Thiriku co-operative society	50,050.00	834	340,087.77	339.75	407.7	0.10
Baringo Cha Coffee Mill PLC	38,999.00	650	254,073.20	325.74	390.89	0.10
Maguta Estate Coffee and Tea Company Limited	20,643.00	344	207,845.92	503.43	604.12	0.00
African Coffee Roasters EPZ Ltd	16,980.00	283	93,611.02	275.65	330.78	0.00
Ndirangu	300	5	2,500.00	416.67	500	0.00
Grand Total	**50,630,735.47**	**843,846**	**311,883,871.46**	**308**	**369.6**	**100.00**

Source: AFA-Coffee Directorate

i) Coffee Direct Sales

A total of 11,840.47 MT (197,341 bags weighing 60 Kg), were sold directly to consumers in the year 2021/22. Tropical Farm Management was the top marketer during the year under review, generating sales of up to 5,160 MT (86,003 bags), or 43.6 percent of all direct sales. Ndirangu marketer made the fewest direct sales, totaling 0.3 MT (5 bags). Maguta Estate Coffee and Tea Company Limited exporters achieved the overall best average price per 50 Kg bag of USD 503.43, while African Coffee Roasters EPZ Ltd marketer achieved the lowest price of USD 275.65. Table 8 below, provides more information.

Table 8: Direct Sales performance by Marketers 2021/22

Marketer	No. Bags (60 Kg bags)	Weight (Kg)	Min of Price (USD/50Kg)	Max of Price (USD/50Kg)	Gross Proceeds (USD)	Average Price (USD50Kg)	%
African Coffee Roasters EPZ Ltd	283	16,980.00	275.65	275.65	93,611.02	275.65	0.1
Baringo Cha Coffee Mill Plc	650	38,999.00	320.02	331.50	254,073.20	325.74	0.3
Classic Coffee Ltd	471	28,230.00	200.00	600.00	243,863.40	431.92	0.2
Coffee Management Services	51,480	3,088,772.00	195.00	750.00	24,593,108.32	398.10	26.1
Kenya Cooperative Coffee Exporters	9,764	585,819.47	75.00	630.00	5,011,311.08	427.72	4.9
Kipkelion District Co-operative Union Limited	4,480	268,800.00	326.00	367.50	1,816,320.00	337.86	2.3
Maguta Estate Coffee and Tea Company Limited	344	20,643.00	280.00	1,695.70	207,845.92	503.43	0.2
Ndirangu	5	300.00	416.67	416.67	2,500.00	416.67	0.0
Oaklands Coffee Marketing	15,087	905,215.00	220.00	450.00	6,807,256.30	376.00	7.6
Sucastainability (K) Ltd	24,738	1,484,283.00	200.00	650.00	10,825,310.28	364.66	12.5
Sustainable Management Services	3,203	192,187.00	250.00	400.00	1,559,847.10	405.81	1.6
Thiriku co-operative society	834	50,050.00	339.75	339.75	340,087.77	339.75	0.4
Tropical Farm Management (K) Ltd.	86,003	5,160,194.00	59.63	527.46	32,795,866.65	317.78	43.6
Grand Total	**197,341**	**11,840,472.47**	**59.63**	**1,695.70**	**84,551,001.04**	**357.04**	**100**

Source: AFA-Coffee Directorate

A total of 11,840 MT of coffee was sold via direct sales (second window) during the year under review translating to 13.37 percent rise from 10,444 MT that were sold in the previous year. Additionally, both the value (USD) and the average price per 50 Kg bag for the direct sales rose by 23 percent and 9 percent respectively during the period under review in comparison to 2020/21 as outlined in Table 8.

ii) Coffee Auction

The total number of bags offered for sale increased from 407,432 bags in 2020/21 to current 646,509 bags in the year under review. There was a corresponding increase in auction value from USD 141.2 million to USD 227.3 million in the season under review. Similarly, the average auction price for season 2021/22 was up by USD 11.96 per 50 kg bag from USD 281.07 realized in the previous season. For more details, refer to Tables 9 and 10.

Table 9: Marketers performance at the NCE 2020/21

No.	Marketers	Weight Bought (Kg)	Bags Bought	Gross value (USD)	Average Price/50Kg bag (USD)	%-share
1	Tropical Farm Management (K) Ltd.	6,549,734	106,750	39,901,372.84	304.60	26.1
2	Coffee Management Services	5,656,806	92,305	30,225,706.92	267.16	22.5
3	Aristocrats Coffee & Tea	4,239,284	68,955	23,701,897.90	279.55	16.9
4	Sucastainability (K) Ltd	3,021,829	48,271	16,953,583.26	280.52	12.0
5	Oaklands Coffee Marketing	2,304,311	37,492	12,405,765.68	269.19	9.2
6	New KPCU Ltd	987,675	15,738	5,578,257.54	282.39	3.9
7	Thika Coffee Marketing	873,198	14,011	4,395,700.56	251.70	3.5
8	Sustainable Management Services	806,649	12,972	4,457,265.96	276.28	3.2
9	Kenya Cooperative Coffee Exporters	431,082	6,849	2,122,617.48	246.20	1.7
10	Meru County Coffee Marketing	224,657	3,601	1,307,791.84	291.06	0.9
11	Classic Coffee Ltd	30,453	488	190,417.48	312.64	0.1
Total		**25,125,678.00**	**407,432**	**141,240,377.46**	**281.07**	**100**

Source: AFA-Coffee Directorate

Table 10: Marketers performance at the NCE 2021/22

No.	Marketers	Weight Bought (Kg)	Bags Bought	Gross value (USD)	Average Price/50Kg bag (USD)	%-share
1	Coffee Management Services	9,370,065.00	156,169	54,061,103.74	288.48	24
2	Tropical Farm Management (K) Ltd.	8,878,066.00	147,967	55,235,217.64	311.08	23

No.	Marketers	Weight Bought (Kg)	Bags Bought	Gross value (USD)	Average Price/50Kg bag (USD)	%-share
3	Sucastainability (K) Ltd	5,829,242.00	97,153	33,516,513.60	287.49	15
4	Aristocrats Coffee & Tea	4,958,457.00	82,642	28,867,921.98	291.1	13
5	Oaklands Coffee Marketing	3,969,193.00	66,153	23,443,381.40	295.32	10
6	Sustainable Management Services	1,575,554.00	26,259	9,352,119.06	296.79	4
7	Thika Coffee Marketing	1,480,630.00	24,679	7,993,567.58	269.94	4
8	New KPCU Ltd	1,326,536.00	22,109	7,249,218.16	273.24	3
9	Kenya Cooperative Coffee Exporters	600,373.00	10,007	3,185,865.72	265.32	2
10	Classic Coffee Ltd	292,892.00	4,882	1,851,865.96	316.13	1
11	Meru County Coffee Marketing	509,255.00	8,489	2,576,095.58	252.93	1
Total		**38,790,263.00**	**646,509**	**227,332,870.42**	**293.03**	**100**

Source: AFA-Coffee Directorate

Coffee Performance by Grade

The main grades comprising of AA, AB, C, E, PB, T and TT fetched an average price of USD 271.43 per 50 Kg bag in 2021/22 compared to USD 308.14 per bag in 2020/21. The volume of main grades was 33,976 MT in 2021/22 valued at USD 210.4 million compared to 21,649 MT valued at USD 133.4 million in the previous season. Similarly, miscellaneous grades totaled to 2,369 MT valued at USD 8.8 million in 2021/22 compared to 1,220 MT valued at USD 3.5 million. The unwashed grades volume was 2,424 MT valued at USD 8.0 million in 2021/22 compared to 2,257 MT valued at USD 4.3 million in 2020/21. For more details, refer to Table 11 and 12 below.

Table 11: Grade performance 2020/21

Category of coffee	Grade	No Bags	Weight Bought (MT)	Min (USD)	Max (USD)	Avg price (USD)	Value (USD)	%
Main Grades	AA	105,510	6,488.76	50	500	339.63	44,075,070.74	**26**
	AB	159,160	9,729.31	40	457	316.01	61,491,219.42	**39**
	C	44,566	2,794.10	50	367	269.26	15,046,780.36	**11**
	E	1,161	73.79	82	342	269.6	397,888.86	**0**
	PB	21,521	1,361.24	80	479	302.34	8,231,208.54	**5**
	T	9,668	607.15	25	334	116.13	1,410,193.08	**2**
	TT	9,456	594.86	22	343	232.62	2,767,501.82	**2**
	Sub-Total	**351,042**	**21,649.20**	**22**	**500**	**308.14**	**133,419,862.82**	**86**
Miscellaneous	HE	2,594	164.76	50	250	131.18	432,278.36	**1**
	SB	1,348	72.51	17	104	64.5	93,527.36	**0**
	UG	1,429	88.85	50	319	130.01	231,021.58	**0**
	UG1	8,894	553.82	38	320	179.63	1,989,665.00	**2**
	UG2	5,241	331.75	18	257	109.47	726,330.52	**1**
	UG3	125	7.98	28	104	65.34	10,422.16	**0**

	Sub-Total	**19,631**	**1,219.66**	**17**	**320**	**142.8**	**3,483,244.98**	**5**
Unwashed	MH	28,914	1,766.23	42	194	102.9	3,634,927.88	**7**
	ML	7,845	490.58	34	144	71.58	702,341.78	**2**
	Sub-Total	**36,759**	**2,256.82**	**34**	**194**	**96.09**	**4,337,269.66**	**9**
Total		**407,432**	**25,125.68**			**281.07**	**141,240,377.46**	**100**

Source: AFA-Coffee Directorate

Table 12: Grade performance 2021/22

Category of coffee	Grade	No Bags	Weight Bought (MT)	Min (USD)	Max (USD)	Avg price (USD)	Value (USD)	%
Main Grades	AA	130,128	8,004.14	83.00	502.00	359.46	58,871,492.16	26
	AB	257,020	15,674.72	65.00	500.00	308.23	98,281,539.40	43
	C	100,475	6,223.62	37.00	423.00	264.13	32,946,421.92	14
	E	1,497	94.65	129.00	385.00	255.19	516,392.56	0
	PB	29,029	1,830.78	77.00	455.00	299.11	11,077,037.94	5
	T	19,663	1,228.18	38.00	293.00	166.80	4,116,856.42	2
	TT	14,634	919.64	28.00	408.00	247.08	4,616,162.90	2
	Sub- Total	**552,446**	**33,975.73**	**28.00**	**293.00**	**271.43**	**210,425,903.30**	**93**
Miscellaneous	HE	5,253	327.75	68.00	282.00	181.30	1,298,800.30	1
	SB	1,877	101.53	30.00	234.00	85.68	164,092.48	0
	UG	2,490	153.68	50.00	313.00	158.27	431,239.72	0
	UG1	17,598	1,087.11	61.00	374.00	206.18	4,777,730.56	2
	UG2	10,949	686.57	25.00	317.00	134.48	2,110,809.66	1
	UG3	190	12.15	60.00	109.00	85.39	20,448.36	0
	Sub- Total	**38,357**	**2,368.78**	**25.00**	**374.00**	**141.88**	**8,803,121.08**	**4**
Unwashed	MH	29,468	1,797.49	52.00	250.00	191.11	6,855,349.62	3
	ML	10,031	626.94	35.00	199.00	92.44	1,156,423.82	1
	Sub- Total	**39,499**	**2,424.43**	**35.00**	**250.00**	**141.77**	**8,011,773.44**	**4**
Total		**630,302**	**38,768.93**			**185.03**	**227,240,797.82**	**100**

Source: AFA-Coffee Directorate

The volume of main grades at the auction increased from 86 percent in 2020/21 to 93 percent in 2021/22 whereas that of miscellaneous reduced by 1 percent from 5 percent realized in 2020/21. Unwashed grades accounted for 4 percent in 2021/22 compared to 9 percent in 2020/21. In terms of grades, the bulk of sales were grade AB (43 percent) followed by AA (26 percent), C (14 percent) and PB (5 percent) in 2021/22 compared to AB (39 percent) followed by AA (26 percent), C (11 percent) and PB (5 percent) for main grades in 2020/21. Among the miscellaneous grade UG1 was the dominant grade while MH and ML contributed 3 percent and 1 percent respectively in 2021/22. Kenyan coffee is therefore predominantly wet processed.

Coffee Exports

A total of 42,858 MT of coffee were exported during the period under review, a 2.5 percent rise from 41,800 MT exported in 2020/21. The export values were USD 292.28

million in season 2020/21 and USD 298.56 million in season 2021/22 translating to a 2 percent increase. Additionally, there was a 26 percent upsurge in local currency earnings due to the prevailing devaluation of Kenya Shilling. Analysis of coffee quarterly exports indicates that the highest quantity of coffee was exported in Quarter three (15,027.68 MT) while quarter one registered the lowest quantity of coffee export at 5,562.79 MT as indicated in the Table 13 below.

Table 13: Quarterly coffee sales 2020/21 and 2021/22

Quarter	2020/21	2021/22	2020/21	2021/22	2020/21	2021/22
	Weight (GBE-MT)		Value (USD million)		Value (KES Billion)	
Q1 (Oct-Dec)	8,869.11	5,562.79	40.44	35.49	4.42	3.95
Q2(Jan-Mar)	10,971.33	11,183.16	70.26	84.28	7.71	9.44
Q3(Apr-Jun)	12,713.64	15,027.68	124.98	107.38	8.77	12.46
Q4(Jul-Sept)	9,245.48	11,084.00	56.6	71.41	6.17	8.51
Total	**41,799.57**	**42,857.63**	**292.28**	**298.56**	**27.07**	**34.37**

Source: AFA-Coffee Directorate

Export destinations by quantities and values

The top export destinations are USA (18.9 percent), Belgium (18.9 percent), Germany (14.2 percent), South Korea (10.2 percent), Sweden (5.1 percent), Tunisia (3.4 percent), Australia (3.0 percent), Denmark (3.0 percent) and Norway (2.9 percent). Other 39 destinations up-took 20.4 percent of the export volumes. For more details, refer to Tables 14 and 15.

Table 14: Coffee Export by Destinations 2021/22

No	Destination	Weight (MT)	Value (USD Million)	Value(KES Billion)	%-Quantities
1	USA	8,104.02	62.32	7.19	18.91
2	Belgium	8,084.75	63.99	7.41	18.86
3	Germany	6,088.57	36.71	4.26	14.21
4	South Korea	4,347.91	31.49	3.62	10.14
5	Sweden	2,193.51	14.94	1.72	5.12
6	Tunisia	1,437.08	3.70	0.42	3.35
7	Australia	1,302.20	8.26	0.95	3.04
8	Denmark	1,281.26	8.35	0.96	2.99
9	Norway	1,235.18	10.63	1.15	2.88
10	Japan	1,175.07	9.73	1.12	2.74
11	United Kingdom	1,045.54	7.61	0.87	2.44
12	Netherlands	972.61	5.17	0.59	2.27
13	Finland	849.59	5.82	0.67	1.98
14	Romania	415.80	3.25	0.37	0.97
15	China	413.25	3.13	0.37	0.96

No	Destination	Weight (MT)	Value (USD Million)	Value(KES Billion)	%-Quantities
16	Canada	404.25	2.90	0.34	0.94
17	Spain	353.33	2.16	0.25	0.82
18	Taiwan	303.33	2.43	0.28	0.71
19	United Arab Emirates	283.44	1.27	0.15	0.66
20	Switzerland	269.58	1.92	0.22	0.63
21	New Zealand	256.42	0.75	0.09	0.60
22	Italy	217.14	0.98	0.11	0.51
23	Russian Federation	208.50	1.48	0.17	0.49
24	Jordan	196.63	1.22	0.14	0.46
25	India	176.40	0.93	0.11	0.41
26	Turkey	144.06	0.69	0.08	0.34
27	Latvia	123.48	0.96	0.11	0.29
28	South Africa	121.82	0.57	0.07	0.28
29	Iran	116.86	0.80	0.09	0.27
30	Egypt	115.80	0.69	0.08	0.27
31	Saudi Arabia	99.79	0.74	0.08	0.23
32	France	94.07	0.65	0.07	0.22
33	Ireland	84.54	0.66	0.08	0.20
34	Guatemala	77.80	0.35	0.04	0.18
35	Syria	57.60	0.17	0.02	0.13
36	Ukraine	41.28	0.23	0.03	0.10
37	Somalia	35.22	0.19	0.02	0.08
38	Greece	20.19	0.15	0.02	0.05
39	Burundi	19.20	0.08	0.01	0.04
40	Croatia	19.20	0.03	0.00	0.04
41	Oman	18.56	0.06	0.01	0.04
42	Hong Kong	17.34	0.13	0.02	0.04
43	Singapore	9.60	0.08	0.01	0.02
44	Kuwait	6.66	0.05	0.01	0.02
45	Congo D.Republic	6.28	0.04	0.00	0.01
46	Bulgaria	6.18	0.06	0.01	0.01
47	Thailand	4.95	0.04	0.00	0.01
48	Bangladesh	1.02	0.01	0.00	0.00
49	Bahrain	0.65	0.01	0.00	0.00
50	Nigeria	0.12	0.00	0.00	0.00
Grand Total		**42,858**	**298.56**	**34.37**	**100.00**

Source: AFA-Coffee Directorate

Table 15: Coffee Exports by Destinations 2020/21 and 2021/22

Destination	2020/21				2021/22			
	Weight (MT)	Value (USD)	Value (KES)	%	Weight (MT)	Value (USD)	Value (KES)	%
USA	6,168	37.44	4.08	14.76	8,104	62.32	7.19	18.91
Belgium	8,928	58.29	6.35	21.36	8,085	63.99	7.41	18.86
Germany	5,547	28.13	3.07	13.27	6,089	36.71	4.26	14.21
South Korea	4,039	22.85	2.49	9.66	4,348	31.49	3.62	10.14
Sweden	2,952	17.78	1.94	7.06	2,194	14.94	1.72	5.12
Tunisia	-	-	-	0.00	1,437	3.70	0.42	3.35
Australia	1,413	9.30	1.01	3.38	1,302	8.26	0.95	3.04
Denmark	1,185	6.61	0.72	2.83	1,281	8.35	0.96	2.99
Norway	1,411	39.58	1.08	3.37	1,235	10.63	1.15	2.88
Japan	1,765	12.89	1.40	4.22	1,175	9.73	1.12	2.74
Others	8,392	59.41	4.92	20.08	7,608	48.43	5.56	17.75
Grand Total	**41,800**	**292.28**	**27.07**	**100.00**	**42,858**	**298.56**	**34.37**	**100.0**

Source: AFA-Coffee Directorate

Export trends

The highest volume so far of 50,600 MT was attained in 2018/19. The export volume per year averages 44,000 MT. However, comparing 2020/21 and 2021/22, there was some little improvement in volumes exported. The value realized in 2021/22 was the highest in the last 10 years. Table 16 below, shows the export volumes and values from 2012/13 to 2021/22.

Table 16: Export Volume and Value Trends

Year	Export Volume (MT)	Export Earnings (KES Billion)
2012/13	49,031	18.21
2013/14	47,175	19.73
2014/15	44,064	21.01
2015/16	44,343	20.89
2016/17	43,379	23.47
2017/18	43,290	23.31
2018/19	50,600	21.70
2019/20	45,263	22.02
2020/21	41,797	27.07
2021/22	42,858	34.37

Source: AFA-Coffee Directorate

Coffee Exports by Form

In 2021/22 the overall coffee exports volume was 42,858 MT valued at USD 298.56 million compared to 41,797 MT valued at USD 292.26 million (KES 27.07 billion) in 2020/21. Table 17 below, shows coffee exports by form for the coffee year 2020/21 and 2021/22.

Table 17: Coffee Exports by Form 2020/21 and 2021/22

Form	Weight (MT)		Value (USD Million)		Value (KES Billion)	
	2020/21	2021/22	2020/21	2021/22	2020/21	2021/22
Green	40,511	41,756	285.34	291.85	26.32	33.6
Roasted	1,286	1,102	6.915	6.71	0.75	0.76
Total	**41,797**	**42,858**	**292.26**	**298.56**	**27.07**	**34.36**

Source: AFA-Coffee Directorate

Coffee Imports

The total quantity of coffee imported during the year under review was 3,762.53 MT valued at USD 19.51 million up from 653.28 MT valued at USD 2.65 million in 2020/21.

The nation imports coffee in three different forms namely green beans, roasted/ground and soluble forms. Green bean coffee imports in 2020/21 was 613.6 MT valued at USD 2.57 million compared to 3,685 MT valued at USD 18.99 million that was imported in 2021/22. The roasted/ground coffee was only 0.9 MT valued at USD 9,419.79 in 2020/21 compared to 60.9 MT valued at USD 370,890 during the period under review. Importation of soluble or instant coffee in 2021/22 reduced by 58.6 percent from 38 MT valued at USD 61,146.80 in 2020/21 to 15.7 MT valued at USD 138,135.21 in 2021/22. For more details, refer to Table 18 below.

Table 18: Coffee imports by quantity (MT) and values (USD)

Form	Weight (Kg)		Value (USD)	
	2020/21	2021/22	2020/21	2021/22
Green	613,589.10	3,685,852.80	2,574,523.16	18,999,713.96
Roasted/Ground	903.57	60,933.92	9,419.79	370,890.98
Soluble	38,789.40	15,739.01	61,146.80	138,135.21
Grand Total	**653,282.07**	**3,762,525.73**	**2,645,089.75**	**19,508,740.15**

Source: AFA-Coffee Directorate

African countries accounted for 91.8 percent of the total green bean coffee imports. The product mainly originated from Uganda (30 percent), Rwanda (26 percent), Burundi (15 percent), DRC (13 percent), Tanzania (9 percent) and Ethiopia. Outside Africa, Brazil is the largest origin of green bean coffee with 5.2 percent followed by Guatemala (2.6 percent), Hong Kong (0.2 percent), Singapore (0.2 percent) and Germany. Tanzania and Finland are leading in terms of roasted and ground coffee imports with 50.2 percent and 14.9 percent respectively. The other countries are Uganda (32 percent), Ethiopia (1.5 percent), Germany (0.7 percent), United Arab Emirates (0.1 percent) and South Africa (0.1 percent). Roasted coffee imports from

Rwanda were minimal during the period under review. The soluble imports are mainly from Malaysia (49 percent), Tanzania (29 percent), Portugal (21 percent) and Germany (0.1 percent) as shown in Table 19.

Table 19: Coffee Imports by form and country of origin 2019/20-2021/22

Coffee Year	Country of Origin	Weight (Kg)				Value (USD)			
		Green beans	Roasted/ground	Soluble	Total	Green beans	Roasted/ground	Soluble	Total
2019/20	Belgium	1,000.00	0	0	1,000.00	1,411.65	0	0	1,411.65
	Italy	600	239.3	0	839.30	1,600.00	3,097.92	0	4,697.92
	Malaysia	0	0	4,316.80	4,316.80	0	0	38,720.98	38,720.98
	Netherlands	0	0	46	46.00	0	0	508.5	508.50
	South Africa	0	60	0	60.00	0	56,452.80	0	56,452.80
	Tanzania	0	0	3,072.00	3,072.00	0	0	65,400.00	65,400.00
	United Kingdom	0	0	123.76	123.76	0	0	720	720.00
	Total	**1,600.00**	**299.3**	**7,558.56**	**9,457.86**	**3,011.65**	**59,550.72**	**105,349.48**	**167,911.85**
2020/21	Belgium	89.1	0	0	89.10	1,904.00	0	0	1,904.00
	Burundi	19,200.00	0	0	19,200.00	76,800.00	0	0	76,800.00
	China	0	0	31,239.00	31,239.00	0	0	50,523.00	50,523.00
	Ethiopia	18,000.00	0	0	18,000.00	54,365.44	0	0	54,365.44
	India	0	599.76	0	599.76	0	4,846.52	0	4,846.52
	Italy	0	303.81	0	303.81	0	4,573.27	0	4,573.27
	Portugal	0	0	7,550.40	7,550.40	0	0	10,623.80	10,623.80
	Rwanda	480,000.00	0	0	480,000.00	2,153,277.78	0	0	2,153,277.78
	Uganda	96,300.00	0	0	96,300.00	288,175.94	0	0	288,175.94
	Total	**613,589.10**	**903.57**	**38,789.40**	**653,282.07**	**2,574,523.16**	**9,419.79**	**61,146.80**	**2,645,089.75**
2021/22	Brazil	192,385.00	0	0	192,385.00	1,025,244.23	0	0	1,025,244.23
	Burundi	543,976.00	0	0	543,976.00	2,491,405.40	0	0	2,491,405.40
	Democratic Republic of Congo	461,120.00	0	0	461,120.00	1,751,788.06	0	0	1,751,788.06
	Ethiopia	428.4	946.05	0	1,374.45	1,218.00	3,015.00	0	4,233.00
	Finland		9,139.20	0	9,139.20	0	90,966.15	0	90,966.15
	Germany	71.4	462.27	10.4	544.07	330	5,144.87	133	5,607.87
	Guatemala	97,116.00	0	0	97,116.00	439,775.92	0	0	439,775.92
	Hong Kong	6,000.00	0	0	6,000.00	27,421.87	0	0	27,421.87
	Malaysia	0	0	7,774.65	7,774.65	0	0	32,517.90	32,517.90
	Portugal	0	0	3,455.76	3,455.76	0	0	14,293.49	14,293.49
	Rwanda	944,400.00	39.27	0	944,439.27	7,035,281.68	1.01	0	7,035,282.69
	Singapore	6,000.00	0	0	6,000.00	27,504.00	0	0	27,504.00

Coffee Year	Country of Origin	Weight (Kg)				Value (USD)			
		Green beans	Roasted/ground	Soluble	Total	Green beans	Roasted/ground	Soluble	Total
	South Africa	0	107.1	0	107.10	0	4,978.91	0	4,978.91
	Tanzania	311,700.00	30,600.00	4,498.20	346,798.20	1,043,379.77	198,480.82	91,190.82	1,333,051.41
	Uganda	1,122,656.00	19,524.60	0	1,142,180.60	5,156,365.03	64,341.82	0	5,220,706.85
	United Arabs Emirates	0	115.43	0	115.43	0	3,962.40	0	3,962.40
	Total	**3,685,852.80**	**60,933.92**	**15,739.01**	**3,762,525.73**	**18,999,713.96**	**370,890.98**	**138,135.21**	**19,508,740.15**

Source: AFA-Coffee Directorate

Warehouse stock levels

There was both inward and outward movements of coffee stocks from respective warehouses for both export and local trade. The peak months for stock held in 60 Kg bags were February 2022 (441,237 bags), March 2022 (439,537 bags) and April 2022 (382,370 bags) while the period of lowest stock was January 2022 (94,729 bags). Total stock carryover for season 2021/22 was 251,205 bags. Refer to Table 20, for more details.

Table 20: Monthly storage analysis for the year 2021/22 (60 kg bags)

WAREHOUSE	OCT-21	NOV-21	DEC-21	JAN-22	FEB-22	MAR-22	APR-22	MAY-22	JUN-22	JUL-22	AUG-22	SE
Bollore Transport & Logistics W/Hse	56,361	76,415	91,794	127,754	48,044	147,254	129,731	94,893	73,929	81,312	84,663	8
Jungle Macs Epz Ltd	-	-	-	-	-	-	-	-	-	-	-	
Sondhi Trading Limited	1,569	2,117	1,034	1,470	2,460	2,276	2,978	17	685	3	1,773	
Mombasa Coffee Ltd.	-	-	-	-	-	-	-	-	-	-	-	
Diamond Coffee Co. Ltd	2,001	1,981	2,183	4,136	4,607	3,729	2,723	438	389	114	174	
African Coffee Roasters Epz Limited –Local	217	259	202	305	257	231	257	223	204	159	150	
African Coffee Roasters Epz Limited -Imported	1,253	4,382	3,506	3,243	3,650	4,300	4,869	4,138	3,439	3,349	3,604	
C Dorman Sez Ltd	6,895	10,551	12,191	22,179	28,211	39,726	38,247	34,921	28,435	18,578	21,999	2
Kyandu Trading Company Ltd	393	183	157	287	402	402	1,002	1,107	787	1,592	1,679	
Nkg Coffee Mills Kenya Ltd	6,728	29,834	58,099	87,692	88,006	74,041	53,686	30,012	17,776	25,659	31,744	3
Coffee Management Services Ltd	12,533	32,709	63,419	84,368	84,142	84,997	62,058	28,970	18,097	30,973	25,573	2
Louis Dreyfus Company Kenya Limited	20,491	22,787	28,726	29,493	32,397	37,559	40,204	36,434	39,146	37,265	42,167	3
Taylor Winch Coffee Limited-Apex Business Park	1,763	2,770	5,198	8,332	17,845	16,134	29,522	32,637	30,301	26,343	26,290	2
Africoff Trading Co Ltd	3,526	3,344	5,462	4,603	4,728	5,618	3,661	3,640	2,680	3,767	3,337	
Mitchellcotts Freight Kenya Limited	2,296	466	1,582	961	1,898	2,587	1,940	964	229	300	1,002	
Kenya Co-Operative Coffee Exporters Limited	2,017	2,080	4,513	7,234	9,603	11,629	9,054	5,208	3,273	3,140	2,939	
Thika Coffee Mill Warehouse	-	-	-	-	-	-	-	-	-	-	-	
Nkpcu-All Branches	13,421	12,834	11,782	12,671	14,987	9,055	2,438	533	524	1,694	3,779	
TOTAL	**131,463**	**202,710**	**289,847**	**94,729**	**441,237**	**439,537**	**382,370**	**274,135**	**219,895**	**234,248**	**250,875**	**251**

Source: AFA-Coffee Directorate

Domestic Consumption

Coffee consumption during the year under review increased by 4 percent to 1,722 MT from 1,655 MT consumed in 2020/21. The consumption projection for 2022/23 is approximately 1,791 MT. Table 21 shows local coffee consumption trend for the past five years.

Table 21: Consumption trend in GBE and 60-kg bags

Year	Production MT(GBE)	Local consumption (MT)- (GBE)	% Production
2017/18	41,375	1,342.00	3.24
2018/19	44,989	1,411.21	3.14
2019/20	36,873	1,577.00	4.27
2020/21	34,512	1,655.85	4.81
2021/22	51,853	1,722	3.32

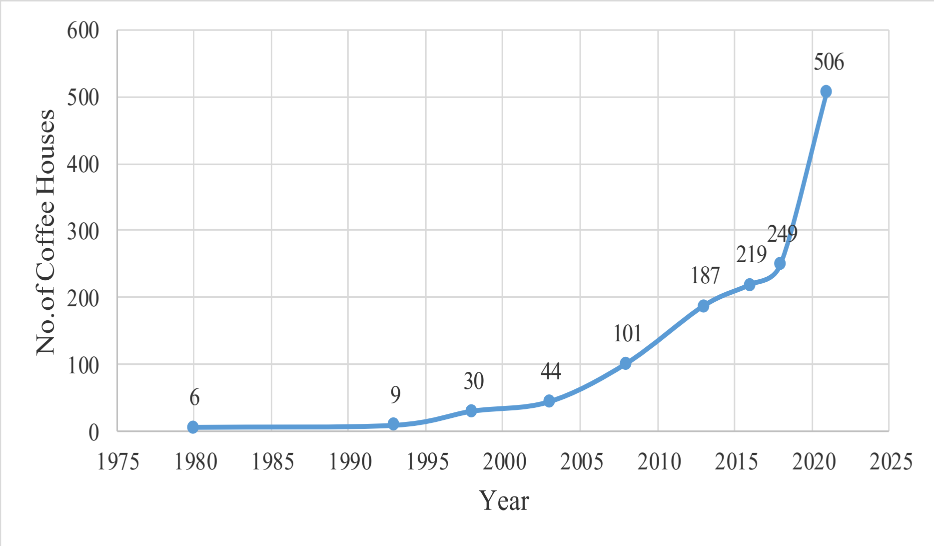
Source: AFA-Coffee Directorate

Number of Coffee Houses

The increasing number of stakeholders engaging in value addition has occasioned an increased number of coffee consumption outlets, this is due to steady supply of processed coffee.

The number of coffee outlets increased from 231 in 2019 to 506 in 2021 while the number of coffee stakeholders engaged in the roasting and packaging business from 25 in 2019/20 to present 35 in 2020/21. Coffee shops and big hotels are the main drivers of the domestic consumption in cities and major towns such as Nairobi, Mombasa, Kisumu, Nakuru and Eldoret. For more details, refer to Figure 1.

Figure 1: Trend of number of coffee houses from 1980-2021



Source: AFA-Coffee Directorate

Production Forecast 2022/23

The crop year 2021/22 realized an improvement in production by over 50 percent compared to the previous year. Although, coffee production is biennial and cyclic in nature and assuming all other factors of production remain constant, towards the end of 2022 and early 2023, the country experienced very adverse effects of drought in most coffee zones which affected flowering and berry formations. This will result into increased production mainly composed of coffee lights (poor-quality) in 2022/23 compared to 2021/22. During the first round of projection conducted by AFA-Coffee Directorate at the beginning of the coffee season, estimates were 46,000 MT which was later adjusted to approximately 52,000 MT during the mid-year forecast. The distribution by individual counties is provided in Table 22 below.

Table 22: Production estimates 2022/23 by county and grower category

No.	County	Arabica		Robusta	Total
		Estate	Co-op	Co-op	
1	Kiambu	9,076	1,532	-	10,607
2	Kirinyaga	454	7,941	-	8,395
3	Nyeri	681	6,240	-	6,920

No.	County	Arabica		Robusta	Total
		Estate	Co-op	Co-op	
4	Murang'a	1,021	4,538	-	5,559
5	Kericho	737	3,630	-	4,368
6	Bungoma	91	2,950	1	3,041
7	Meru	227	2,042	-	2,269
8	Embu	227	2,269	-	2,496
9	Nandi	227	1,134	-	1,361
10	Machakos	511	908	-	1,418
11	Kisii	681	511	-	1,191
12	Tharaka Nithi	91	851	-	942
13	Nyamira	340	454	-	794
14	Trans Nzoia	908	113	-	1,021
15	Nakuru	454	284	-	737
16	Baringo	23	147	-	170
17	Uasin Gishu	113	23	-	136
18	Elgeyo Marakwet	34	68	-	102
19	Narok	113	5	-	118
20	Makueni	8	79	-	87
21	Migori	11	79	-	91
22	Kisumu	57	1	-	58
23	Bomet	23	17	-	40
24	West Pokot	1	40	-	40
25	Kakamega	14	17	-	31
26	Nairobi	17	-	-	17
27	Homa Bay	1	10	-	11
28	Laikipia	1	6	-	7
29	Kajiado	7	-	-	7
30	Busia	-	0	3	3
31	Vihiga	-	0	-	0
32	Siaya	1	-	1	2
	Total	**16,148**	**35,888**	**5**	**52,041**

Source: AFA-Coffee Directorate

Coffee sub-sector challenges and interventions

Over the years, the coffee sub-sector has faced challenges that have affected production and marketing. Although, the core mandate of AFA is to develop, regulate and promote the scheduled crops, addressing the challenges requires a multiple stakeholder approach. Table 23 below summarizes some of the challenges and interventions in the coffee sub-sector in Kenya.

Table 23: Coffee Sub-Sector Challenges and Interventions

No.	Challenges	Ongoing Interventions	Proposed interventions
1.	High cost of Production	-Ministry of Agriculture and Livestock Development initiated a fertilizer Subsidy program to support coffee farmers	-Lobby for sustained and expanded input subsidy programs for coffee farmers
2.	Low production and productivity	-Sensitization on adoption of Technology, Innovations and Management Practices (TIMPs)	- Support to upscale sensitization - Lobby for sustained and expanded input subsidy programs for coffee farmers
3.	Climate change	-Sensitization of farmers and stakeholders on Climate Smart Production Practices including use of shade trees, mulching, eco pulpers	-Increase budgetary support the Directorate to increase the number of sensitization forums for stakeholders to cover more Counties
4.	Encroaching of land under coffee production by the real estate and competition from other sectors	-Promotion of intensive production to increase production per unit through sensitization and capacity building on adoption of Technology, Innovations and Management Practices (TIMPs) for the coffee value chain as developed by KARLO	-Provide Budgetary support for the Directorate to promote expansion of coffee in the West of Rift through provision of coffee seedlings
5.	Aging Coffee Farming Community	-Sensitization of the youth to participate in the coffee value chain -Identification of business opportunities across the value chain- Entrepreneurs guide in for the coffee industry developed	-Budgetary support to upscale sensitization
6.	Exceedance of Maximum Residue Levels (MRLs) in coffee for exports	-Guidelines on safe use of pesticides developed and shared with County Governments -Sensitization of stakeholders on the challenge of MRLs	-Budgetary support to upscale sensitization and County engagements -Support to enhance testing capacity at the Directorate to include testing for chemical residues in addition to the current organoleptic tests being done
7.	Inadequate affordable credit	-Government established Commodities Fund to finance coffee farmers -The Cherry advance fund was established under the New KPCU	-Board to facilitate stakeholder engagements for policy formulation for more efficient and well-tailored products for coffee farmers
8.	Fluctuating global coffee prices	-Enhanced promotion of Kenyan Coffee in the emerging markets in Asia and Africa -Initiatives to promote domestic coffee consumption	-Enhance budgetary support for marketing and promotion initiatives
9.	EU Regulations	-Multi- Sectoral and Agency Technical Committee to do geo mapping of coffee growing farms coordinates	-Board to lobby Ministry of Foreign and Diaspora Affairs and Trade on bilateral trade issues

Source: AFA-Coffee Directorate

SUGAR

Chapter 2: Sugar Industry

Introduction

The sugar sub-sector is critical to Kenya's agricultural sector and the national economy. It supports over eight million Kenyans who draw their livelihoods directly from sugar production and indirectly through linked enterprises in supply of goods, related services and social amenities. The industry is the socio-economic backbone of the sugarcane growing communities supporting about 300,000 out-grower farmers, spread over 14 counties. Unlike leading sugar producing countries where sugarcane production is dominated by highly mechanized and irrigated large scale plantations, Kenyan production is characterized by smallholders with average land holding of 0.7 Ha, low level of mechanization and rain-fed farming.

Additionally, the sector provides raw materials for downstream industries for the production of ethanol, power, beverages, pharmaceuticals and confectioneries, among others.

The Kenyan sugar industry has 16 sugar factories namely: Chemelil, Muhoroni, Nzoia, South Nyanza, Soin, Miwani, West Kenya, Mumias, Olepito, Busia, Butali, Kibos, Sukari, Transmara, Naitiri and Kwale. During the review period, January-December 2022 Miwani and Soin sugar companies remained out of operation.

The total sugarcane milled increased by 13.5 percent to 8,676,181 MT in 2022 from 7,647,224 MT in 2021 resulting in an all-time high production of 796,554 MT of sugar, 13.8 percent up from 700,241 MT produced in 2021.

2.1 Area under Sugarcane

Total area under sugarcane as at 31st December 2022 was 242,508 Ha, up 8.7 percent from 223,006 Ha recorded in the same period 2021. The area under sugarcane was spread across 14 counties: Kakamega, Bungoma, Kisumu, Narok, Busia, Nandi, Homa Bay, Kericho, Migori, Trans Nzoia, Kwale, Uasin Gishu, Kisii and Siaya. The increase in acreage was notable in Kakamega, Busia and Migori counties.

The counties with the largest area under sugarcane with their percentage shares are: Kakamega (23.7 percent), Bungoma (16.97 percent), Kisumu (11.32 percent) and Narok (7.92 percent). The total number of contracted farmers involved in sugarcane growing in 2022 was 292,586 up 11.4 percent from 262,667 in 2021. For more details refer to Table 24.

Table 24: Area under Sugarcane production in Hectares, the percentage contribution per County and number of farmers

County	Area under cane (Ha)		% Area under cane contribution		Number of farmers	
	2021	2022	2021	2022	2021	2022
Kakamega	44,268	57,466	19.9	23.7	74,422	78,053
Bungoma	39,430	41,153	17.7	16.97	73,731	82,038
Kisumu	28,673	27,448	12.9	11.32	20,412	18,812
Narok	18,524	19,211	8.3	7.92	16,637	19,716
Busia	17,221	20,692	7.7	8.53	24,954	28,727
Nandi	17,175	17,227	7.7	7.1	12,696	13,495
Homabay	14,104	13,692	6.3	5.65	10,199	15,120
Kericho	10,625	9,661	4.8	3.98	10,385	8,823
Migori	10,326	16,976	4.6	7	11,143	21,390
Trans Nzoia	7,638	6,958	3.4	2.87	2,077	2,219
Kwale	7,382	7,467	3.3	3.08	245	245
Uasin Gishu	4,057	3,274	1.8	1.35	2,155	2,406
Kisii	2,475	648	1.1	0.27	2,190	983
Vihiga	569	-	0.3	0	1,051	
Siaya	539	635	0.2	0.26	370	559
TOTAL	**223,006**	**242,508**	**100**	**100**	**262,667**	**292,586**

Source: AFA - Sugar Directorate

The area under sugarcane in the nucleus estate accounted for 6 percent while 94 percent was covered by outgrower farmers. For more details, refer to Table 25.

Table 25: Area under sugarcane by factory 2022 (Ha)

Factory	Nucleus	Outgrowers*	Total
Chemelil	1,750	16,385	18,135
Muhoroni	1,393	14,125	15,518
Mumias	208	5,539	5,747

Factory	Nucleus	Outgrowers*	Total
Nzoia	2,361	16,078	18,439
South Nyanza	2,289	5,232	7,521
Kibos	791	8,642	9,433
Soin	-	2,809	2,809
Butali	-	24,717	24,717
West Kenya	-	45,972	45,972
Miwani	1,162	-	1,162
Sukari	-	24,268	24,268
Transmara	38	18,701	18,739
Kwale	4,033	3,434	7,467
Olepito	34	9,927	9,961
Busia	158	11,665	11,823
Naitiri	-	20,797	20,797
TOTAL	**14,217**	**228,291**	**242,508**
% CONTRIBUTION	**6**	**94**	**100**

**Note: the area does not include the non-contracted farmers*

Source: AFA - Sugar Directorate

Most sugar factories have seen an increase in area under sugarcane, with the exception of Nzoia, South Nyanza, West Kenya and Miwani zones. For more details, refer to Table 26 below.

Table 26: Area under Sugar Cane by Factory from 2018-2022 in Hectares

Factory	2018	2019	2020	2021	2022
Chemelil	17,005	16,905	18,186	18,012	18,135
Muhoroni	13,850	13,184	13,775	15,282	15,518
Mumias	13,034	1,925	198	274	5,747
Nzoia	20,084	18,046	18,775	18,918	18,439
South Nyanza	11,597	10,113	8,959	8,803	7,521
Kibos	6,277	8,013	7,393	8,087	9,433
Soin	1,825	1,822	1,915	2,799	2,809
Butali	15,526	14,913	19,749	24,021	24,717
West Kenya	38,868	46,716	48,011	59,048	45,972
Miwani	4,017	1,938	1,900	1,615	1,162
Sukari	11,986	15,447	17,710	21,251	24,268
Transmara	14,958	15,075	15,308	16,980	18,739
Kwale	9,488	9,488	6,763	7,287	7,467

Factory	2018	2019	2020	2021	2022
Olepito	7,942	8,875	9,013	9,612	9,961
Busia	15,943	14,978	12,858	11,017	11,823
Naitiri	-	-	-	-	20,797
Total	**202,400**	**197,438**	**200,513**	**223,006**	**242,508**

Source: AFA - Sugar Directorate

Area Harvested, Yield and Sugarcane Deliveries

In 2022, the total area harvested was 117,960 Ha, 26.4 percent up from 93,288 Ha recorded in 2021. The increase is mainly attributed to the improved sugar industry's requirement due to expansion of cane crushing capacities in some private mills. This was boosted by the increased availability of mature cane during the first half of the year under review. For more details, refer to Table 27 below.

Table 27: Area harvested by Factory from 2018-2022 in Hectares

Factory	2018	2019	2020	2021	2022
Chemelil	4,971	1,143	6,956	7,134	5,071
Muhoroni	2,641	4,294	5,403	5,276	4,871
Mumias	2,175	-	-	-	1,880
Nzoia	8,230	4,191	7,136	6,137	3,361
South Nyanza	6,464	2,780	1,285	3,249	3,076
Kibos	2,717	1,916	2,894	3,517	4,111
Soin	-	-	-	-	-
Butali	11,204	8,656	13,273	10,977	13,092
West Kenya	18,000	22,977	12,337	15,158	14,898
Sukari	9,378	12,951	4,562	5,620	4,718
Transmara	3,910	4,587	21,366	28,149	39,121
Kwale	2,390	319	5,833	1,331	3,677
Olepito	1,000	3,422	3,229	3,498	3,646
Busia	-	4,288	5,406	3,242	4,101
Naitiri	-	-	-	-	12,336
Total	**73,080**	**71,524**	**89,680**	**93,288**	**117,960**

Source: AFA - Sugar Directorate

The average sugarcane yields in 2022 was 62.90 MT per Ha down 10 percent from 69.95 MT per Ha recorded in 2021, attributed to weak crop management and the harvesting of immature sugarcane.

Total sugarcane deliveries in 2022 were 8,799,769 MT, up 14.9 percent from 7,659,120 MT in 2021. The increase in sugarcane deliveries was primarily attributed to favorable weather conditions for sugarcane growth in most sugar growing zones. A total of 94 percent of sugarcane delivered for milling was supplied by out grower farmers while 6 percent was supplied by nucleus estates. For more details, refer to Tables 28 and 29 below.

Table 28: Cane deliveries by factory from 2018-2022 in Metric Tons

Factory	2018	2019	2020	2021	2022
Chemelil	226,481	42,587	349,343	347,844	260,889
Muhoroni	215,325	210,514	285,154	317,592	325,684
Mumias	136,586	-	-	-	113,289
Nzoia	393,429	184,254	433,446	350,133	194,204
South Nyanza	490,442	204,701	197,098	422,292	444,150
Kibos	826,404	657,898	937,925	797,758	1,136,852
Soin	-	-	-	-	-
West Kenya	934,042	1,054,505	1,430,999	1,943,199	2,134,133
Butali	703,633	562,141	895,794	752,008	929,519
Transmara	576,588	731,840	826,616	1,028,693	805,101
Sukari	533,988	633,230	624,235	973,980	952,967
Kwale	179,914	18,878	268,861	30,042	86,313
Olepito	45,325	130,520	150,556	188,468	227,751
Busia	-	174,034	410,871	507,111	407,124
Naitiri	-	-	-	-	781,794
Total	**5,262,157**	**4,605,102**	**6,810,898**	**7,659,120**	**8,799,769**

Source: AFA - Sugar Directorate

Table 29: Area under Sugarcane, Area Harvested, Production, Average yield and Sugarcane prices from 2018-2022

Year	2018	2019	2020	2021	2022
Area under sugar cane (Ha)	202,400	197,438	200,513	223,006	**242,508**
Area harvested (Ha) *	73,080	71,525	89,680	93,288	**117,960**
Total cane deliveries (production) in MT	5,262,157	4,605,102	6,810,898	7,659,120	**8,799,769**
Cane delivered by non-					

Year	2018	2019	2020	2021	2022
contracted farmers in MT	1,233,137	938,838	1,264,169	1,133,314	**1,379,960**
Average yield (MT/Ha) **	55	51	62	70	**63**
Average cane prices paid to Farmers (KES/MT)	3,988	3,815	3,707	3,912	**4,514**
* Exclude area harvested by non-contracted farmers ** Yield calculated = (Total cane delivery-cane by non-contracted farmers)/area harvested					

Source: AFA - Sugar Directorate

2.2 Factory Performance

Total sugarcane crushed by the industry in 2022 was 8,676,181 MT up 13.5 percent from 7,647,224 MT in 2021. This is mainly attributed to commencement of operations at the West Kenya (Naitiri Plant) as well as increased sugarcane availability across all the sugarcane growing zones. As a result, sugar made increased by 14.1 percent to 800,436 MT in 2022 from 701,552 MT in 2021. For more information refer to Tables 30 and 31 below.

Table 30: Sugarcane crushed by Factory from 2018-2022 in Metric Tons

Factory	2018	2019	2020	2021	2022
Muhoroni	225,094	187,957	279,738	313,539	**319,615**
Chemelil	228,052	43,487	346,841	353,616	**263,744**
Mumias	88,201	-	-	-	**113,289**
Nzoia	393,118	185,844	424,598	353,179	**200,016**
South Nyanza	508,623	233,722	220,550	430,076	**487,051**
Soin	-	-	-	-	**-**
Kibos	832,272	653,443	1,000,076	791,243	**1,136,253**
Butali	707,301	574,338	895,241	751,035	**929,636**
West Kenya	925,894	1,048,270	1,464,241	1,943,199	**1,887,785**
Sukari	518,534	633,229	617,810	972,556	**936,550**
Transmara	730,632	760,179	805,627	1,031,187	**937,203**
Kwale	172,312	18,020	264,352	30,042	**90,950**
Olepito	53,726	97,603	151,093	176,159	**133,500**
Busia	-	168,620	410,036	501,393	**407,994**
Naitiri	-	-	-	-	**832,595**
Total	**5,383,759**	**4,604,712**	**6,880,203**	**7,647,224**	**8,676,181**

Source: AFA - Sugar Directorate

Table 31: Sugar made by Factory from 2018-2022 in Metric Tons

Factory	2018	2019	2020	2021	2022
Muhoroni	15,981	11,964	18,060	20,671	**23,971**
Chemelil	15,089	2,606	25,362	22,053	**17,168**
Mumias	4,751	-	-	-	**9,441**
Nzoia	27,541	13,003	27,274	21,578	**12,921**
South Nyanza	40,726	12,448	14,373	32,627	**41,206**
Kibos	66,751	53,568	85,507	67,880	**95,337**
Soin	-	-	-	-	**-**
Butali	65,468	53,577	87,226	79,787	**101,637**
West Kenya	71,283	85,085	128,786	188,512	**175,632**
Sukari	44,383	54,067	55,436	96,156	**90,721**
Transmara	67,275	72,504	78,701	107,347	**93,670**
Kwale	17,506	339	10,877	1,477	**4,656**
Olepito	4,051	8,044	11,926	15,741	**11,691**
Busia	-	10,912	31,978	47,723	**37,140**
Naitiri	-	-	-	-	**85,245**
Total	**440,805**	**378,117**	**575,506**	**701,552**	**800,436**

Source: AFA - Sugar Directorate

Cane to Sugar Ratio by Factory from 2018-2022 (TC/TS)

The industry sugarcane to sugar ratio improved from 10.90 in 2021, to 10.84 in 2022. Butali and Naitiri sugar factories had the best sugar recovery rates, with TC/TS ratios of 9.15 and 9.77 respectively. Transmara also performed impressively with a TC/TS of 10.01. Kwale sugar factory, on the other hand, had the poorest sugar recovery with a TC/TS of 19.53, which was attributed to milling of over mature sugarcane with very low sucrose content. Refer to Table 32 below, for more details.

Table 32: Cane to Sugar Ratio by Factory from 2018-2022 (TC/TS)

Factory	2018	2019	2020	2021	2022
Chemelil	15.11	16.69	13.68	16.03	15.36
Muhoroni	14.09	15.71	15.49	15.17	13.33
Mumias	18.56	-	-	-	12
Nzoia	14.27	14.29	15.57	16.37	15.48
South Nyanza	12.49	18.78	15.35	13.18	11.82
Kibos	12.47	12.2	11.7	11.66	11.92
Butali	10.8	10.72	10.26	9.41	9.15
West Kenya	12.99	12.32	11.37	10.31	10.72
Sukari	11.68	11.71	11.14	10.11	10.32
Transmara	10.86	10.48	10.24	9.61	10.01
Kwale	9.84	53.13	24.3	20.34	19.53

Factory	2018	2019	2020	2021	2022
Olepito	13.26	12.13	12.67	11.19	11.42
Busia	-	15.45	12.82	10.51	10.99
Naitiri	-	-	-	-	9.77
Weighted - average	**12.21**	**12.18**	**11.96**	**10.9**	**10.84**

Source: AFA - Sugar Directorate

Sugar Production, Sales and Closing Stocks

Sugar Production

A total of 796,554 MT of sugar was produced in 2022, the highest ever recorded in the sector. This was 14 percent higher than 700,241 MT realized in 2021. The increase is attributed to improved sugarcane supply in all sugar zones and the coming into operations of the Naitiri and Mumias sugar mills. During the year 2022, Chemelil, Nzoia, West Kenya, Transmara, Sukari, Olepito and Busia sugar companies recorded a decline in sugar production. Although, West Kenya had a decline in production, it was still the leading producer with 174,671 MT (22 percent) compared to 188,512 MT in 2021. Other leading producers in order of performance were Butali 99,537 MT (12.5 percent), Kibos 94,943 MT (11.9 percent), Transmara 93,670 MT (11.8 percent), Sukari 90,939 MT (11.4 percent), and Naitiri 85,245 MT (10.7 percent). For more information refer to Table 33 below.

Table 33: Sugar Production (Bagged) by Factory from 2018-2022 in Metric Tons

Factory	2018	2019	2020	2021	2022	% Contribution 2022
Chemelil	14,598	2,863	24,328	21,681	16,697	2.1
Muhoroni	14,886	10,601	17,464	19,711	23,300	2.9
Mumias	4,768	-	-	-	9,441	1.2
Nzoia	28,195	12,582	26,977	21,015	12,926	1.6
South Nyanza	40,149	12,573	13,908	32,786	41,228	5.2
Kibos	66,599	53,249	85,339	68,139	94,943	11.9
Soin	-	-	-	-	-	0.0

Factory	2018	2019	2020	2021	2022	% Contribution 2022
Butali	65,292	53,577	87,227	79,787	99,537	12.5
West Kenya	107,350	136,305	151,802	188,512	174,671	21.9
Sukari	60,401	68,657	63,146	96,156	90,939	11.4
Transmara	67,040	72,011	78,761	107,233	93,670	11.8
Kwale	17,570	339	10,875	1,477	4,656	0.6
Olepito	4,249	8,043	11,933	15,741	11,691	1.5
Busia	-	10,135	31,978	48,003	37,609	4.7
Naitiri	-	-	-	-	85,245	10.7
Total	**491,097**	**440,935**	**603,738**	**700,241**	**796,554**	**100.0**

Source: AFA - Sugar Directorate

Sugar Sales and Closing Stocks

Total sugar sales in 2022 were 792,203 MT, up 14 percent from 695,348 MT in 2021, attributed to a rising demand for local sugar and low sugar imports.

Total closing stocks of sugar held by all mills as at the 31st December 2022 was 10,742 MT compared to 6,278 MT in the same period of 2021. Sukari ended the year with the highest closing stock while Muhoroni had the least closing stock. For more details, refer to Table 34.

Table 34: Comparative Sugar Production, Sales and Closing Stocks in 2021 and 2022 in Metric Tons

SUGAR FACTORY	PRODUCTION		SALES		CLOSING STOCKS		
	2021	2022	2021	2022	2021	2022	% Share 2022
Muhoroni	19,711	23,300	19,537	23,274	0	54	0.52
Chemelil	21,681	16,697	21,611	16,518	109	271	2.59
Mumias	-	9,441	-	8861	-	578	5.52
Nzoia	21,015	12,926	20,971	12,706	74	212	2.02
Sony	32,786	41,228	32,726	40,718	92	601	5.74
West Kenya	188,512	174,671	187,993	174,219	921	1,345	12.84
Kibos	68,139	94,943	67,420	95,272	553	225	2.15
Butali	79,787	99,537	79,030	99,652	880	766	7.31
Transmara	107,233	93,670	105,267	94,643	1,949	979	9.35
Sukari	96,156	90,939	95,405	89,844	752	1,848	17.65
Kwale	1,477	4,656	4,025	2,996	-	1,659	15.84

SUGAR FACTORY	PRODUCTION		SALES		CLOSING STOCKS		
	2021	2022	2021	2022	2021	2022	% Share 2022
Olepito	15,741	11,691	14,971	11,860	787	620	5.92
Busia	48,003	37,609	46,392	37,601	161	108	1.03
Naitiri	-	85,245	-	84,039	-	1,206	11.52
TOTAL	**700,241**	**796,554**	**695,348**	**792,203**	**6,278**	**10,472**	**100**

Source: AFA-Sugar Directorate

Molasses Production, Sales and Closing Stocks

Total molasses production in 2022 was 333,989 MT, up 13 percent from 295,574 MT in 2021, attributed to improved performance mainly by private millers.

Total molasses sales in 2022 were 331,632 MT, up 9 percent from 304,088 MT in 2021. Closing stocks of molasses as at 31st December 2022 totaled 11,075 MT, compared to 8,821 MT in 2021. For more details, refer to Table 35 below.

Table 35: Molasses Production, Sales and Closing Stocks from 2018-2022 in Metric Tons

Year	Production	Domestic sales	Closing stocks
2018	211,064	193,694	**16,604**
2019	186,257	189,038	**16,120**
2020	269,772	262,792	**17,260**
2021	295,574	304,088	**8,821**
2022	**333,989**	**331,632**	**11,075**

Source: AFA-Sugar Directorate

Market Performance: Local Market

Sugarcane Prices

Sugarcane prices ranged between KES 4,100-4,584 per MT in the period January to December 2022. The first quarter of the year recorded the lowest cane price at an average of 4,372 per MT. Subsequent months saw an increase in sugarcane prices with a weighted average price of KES 4,534 per MT from April to June 2022. The period July to August saw a slight increase in price to KES 4,563 per MT. Prices continued to increase throughout the last quarter with a weighted average price of KES 4,584 per MT. Overall, sugarcane prices in 2022 averaged KES 4,514 per MT, up 15.45 percent from KES 3,910 per MT in 2021. It should be noted that sugarcane prices are influenced by ex-factory sugar prices. For more details, refer to Figure 2.

Ex-factory Sugar Prices

Weighted ex-factory sugar prices began the year at an average of KES 5,234 per 50 Kg bag, increasing to 5,560 per 50 Kg bag in February 2022. March saw a significant drop to average at KES 5,153 per 50 Kg bag. Subsequent months saw a fairly stable market price, picking slightly in May at KES. 5,261 per 50 Kg bag. Prices fell slightly in June, trading at KES 5,199 per 50 Kg bag, and to a further KES. 5,158 per 50 Kg bag in July. The prices resumed to an upward trend in subsequent months, reaching a high of KES 6,713 per 50 Kg bag in December 2022. High prices at the end of the year are typical due to the festive season.

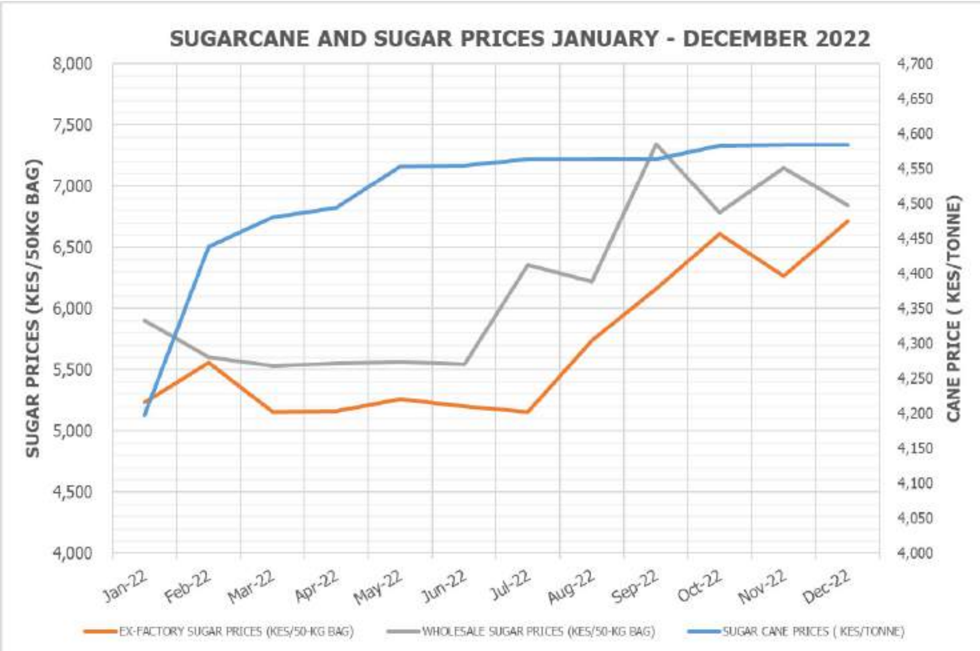
Overall, the average ex-factory sugar price for the year was KES 5,669 per 50 Kg bag up 22 percent from KES 4,645 recorded in the same period in 2021. For more details, refer to Figure 2.

Wholesale Sugar Prices

Wholesale sugar prices in January averaged KES 5,900, then fell to KES 5,600 per 50 Kg bag in February. From the month of March to June 2022, the prices remained fairly stable. In July the prices spiked to KES 6,356 per 50 Kg bag, 14.6 percent up from the previous month, attributed to speculative purchasing due to the national elections scheduled for August 2022. Following a peaceful election period, market forces and tensions eased resulting in a slight decrease in prices, with the month of August ending at KES 6,218 per 50 Kg bag. Prices surged to KES 7,341 per 50 Kg bag in September, owing to a decline in sugar stocks held by millers and diminished sugar imports. Prices then fell to KES 6,787 in October before rising at the end of November to KES 7,149 per 50 Kg bag. Prices then fell to KES 6,844 in December.

During the review period, wholesale prices ranged between KES 5,534 to KES 7,341 per 50 Kg bag, leading to an overall average price of KES 6,199, 25 percent higher, from KES 4,969 recorded in 2021. For more details, refer to Figure 2.

Figure 2: Sugarcane and Sugar Prices January – December 2022



Source: AFA-Sugar Directorate

Retail Sugar Prices

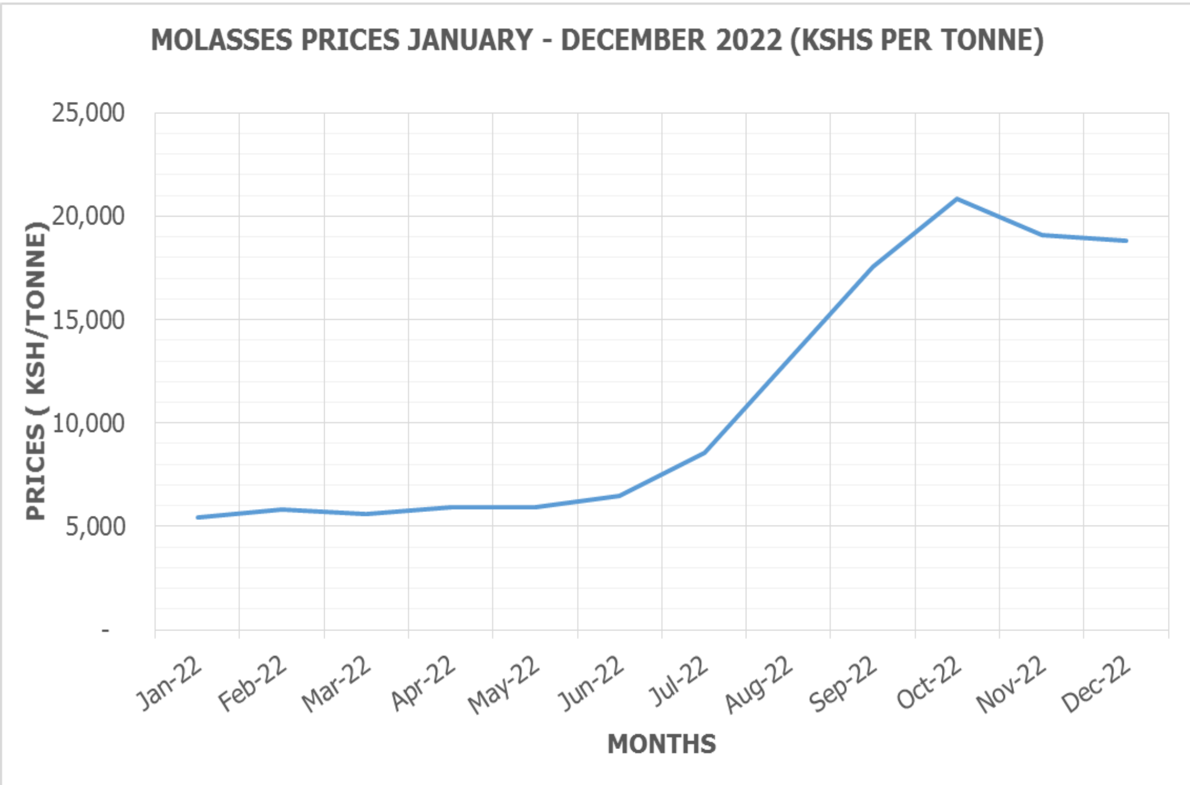
Retail sugar prices are dependent on the stocking/wholesale prices. Retail sugar prices in January averaged of KES 130 per Kg. Prices increased slightly to KES 132 per Kg in February 2022, before dropping in March to trade at an average price of KES 130 per Kg. For two consecutive months, April and May, the price remained at KES 129 per Kg, dropping by one shilling in June 2022. The retail price rose in the two consecutive months, reaching KES 132 and 140 per Kg in July and August, respectively. Thereafter, there was a sustained increase in retail prices to hit a high of KES. 158 per Kg between September to November. The end of the year saw a slight reduction in prices to an average of KES 155 per Kg in December. The overall average sugar price per Kg in 2022 was KES 140 per Kg, 22.80 percent higher than KES. 114 per Kg in 2021.

Molasses Prices

Molasses prices in January averaged KES 5,453 per MT increasing to KES 5,828 per MT in February, and dropping to KES 5,578 per MT in March. The subsequent months saw a steady increase in molasses prices, from KES 5,917 per MT in April to KES 20,858 per MT in October. The succeeding two months saw a slight drop in prices to close the year at an average price of KES 18,828 per MT.

During the review period, molasses prices ranged between KES 4,508 - KES 24,223 per MT. The overall average molasses was KES 11,362 per MT, an increase from KES 4,535 per MT recorded in 2021. For more details, refer to Figure 3.

Figure 3: Molasses Prices January – December 2022 (KES per MT)



Source: AFA-Sugar Directorate

Foreign Trade

Sugar Imports and CIF Values

Cumulative sugar imports in 2022 were 320,708 MT, a decline of 24.78 percent from 426,334 MT shipped over the same period in 2021. This was attributed to a general decline in available stocks in the world market.

Imports of mill white/brown sugar were 133,139 MT down 47.2 percent from 252,180 MT during the same period in 2021. In order to meet industrial sugar requirements, 187,569 MT of white refined sugar were imported, 7.7 percent up from 174,154 MT imported in 2021. For more details, refer to Table 36.

Table 36: Sugar Imports for 2021 and 2022 by Type in Metric Tonnes

TYPE	2021	2022
Brown/Mill White	252,180	133,139
White Refined	174,154	187,569
TOTAL	**426,334**	**320,708**

Source: AFA-Sugar Directorate

C.I.F Value

In 2022, the C.I.F Mombasa landed prices for imported mill white/brown sugar averaged KES 76,668 per MT, compared to KES 73,126 per MT for white refined sugar, a difference of KES 3,542 per MT. White refined sugar is generally cheaper than table sugar because most of it is imported under the Duty Remission Scheme.

Overall, the C.I.F value for both refined and table sugar averaged KES 74,596 per MT in 2022, up 23 percent from KES 60,657 per MT in 2021. For more details, refer to Table 37 below.

Table 37: Sugar Imports by Type and Values from 2018-2022

Year	Mill white/brown sugar			White refined sugar			Total imports		
	Quantity (MT)	C.I.F value (KES)	C.I.F Unit value (KES/MT)	Quantity (MT)	CIF value (KES)	C.I.F unit value (KES/MT)	Quantity(MT)	C.I.F value (KES)	C.I.F unit value (KES/MT)

2018	122,121	7,574,813,604	62,027	162,048	8,075,860,121	49,836	284,169	15,650,673,725	**55,075**
2019	285,093	15,913,322,848	55,818	173,538	7,887,642,173	45,452	458,631	23,800,965,021	**51,896**
2020	309,408	17,947,527,049	58,006	132,985	6,519,788,209	49,027	442,393	24,467,315,258	**55,307**
2021	252,180	16,004,911,150	63,466	174,154	9,855,287,039	56,589	426,334	25,860,198,189	**60,657**
2022	**133,139**	**10,207,443,124**	**76,668**	**187,569**	**13,716,157,673**	**73,126**	**320,708**	**23,923,600,797**	**74,596**

Source: AFA-Sugar Directorate

The value of sugar imports in 2022 were valued at KES 23.92 billion compared to KES 90.31 billion for locally produced sugar. It is worth noting that the value for locally produced sugar increased by 61 percent from KES 56.12 billion achieved in 2021. The increase was due to more sugar being produced in 2022 and was well supported by the rising sugar prices. For more details, refer to Table 38 below.

Table 38: Sugar production, imports and values from 2018-2022

YEAR	Local Sugar			Sugar Imports			Total Value KES (local & imports) in Billion
	sugar production (MT)	Ex-Factory sugar price (KES/MT) *	Sugar Value (in Billions KES)	Sugar Imports (MT)	CIF	Sugar Value (in Billions	
2018	491,097	74,684	**36.68**	284,169	55,075	**15.65**	**52.33**
2019	440,935	70,241	**30.97**	458,631	51,896	**23.8**	**54.77**
2020	603,788	73,601	**44.44**	442,393	55,307	**24.47**	**68.91**
2021	700,241	80,154	**56.12**	426,334	60,657	**25.86**	**81.98**
2022	796,553	113,380	**90.31**	320,708	74,596	**23.92**	**114.23**
*** Average sugar prices excluding VAT and Levies**							

Source: AFA-Sugar Directorate

Sugar Exports

Despite Kenya being a net sugar importer, there were 359 MT of sugar exported in 2022 compared to 1,196 MT in 2021. Most sugar exports were destined for the neighboring countries mainly Uganda, Rwanda, and Democratic Republic of Congo. For more details, refer to Table 39 below.

Table 39: Sugar and Sugar by-product exports 2018-2022 by type and destination

	COUNTRY OF DESTINATION	2018	2019	2020	2021	2022
i) SUGAR BY-PRODUCTS I.E JAGGERY & MOLASSES (MT)	Aircraft & Shipstores	0.36	0.30	0.17	0.24	0.46
	South Sudan	8.33	0.05	0.05	0.04	-
	Rwanda	11.28	2.18	-	3.71	3.91
	EPZ	-	5.00	-	-	-
	Sudan	0.05	-	-	-	-
	Australia	-	0.25	-	-	-
	Mali	-	-	-	-	0.01
	Democratic Republic of Congo	-	-	-	0.01	-
	Great Britain	0.30	-	-	-	-
	TOTAL	**20.31**	**7.78**	**0.21**	**4.01**	**4.38**
ii) BROWN / MILL WHITE SUGAR (MT)	Aircraft & Ship Stores	1.10	1.37	1.36	0.68	1.39
	South Sudan	13.70	7.95	4.80	2.56	6.02
	Democratic Republic of Congo	-	0.95	3.00	0.07	29.57
	Uganda	25.00	66.03	53.84	50.28	93.43
	Rwanda	-	82.90	133.97	127.71	227.50
	Tanzania	-	-	3.33	-	-
	Burundi	-	-	0.57	-	0.58
	United Arab Emirates	-	-	0.03	-	-
	South Africa	-	-	-	0.11	0.19
	Mozambique	-	-	-	0.06	-
	Algeria	-	-	-	0.03	-
	Sweden	-	0.06	-	-	-
	Singapore	-	-	-	-	0.11
	Indonesia	-	-	-	0.03	0.04
	Japan	-	-	-	0.05	-
	India	-	-	-	0.02	0.05

	COUNTRY OF DESTINATION	2018	2019	2020	2021	2022
	Niger	-	-	-	0.08	0.29
	Ethiopia	-	-	-	-	0.02
	Germany	-	-	-	0.55	0.02
	Botswana	-	-	-	0.03	-
	China	-	-	-	-	0.04
	TOTAL	**39.80**	**159.27**	**200.89**	**182.25**	**359.23**
iii) REFINED WHITE SUGAR (MT)	Aircraft & Ship Stores	-	0.2	0.1	0.1	0.0
	Tanzania	1,847.6	601.9	-	250.8	-
	Uganda	39.1	12.1	-	506.3	-
	EPZ	-	-	160.0	-	-
	Rwanda	39.1	-	14.1	254.4	-
	Oman	-	-	-	1.8	-
	Congo, Brazzaville	-	-	0.0	-	-
	South Sudan	0.0	1.8	0.0	-	0.2
	Djibouti	-	-	-	0.0	-
	TOTAL	**1,925.85**	**615.94**	**174.20**	**1,013.38**	**0.19**
TOTAL SUGAR EXPORTS (ii+iii)		**1,965.65**	**775.20**	**375.09**	**1,195.62**	**359.41**

Source: AFA-Sugar Directorate

In summary, the sugar industry has witnessed a steady increase in sugar production due to enhanced investments by both Government and private players. On the other hand, the increase in population has had an upward push in sugar consumption, outpacing domestic production. The country has not reached self-sufficiency in sugar production as several mills continue to operate inefficiently and below capacity. For this reason, the country has been bridging the deficit through the importation of sugar. For more details, refer to Table 40.

Table 40: Sugar Production, Consumption, Imports and Exports from 2018-2022 in Metric Tons

YEAR	PRODUCTION	CONSUMPTION	IMPORTS	EXPORTS
2018	491,097	1,008,703	284,169	**1,966**
2019	440,935	1,039,729	458,631	**775**
2020	603,788	1,072,414	442,393	**375**
2021	700,241	1,104,443	426,334	**1,196**
2022	**796,554**	**1,131,129**	**320,708**	**359**

Source: AFA-Sugar Directorate

WORLD SUGAR HIGHLIGHTS 2021

In 2021 Brazil was the largest world producer of Sugar (35.1 million MT), followed by India with 31.56 million MT. EU-27 accounted for 12.56 million MT. China and USA ranked fourth and fifth, with 9.91 million MT and 7.82 million MT, respectively. Thailand accounted for 7.62 million MT of global sugar output.

(*EU 27 data comprises of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden)*

In Africa, Egypt was the leading producer of sugar (2,720,000 MT), followed by South Africa with 1,893,090 MT. Kenya produced 700,241 MT of sugar and was ranked third. Uganda come forth with a total production of 622,243 MT. Eswatini was Africa's fifth-best producer, with 601,759 MT, while Nigeria was the leading country in Africa in the importation of sugar. For more details, refer to Table 41.

Table 41: Sugar Production, Consumption, Imports and Exports in Selected African Countries 2021 in Metric Tons

Country	Production	Consumption	Imports	Exports
Egypt	2,720,000	3,200,000	1,030,000	670,000
South Africa	1,893,090	1,696,098	412,638	490,524

Country	Production	Consumption	Imports	Exports
Kenya	700,241	1,104,443	426,334	1,196
Uganda	622,243	390,000	99,224	178,517
Eswatini	601,759	53,000	-	631,251
Ethiopia	473,000	660,000	330,678	-
Zambia	397,032	197,000	1,067	277,092
Zimbabwe	390,786	356,427	-	37,982
Morocco	388,393	1,197,414	1,492,338	652,306
Tanzania	382,467	500,000	188,181	-
Sudan	323,046	1,440,069	1,499,805	400,000
Malawi	276,162	187,470	-	109,016
Mozambique	271,836	186,969	-	128,245
Mauritius	245,603	29,582	115,154	329,531
Senegal	145,000	295,000	126,710	1,121
Angola	118,000	395,000	281,167	-
Madagascar	89,935	283,004	197,339	4,269
Congo	83,231	430,000	330,789	-
Nigeria	34,150	1,567,653	1,567,653	-
Burkina Faso	30,000	115,000	77,880	-
Burundi	24,000	58,000	23,964	9
Somalia	23,000	258,000	748,927	525,000
Rwanda	10,000	96,000	82,989	-
Algeria	-	1,800,000	2,459,908	545,744
Ghana	-	370,000	432,874	65,004

Source: ISO 2021

World Sugar Market 2022

In the year 2022, the Spot Price for raw sugar (the ISA daily price) began the year at a monthly average of 18.22 cents per lb (USD 401.68 per MT), falling to a monthly average of 17.86 cents per lb (USD 393.74 per MT) in February. Prices rose in March to a monthly average of 19.05 cents per lb (USD 419.98 per MT). The highest Price for the year 2022 was recorded in April at a monthly average of 19.64 cents per lb (USD 432.98 per MT). Prices fell steadily between May and October, with lowest price recorded in October 2022, at a monthly average of 17.54 cents per pound (USD 386.69 per MT). The period ended December 2022, at an average of 18.93 cents per lb (USD 417.33 per MT). Overall, the year ended with an annual average of 18.50 cents per lb (USD 407.76 per MT), a 5 percent increase from the previous year's average of 17.67 cents per lb (USD 389.44 per MT).

The ISO White Sugar Price Index followed a similar pattern to that of raw sugar. The year 2022 began with a monthly average price of USD 494.37 per MT. The ISO White Sugar Price Index recorded the lowest price of the year 2022 in February at an average price of USD 488.18 per MT. The Spot price for white sugar recorded a non-definite trend throughout the year with the highest price recorded in June at an average of 549.47 per MT. The year ended with a price of USD 540.77 per MT. Overall, the annual average price in 2022 was USD 528.05 per MT, up from USD 471.10 per MT the previous year, representing a 12 percent increase.

Challenges facing the Sugar Industry

Some of the challenges facing the sugar industry are:

1. Delayed cane harvesting when there is a lot mature cane in a milling zone.
2. Delayed payment of cane proceeds by some mills especially the Government owned mills.
3. Non-adherence of timely lifting of all harvested cane to the mill.
4. Non-availability of affordable inputs when needed.
5. Delayed factory maintenance leading to frequent unscheduled factory stoppages and low sugar recoveries.
6. Poor state of roads in the sugar zone (feeder roads) which result to increased cane spillage and high maintenance costs of haulage fleets.

MIRAA, PYRETHRUM AND OTHER INDUSTRIAL CROPS

Chapter 3. Miraa, Pyrethrum & Other Industrial Crops

MPOID is mandated to promote, regulate and develop miraa, pyrethrum and bixa value chains in the country.

3.1 Pyrethrum

Introduction

Pyrethrum is grown in 18 counties namely: Meru, Nyandarua, Nyeri, Kiambu, Trans Nzoia, Uasin Gishu, Bungoma, West Pokot, Elgeyo Marakwet, Nandi, Baringo, Laikipia, Nakuru, Narok, Kericho, Bomet, Kisii and Nyamira.

Area under Pyrethrum

In the period under review, the total acreage under the crop was 4,000 acres an increase of 223 acres from 3,777 acres recorded in 2021. The increase in acreage was as a result of government support in the purchase and distribution of seedling program in the pyrethrum growing counties as well as favorable climatic conditions. Nakuru county had the largest percentage of area under pyrethrum at 29.9 percent followed by Nyandarua and West Pokot at 19.6 and 17.7 percent respectively. For more details, refer to Table 42.

Table 42: Area under Pyrethrum and Percentage Contribution by County

County	2018	2019	2020	2021	2022	% Contribution by County 2022
Nakuru	2,927	2,927	1,722	914	1,197	**29.9**
Nyandarua	155	511	539	1974	783	**19.6**
West Pokot	2,200	2,200	2,200	120	708	**17.7**
Bomet	70	60	60	209	359	**9.0**
Nyeri	65	33	10	5	245	**6.1**
Kericho	112	116	112	128	193	**4.8**
Nyamira	14	23	23	71	180	**4.5**
Kiambu	15	6	6	100	102	**2.6**
Meru	50	21	9	7	66	**1.7**
Laikipia	100	65	65	32	42	**1.1**

County	2018	2019	2020	2021	2022	% Contribution by County 2022
Baringo	65	62	68	92	31	**0.8**
Kisii	70	660	660	14	29	**0.7**
Elgeyo Marakwet	120	678	1,250	34	25	**0.6**
Uasin Gishu	40	678	809	17	20	**0.5**
Narok	53	209	200	40	15	**0.4**
Nandi	5	5	2	6	2	**0.1**
Trans Nzoia	2	14	12	3	1	**0.0**
Bungoma	7	12	12	11	2	**0.1**
Total	**6,070**	**8,280**	**7,759**	**3,777**	**4,000**	**100.0**

Source: AFA-Miraa, Pyrethrum and Other Industrial Crops Directorate

Pyrethrum Dry Flower Deliveries

Pyrethrum Dry flowers delivered increased by 88.2 percent from 500,564 Kgs in 2021 to 941,872 Kgs in 2022 attributed to planting material distribution efforts by the County Governments, processors, individual propagators, inter-farm and other industry stakeholders. Nakuru county produced the highest percentage of dry flowers at 48 percent followed by Nyandarua and West Pokot at 21.8 and 12 percent respectively. For more details, refer to Table 43.

Table 43: Pyrethrum Dry flower deliveries for 2018-2022

County	2018	2019	2020	2021	2022	% Contribution 2022
Nakuru	59,293	147,319	194,539	261,320	452,430	**48.0**
Nyandarua	13,112	7,801	35,250	121,901	204,939	**21.8**
Bomet	10,864	3,523	5,152	32,603	112,566	**12.0**
West Pokot	64,267	110,728	20,001	44,980	61,604	**6.5**
Kericho	4,444	5,637	669	15,176	49,465	**5.3**
Laikipia	1,655	5,033	1,385	10,123	17,836	**1.9**
Nyeri	1,791	3,272	4,341	1,296	11,753	**1.2**
Meru	187	2,517	2,410	622	10,122	**1.1**
Uasin Gishu	6,860	2,013	5,256	4,218	4,349	**0.5**
Elgeyo Marakwet	5,414	1,955	895	1,078	4,010	**0.4**

County	2018	2019	2020	2021	2022	% Contribution 2022
Baringo	3,377	3,272	684	1,750	3,813	**0.4**
Narok	1,905	2,677	1,197	1,297	3,215	**0.3**
Kisii	9,910	3,523	1,203	1,540	3,067	**0.3**
Nyamira	2,888	705	891	1,382	1,872	**0.2**
Kiambu	1,577	755	1,191	701	688	**0.1**
Nandi	103	1,207	82	162	83	**0.0**
Bungoma	161	352	9,750	401	60	**0.0**
Trans Nzoia	23	604	18	14	0	**0.0**
Total	**187,831**	**302,893**	**284,914**	**500,564**	**941,872**	**100.0**

Source: AFA-Miraa, Pyrethrum and Other Industrial Crops Directorate

The value of dry flowers increased from KES 106.7 million in 2021 to KES 235.4 million in 2022 attributed to increase in average farmgate prices from KES 213 per Kg to KES 250 per Kg. Refer to Table 44 for more details.

Table 44: Dry Pyrethrum flowers Delivered and Value 2018-2022

Year	Unit	2018	2019	2020	2021	2022
Production (dry flowers)	MT	187.9	303	284.9	505.5	941.8
Price	KES/Kg	151.9	217.7	200	213	250
Value	KES (millions)	28.5	68.5	57	106.7	235.4

Source: AFA- Miraa, Pyrethrum and Other Industrial Crops Directorate

Pyrethrum Market Performance

The main pyrethrum product is PRE-which is used for the formulation of pesticides. In the period under review a total of 17.54 MT was produced valued at KES 522.96 million against 11.5 MT produced in 2021 worth KES 287.5 million attributed to increased raw material for the processing plants. Refer to Table 45 below, for more details.

Table 45: PRE Price and Value

Year		2018	2019	2020	2021	2022
PRE	MT	3.8	7.4	5.7	11.5	17.54
Price	KES/Kg	24,980.19	24,999.26	23,151.35	25,000	29,815.27
Value	KES (millions)	94.92	184.99	131.96	287.5	522.96

Source: AFA- Miraa, Pyrethrum and Other Industrial Crops Directorate

NUTS AND OIL CROPS

Chapter 4: Nuts and Oil Crops

Introduction

The nuts and oil crops sub-sector has a huge potential to contribute towards food security and manufacturing through job creation. There are 13 scheduled nuts and oil crops namely cashewnuts, coconut, sesame/simsim, sunflower, macadamia, canola/rape seed, groundnuts, oil palm, bambara nuts, jojoba, safflower, castor and linseed.

4.1 Coconut

4.1.1 Agriculture Information

The drought conditions along the coastal belt where coconuts are predominant has negatively affected the coconut subsector. The four consecutive failed rain seasons has led a significant drop in production and retardance of inflorescence which is critical in toddy, tender coconut and mature nuts development. Although coconut is considered resilient and can survive some drought duration, yields are in such situations severely depressed. As a result of the drought therefore, young and bearing age coconut trees have dried up in the last two years. The losses reported have significantly reduced the tree population along the coast. A rapid field assessment carried out by the Nuts and Oil Crops Directorate in March, 2023 to ascertain the extent of the loss established that Rabai Sub County in Kilifi County is the most affected, the tree population in the Sub County was reported to have declined by more than 40 percent. Kaloleni, Kilifi North, Msambweni and Lunga Lunga Sub Counties have also lost a significant coconut tree population estimated at between 15 percent and 20 percent.

The area under coconut reduced by 4,279 Ha from the 77,565 Ha reported in 2021 to 73,286 Ha which is a 6 percent drop in 2022. Similarly, there was a marked reduction in the quantity of nuts produced from 86,554 MT in 2021 to 71,722 MT in 2022 valued at KES 8.23 billion which is a major increase in value from KES 5.52 billion reported in 2021. The increment in the value was mainly due to increased farm gate prices reported during the period. For more details, refer to Table 46, 47 and 48.

Table 46: Area under Coconut, Production and Value by County in 2022

County	Area (HA)		Quantity (MT)		Value (KES) Millions	
	2021	2022	2021	2022	2021	2022
Kilifi	35,664	32,602	39,640	30,126	2,378.40	**3,623.68**
Kwale	30,873	29,455	37,906	32,599	2,426.00	**3,679.08**
Lamu	9,864	10,038	5,584	6,142	446.70	**614.24**
Tana River	925	951	707	792	56.60	**79.08**
Mombasa	145	137	1,992	1,434	159.40	**175.68**
Taita Taveta	94	103	725	629	58.00	**62.63**
TOTAL	**77,565**	**73,286**	**86,554**	**71,722**	**5,525.10**	**8,234.39**

Source: AFA - Nuts and Oil Crops Directorate

Table 47: Area under Coconut and Production by County from 2018-2022

County	Area (Ha)					Production (MT)				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Kilifi	40,225	41,432	41,470	35,664	32,602	44,044	52,853	52,853	39,640	30,126
Kwale	30,895	31,358	31,384	30,873	29,455	39,175	46,227	46,227	37,906	32,599
Lamu	10,503	10,713	10,722	9,864	10,038	5,887	6,771	6,894	5,584	6,142
Tana River	1,050	1,066	1,070	925	951	741	822	822	707	792
Mombasa	151	156	158	145	137	1,953	2,344	2,344	1,992	1,434
Taita Taveta	97	99	102	94	103	759	873	873	725	629
TOTAL	**82,921**	**84,824**	**84,906**	**77,565**	**73,286**	**92,560**	**109,890**	**110,013**	**86,554**	**71,722**

Source: AFA - Nuts and Oil Crops Directorate

Table 48: Value of Coconut in 2018-2022

County	Value (KES) Millions				
	2018	2019	2020	2021	2022
Kilifi	2,402	2,219.80	2,384.00	2,378.40	3623.68
Kwale	1,919.60	2,126.40	2,139.00	2,426.00	3679.08
Lamu	282.6	304.7	322	446.7	614.24
Tana River	36.3	37	35.3	56.6	79.08
Mombasa	93.8	103.1	122	159.4	175.68
Taita Taveta	37.95	37.5	36.1	58	62.63
TOTAL	**4,772**	**4,829**	**5,038**	**5,525**	**8,234**

Source: Nuts and Oil Crops Directorate

4.1.2 Market performance

During the year 2022, the farm gate price per piece of a mature coconut ranged from KES 10 to KES 50 while the market prices ranged between KES 40 to KES 100, depending on size. The exponential increase in price was attributed to decreased local production due to the prevailing drought and premature harvesting of young coconut trees for timber. Whereas the prices were generally good, farmers could not reap maximum returns as the nuts were very small and scarce.

4.2 Cashew nuts

4.2.1 Agriculture Information

During the year under review cashew production suffered dwindling yields as a result of the prevailing weather conditions in the coastal region covering Kilifi, Kwale, Lamu, Tana River and Taita Taveta Counties.

The area under the cashewnuts was estimated at 23,060 Ha with an estimated production of 8,332 MT valued at KES 416.64 million in the year under review. For more details refer to Table 49. Besides the adverse weather conditions, there has been overall reduction in acreage under the crop, consequently reducing production volumes. This reduction is due to farmer apathy brought about by low farm gate prices. Cashew trees are still being cut down for charcoal and wood fuel making a mockery of the replanting initiatives by the Directorate and other industry players keen on revamping cashew farming in Kenya. Most of the processors previously operating have closed down while the remaining ones have scaled down their operations to the very bear minimum since there are insufficient quantities to support their operations all year round.

Generally, Cashew prices have stagnated in the last two years due to dampened competition among the processors to offer better prices. There are positive industry prospects as a result of cashew farming expansion to other regions outside the coastal region in Makueni, Kitui, Machakos, Embu and Tharaka Nithi counties. It is anticipated that farmers in the new production zones will be positive to be organized into viable producer and marketing associations as avenues for extension service delivery and efficiency in marketing.

Table 49: Area under Cashew nut, Production and Value by County in 2021-2022

County	Area (HA)		Quantity (MT)		Values (KES) Millions	
	2021	2022	2021	2022	2021	2022
Kilifi	9,595	10,254	3,387	3,505	162.59	168.25
Kwale	7,135	6,263	2,644	2,089	126.9	100.25
Lamu	5,559	5,622	2,738	2,327	150.6	128.01
Taita Taveta	428	550	177	206	7.96	9.25
Tana River	186	116	112	128	6.15	7.05
Others	255	255	63	77	3.15	3.84
Total	**23,158**	**23,060**	**9,121**	**8,332**	**457.35**	**416.6**

Source: AFA - Nuts and Oil Crops Directorate

Table 50: Area under Cashew nut and Production from 2018-2022

County	Area (Ha)					Production (MT)				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Kilifi	9,412	9,460	9,445	9,595	10,254	4,345	4,779	4,704	3,387	3505
Kwale	7,090	7,020	7,025	7,135	6,263	3,449	3,759	3,672	2,644	2089
Lamu	5,384	5,438	5,450	5,559	5,622	3,422	3,754	3,803	2,738	2327
Taita Taveta	428	430	428	428	550	235	259	246	177	206
Tana River	195	185	186	186	116	156	174	155	112	128

County	Area (Ha)					Production (MT)				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Others	146	153	155	255	255	70	77	88	63	77
Total	**22,655**	**22,686**	**22,689**	**23,158**	**23,060**	**11,677**	**12,802**	**12,668**	**9,121**	**8,332**

Source: AFA - Nuts and Oil Crops Directorate

Table 51: Value of Cashew nut from 2018-2022

County	Values (KES) Millions				
	2018	2019	2020	2021	2022
Kilifi	244.62	244.36	211.69	162.59	168.25
Kwale	216.83	292.81	165.24	126.9	100.25
Lamu	25.28	18.62	190.14	150.6	128.01
Tana River	10.78	15.78	6.22	6.15	9.25
Taita Taveta	15.27	5.76	9.58	7.96	7.05
Others	4.9	5.76	4.38	3.15	3.84
Total	**518**	**583**	**587**	**457**	**417**

Source: AFA - Nuts and Oil Crops Directorate

4.2.2 Market Performance

In the period under review, cashewnuts exports reduced from 430 MT valued at KES 261 million in 2021 to 259 MT valued at KES 171 million. USA, Netherlands and Canada were the leading importers of Kenyan Cashewnuts. For more details, refer to Table 52.

Table 52: Cashewnuts exports by country of destination from 2018 - 2022

Country of Destination	2018		2019		2020		2021		2022	
	Quantity (MT)	Value million KES	Quantity (MT)	Value million KES	Quantity (MT)	Value million KES	Quantity (MT)	Value million KES	Quantity (MT)	Value million KES
USA	78	63.31	79	56	120	59	144	86	183	120
Netherlands	-	-	16	13	31	12	124	76	33	20
Canada	-	-	32	26	-	-	72	45	32	23
Uganda	1	2.03	1	2	-	-	15	9	8	5
Qatar	-	-	-	-	8	6	12	9	3	3
Germany	-	-	-	-	79	61	35	27	-	-
Japan	-	-	18	12	-	-	-	-	-	-
India	-	-	-	-	16	10	-	-	-	-
South	-	-	3	2	-	-	-	-	-	-

Country of Destination	2018		2019		2020		2021		2022	
	Quantity (MT)	Value million KES	Quantity (MT)	Value million KES	Quantity (MT)	Value million KES	Quantity (MT)	Value million KES	Quantity (MT)	Value million KES
Africa										
United Arab Emirates	18	16.51	-	-	-	-	-	-	-	-
Türkiye	-	-	7	5	-	-	-	-	-	-
Egypt	-	-	-	-	-	-	28	9	-	-
Total	**97**	**82**	**156**	**115**	**254**	**149**	**430**	**261**	**259**	**171**

Source: AFA - Nuts and Oil Crops Directorate

4.3 Macadamia

4.3.1 Agriculture Information

The global macadamia industry is currently in turbulence. Whereas other segments of the economy are gradually recovering from the effects of the Covid-19 pandemic, the macadamia industry is taking longer when compared with other stable food commodities. Post pandemic, major companies which had suspended their operations are yet to return to normalcy. A rapid industry assessment indicates that many local companies have stocks left from the previous season, they are thus not buying in the same volumes and prices as they normally would. In terms of recovery, NIS market segment is expected to recover faster than the kernel market, considering that macadamia kernels are primarily used for snacks.

In the year under review the area under macadamia crop was estimated at 8,746 Ha, 21 percent increase from 7,180 Ha reported in 2021. The highest increment was reported in Murang'a, Meru and Embu counties accounting for more than 1,000 Ha of the total increment. This increment is predominantly in terms of intercropping with other perennial and annual crops. Minimal increment in area under the crop was reported in the nontraditional production areas in Nyandarua, Baringo and Busia counties.

The annual production in 2022 was estimated at 40,903 MT valued at KES

2.513 billion down from 42,562 MT valued at KES 2.786 billion in 2021. Refer to Table 53,54 and 55 for more details.

Table 53: Area under Macadamia, Production and Value by County in 2021 and 2022

County	Area (Ha)		Quantity (MT)		Values (KES) millions	
	2021	2022	2021	2022	2021	2022
Muranga	1,893	2,352	11,546	10,963	774	602.9
Meru	1,146	1,382	6,992	6,664	489	466.4
Embu	736	1,099	4,487	4,723	292	330.6
Kiambu	833	992	5,080	4,759	345	285.5
Kirinyaga	705	877	4,300	4,076	279	224.1
Nyeri	409	488	2,497	2,314	157	150.4
Tharaka Nithi	244	272	1,487	1,469	97	102.8
Machakos	139	153	850	847	51	50.8
Nyandarua	133	142	810	767	41	42.1
Baringo	83	89	509	504	31	30.2
Busia	46	52	5	5	30	27.1
Taita Taveta	74	78	454	453	0.297	0.3
Trans Nzoia	490	490	2,988	2,839	167	170.3
Elgeyo Marakwet	44	56	68	52	4	3.3
Makueni	43	46	65	46	4	2.9
Uasin-Gishu	45	56	70	50	4	3
Others	117	123	354	372	21	20.5
TOTAL	**7,180**	**8,746**	**42,562**	**40,903**	**2,786**	**2,513**

Source: AFA-Nuts and Oil Crops Directorate

Table 54: Trend of Area under Macadamia and Production from 2018 - 2022

County	Area (Ha)					Production (MT)				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Muranga	1,887	1,891	1,892	1,893	2,352	12,523	11,057	10,823	11,546	10,963
Meru	1,099	1,143	1,145	1,146	1,382	7,601	6,711	6,614	6,992	6,664
Embu	1,136	1,138	1,139	736	1,099	7,704	6,802	6,801	4,487	4,723
Kiambu	822	828	830	833	992	5,642	4,981	4,711	5,080	4,759
Kirinyaga	697	701	702	705	877	4,485	3,960	3,912	4,300	4,076
Nyeri	382	406	407	409	488	2,342	2,068	2,011	2,497	2,314
Tharaka Nithi	238	240	242	244	272	1,601	1,413	1,390	1,487	1,469
Machakos	134	136	136	139	153	917	810	821	850	847

County	Area (Ha)					Production (MT)				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Nyandarua	130	130	132	133	142	822	726	722	810	767
Baringo	80	82	83	83	89	545	481	481	509	504
Busia	74	74	75	46	52	1	1	1	5	5
Taita Taveta	72	72	73	74	78	486	429	446	454	453
Trans-Nzoia	-	49	50	490	490	-	56	59	2,988	2,839
Elgeyo Marakwet	-	43	44	44	56	-	39	41	68	52
Makueni	-	41	41	43	46	-	42	45	65	46
Uasin-Gishu	-	37	38	45	56	-	37	44	70	50
Others	106	109	114	117	123	214	202	211	354	372
TOTAL	**6,857**	**7,120**	**7,143**	**7,180**	**8,746**	**44,883**	**39,815**	**39,133**	**42,562**	**40,903**

Source: AFA-Nuts and Oil Crops Directorate

Table 55: Value of Macadamia from 2018-2022

County	Values (KES) millions					
	2017	2018	2019	2020	2021	2022
Muranga	1,451	1,628	1,548	693	774	602.9
Meru	881	1,064	973	390	489	466.4
Embu	893	924	884	343	292	330.6
Kiambu	654	790	757	306	345	285.5
Kirinyaga	520	718	594	215	279	224.1
Nyeri	271	316	285	101	157	150.4
Tharaka Nithi	185	216	203	74	97	102.8
Machakos	106	119	109	48	51	50.8
Nyandarua	95	99	91	35	41	42.1
Baringo	61	82	67	22	31	30.2
Taita Taveta	56	65	69	24	30	27.1
Busia	0.09	0.101	0.091	0.054	0.297	0.3
Trans-Nzoia	-	-	7	3	167	170.3
Elgeyo Marakwet	-	-	5	2	4	3.3
Makueni	-	-	6	2	4	2.9
Uasin-Gishu	-	-	5	2	4	3
Others	25	30	27	12	21	20.5
TOTAL	**5,199.22**	**6,050.70**	**5,631.59**	**2,272.05**	**2,786.30**	**2,513**

Source: AFA-Nuts and Oil Crops Directorate

4.3.2 Market performance

During the year 2022, favorable weather in major producing countries contributed to oversupply besides the unfavorable economic conditions. These factors conspired to keep local farm gate prices very low against industry expectations defying previous season's industry trends. The price range per region during the peak season (March to May 2022) as shown in Table 56 below:

Table 56: Macadamia Prices 2022

Region	Farm Gate Price KES/Kg	Factory Price KES/Kg
Nyeri and Murang'a	50	**80**
Kirinyaga	55	**85**
Embu and Meru	70	**90**
Western and Rift Valley	60	**75**
Machakos and Makueni	50	**80**
Coast (Taita)	60	**85**
Average	**50**	**83**

Source: AFA-Nuts and Oil Crops Directorate

4.3.3 Macadamia Exports 2022

The Kenyan macadamia nuts are mainly exported to the U.S.A and European countries where they are popular ingredients in the confectionery, baking, ice cream, and snack food industries as roasted nuts, chocolates, and cookies sold in major supermarkets, hotels and airlines.

The top four Kenya's macadamia export destination accounted for 83 percent of the total exports by value which were USA (52.7 percent), China (12.2 percent), Germany (11 percent) and Netherlands (7.14 percent). Similarly, there was a marked increase in the volume of exports from 9,136 MT valued at KES 10.55 billion in 2021 to 10,036 MT valued at KES 12.15 billion in 2022. The augmented growth in value is attributed to the depreciation of the Kenyan Shilling against the US Dollar during the year 2022 as compared to its value in 2021. For more details, refer to Table 111.

4.4 Ground nut

4.4.1 Agriculture Information

Whereas, there is a substantial quantity of peanuts produced in the country, the volumes are not commercially significant to address the country's consumption requirements. The traditional producing counties in Nyanza and Western regions have over the years cut down their production as a result of land fragmentation and competition from staple food enterprises such as maize and beans. Coupled with an unreliable seed multiplication and distribution system, peanuts production continues to decline. Homa Bay County remains the highest producer both in volume and acreage.

The area under peanuts reduced from 14,274 Ha reported in 2021 to 12,788 Ha reported in 2022. The production decreased from 12,898 MT in 2021 to 12,750 MT in the period under review, a 1.15 percent drop attributed to farmers shifting to other competing enterprises. Refer to Table 57 for more details.

Table 57: Area under Ground nuts, Production and Value by County in 2021 and 2022

County	Area (Ha)		Quantity (MT)		Value (KES) millions	
	2021	2022	2021	2022	2021	2022
Homabay	5,529	4,466	3870	4,229	491.25	718.87
Kakamega	2,100	1,771	2601	2,194	234.09	361.96
Migori	1,541	1,479	1510	1,450	145.53	231.92
Kisumu	561	649	592	685	74.61	108.18
Siaya	627	691	502	554	65.76	89.12
Bungoma	760	719	854	808	105.11	120.38
Busia	940	541	846	487	93.06	70.63
Elgeyo Marakwet	339	459	329	446	35.26	61.96
Vihiga	68	290	30	215	3.9	30.75
Meru	849	976	764	879	68.73	105.43
Kisii	365	186	420	214	54.02	33.25
Tharaka Nithi	192	131	115	111	11.52	14.38
West Pokot	15	52	11	53	0.99	6.52
Trans-Nzoia	77	89	45	74	4.32	10.88
Lamu	10	42	9	38	1.35	6.53
Kwale	29	55	15	42	1.66	5.82

County	Area (Ha)		Quantity (MT)		Value (KES) millions	
	2021	2022	2021	2022	2021	2022
Baringo	98	38	87	34	9	4.84
Taita Taveta	14	22	10	21	1.1	3.19
Tana River	107	61	222	127	22.2	20.39
Others	53	71	66	89	7.25	12.43
TOTAL	14,274	12,788	12,898	12,750	1,431	2,017

Source: AFA-Nuts and Oil Crops Directorate

Table 58: Area under Groundnuts and Production by County from 2018-2022

County	Area (Ha)					Production (MT)				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Homabay	5,958	4,132	3,923	5,529	4,466	5,810	3,677	3,461	3,870	4,229
Kakamega	1,624	1,322	1,377	2,100	1,771	2,006	1,177	1,232	2,601	2,194
Migori	995	814	972	1,541	1,479	1,161	804	962	1,510	1,450
Busia	1,025	670	515	940	541	1,136	745	601	846	487
Meru	612	529	412	849	976	1,009	523	406	764	879
Bungoma	678	644	591	760	719	941	716	665	854	808
Siaya	711	520	671	627	691	855	467	619	502	554
Kisumu	1,421	932	902	561	649	1,991	691	661	592	685
Kisii	250	201	196	365	186	226	124	179	420	214
Elgeyo Marakwet	4,025	5,109	502	339	459	4,692	5,679	451	329	446
Tharaka Nithi	106	96	121	192	131	129	95	59	115	111
Baringo	82	75	52	98	38	144	67	46	87	34
Vihiga	614	560	496	68	290	771	346	420	30	215
Trans Nzoia	39	56	67	77	89	51	50	42	45	74
Kwale	69	53	61	29	55	104	47	56	15	42
West Pokot	69	72	81	15	52	94	78	57	11	53
Lamu	83	89	67	10	42	85	88	68	9	38
Taita Taveta	41	26	22	14	22	62	19	14	10	21
Tana River	14	11	9	107	61	18	10	19	222	127
Others	33	54	61	53	71	48	61	54	66	89
TOTAL	18,449	15,965	11,098	14,274	12,788	21,333	15,463	10,072	12,898	12,750

Source: AFA-Nuts and Oil Crops Directorate

Table 59: Value of Groundnuts from 2018-2022

County	Value (KES) millions					
	2017	2018	2019	2020	2021	2022
Homabay	809.98	790.16	514.8	460.31	491.25	718.87
Kakamega	230.46	250.75	162.4	158.88	234.09	361.96

County	Value (KES) millions					
	2017	2018	2019	2020	2021	2022
Migori	105.34	161.38	113.4	134.71	145.53	231.92
Kisumu	278.78	248.88	86.3	92.48	74.61	108.18
Siaya	117.89	112.01	62.6	86.72	65.76	89.12
Bungoma	102.05	125.15	88.8	86.48	105.11	120.38
Busia	137.01	147.68	100.6	78.13	93.06	70.63
Elgeyo Marakwet	591.07	600.58	709.9	45.1	35.26	61.96
Vihiga	76.16	98.69	47.7	60.9	3.9	30.75
Meru	119.32	10.97	66.4	52.73	68.73	105.43
Kisii	24.83	29.15	16.4	24.72	54.02	33.25
Tharaka Nithi	17.64	16.77	12.3	8.35	11.52	14.38
West Pokot	10.37	12.6	10	22.44	0.99	6.52
Trans Nzoia	4	7.14	6.6	5.73	4.32	10.88
Lamu	9.25	9.78	10.9	9.37	1.35	6.53
Kwale	10.61	14.35	6.4	8.03	1.66	5.82
Baringo	19.5	18.72	8.9	6.18	9	4.84
Taita Taveta	7.56	8.68	2.6	2.06	1.1	3.19
Tana River	3.67	2.45	1.4	2.85	22.2	20.39
Others	4.7	6.48	8.5	8.1	7.25	12.43
TOTAL	**2,680.19**	**2,672.37**	**2,036.90**	**1,354.27**	**1,430.71**	**2,017.43**

Source: AFA-Nuts and Oil Crops Directorate

4.4.2 Market performance

During the year under review the average farm gate prices reported, considerably increased to average KES 150 per Kg from the KES 120 per Kg reported in 2021. The highest prices were reported in Homabay County while the least prices were reported in Meru County at KES 170 per Kg and KES 120 per Kg respectively.

4.5 Bambara Nuts

4.5.1 Agriculture Information

Bambara nut is mostly being cultivated for subsistence purposes and the surplus sold in the local markets for both seed and consumption. The major production region is in the Western parts of the country (Busia, Kakamega, Bungoma and Vihiga Counties). The estimated acreage under Bambara nuts increased from 185 Ha in 2021 to 209 Ha reported in 2022. On the other hand, production increased by 63 MT from 465 MT reported in 2021 to 528 MT in 2022 as a result of increased area under the crop. For more details, refer to Table 60, 61 and 62.

Table 60: Area under Bambara nuts, Production and Value by County in 2021-2022

County	Area (Ha)		Quantity (MT)		Value (KES) millions	
	2021	2022	2021	2022	2021	2022
Busia	71	77	192	181	66.24	62.36
Kakamega	83	98	192	255	68.16	90.46
Bungoma	8	9	20	22	7.2	7.91
Vihiga	11	12	30	35	10.5	12.08
Lamu	7	7	21	23	8.19	9.04
Kwale	5	6	10	12	3.7	4.44
Total	**185**	**209**	**465**	**528**	**164**	**186.3**

Source: AFA-Nuts and Oil Crops Directorate

Table 61: Area under Bambara nuts and Production by County from 2018 - 2022

County	Area (Ha)					Production (MT)				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Busia	260	201	97	71	77	2,389	1,887	196	192	181
Kakamega	78	67	61	83	98	801	598	177	192	255
Bungoma	8	7	8	8	9	68	63	19	20	22
Vihiga	10	8	8	11	12	49	66	22	30	35
Lamu	6	8	7	7	7	49	80	24	21	23
Kwale	8	5	6	5	6	53	35	12	10	12
Total	**369**	**297**	**187**	**185**	**209**	**3,409**	**2,729**	**450**	**465**	**528**

Source: AFA-Nuts and Oil Crops Directorate

Table 62: Value of Bambara nuts from 2018-2022

County	Value (KES) millions					
	2017	2018	2019	2020	2021	2022
Busia	802	800.32	610	68.6	66.24	62.36

County	Value (KES) millions					
	2017	2018	2019	2020	2021	2022
Kakamega	279	264.33	173.1	63.72	68.16	90.46
Bungoma	20	19.04	19.5	7.22	7.2	7.91
Vihiga	19	17.15	21	8.03	10.5	12.08
Lamu	14	14.21	16.8	9.36	8.19	9.04
Kwale	25	15.9	12.2	4.44	3.7	4.44
Total	**1,159.00**	**1,131.00**	**852.6**	**161.4**	**164**	**186**

Source: AFA-Nuts and Oil Crops Directorate

4.5.2 Market performance

The farm gate prices ranged between KES 344 per Kg and KES 393 per Kg while market prices were reported to be between KES 362 per Kg and KES 400 per Kg across various market outlets in the country.

4.6 Sesame

4.6.1 Agriculture Information

The lower production of sesame reported in 2021 as a result of the dry weather conditions experienced in the coastal region registered a rebound in 2022. The significant increment in production was recorded in Lamu County which is the largest sesame producer. The total area under the crop increased from 5,203 Ha reported in 2021 to 5,352 Ha reported in 2022. Similarly, the volume increased from 2,845 MT in 2021 valued at KES 215.6 million to 3,191.5 MT in 2022 valued at 242.11 million. Refer to Table 63, 64 and 65 below for more details.

Table 63: Area under Sesame, Production and Value by County in 2021-2022

County	Area (Ha)		Production (MT)		Values (KES) millions	
	2021	2022	2021	2022	2021	2022
Lamu	4,357	4,170	2,567	2,675.80	191.23	199.33
Busia	119	353	80.34	238.1	5.59	16.57
Mandera	169	218	106	136.7	10.18	13.13
Tana River	496	501	52	69.8	4.3	5.58
Bungoma	27	24	20	17.8	2.3	2.04
Siaya	19	69	6	38.8	0.62	4.01
Kakamega	1.7	4	1.4	3	0.14	0.3

County	Area (Ha)		Production (MT)		Values (KES) millions	
	2021	2022	2021	2022	2021	2022
Homabay	14	13	12.06	11.5	1.21	1.15
Total	**5,203**	**5,352**	**2,845**	**3,191.50**	**215.6**	**242.11**

Source: AFA-Nuts and Oil Crops Directorate

Table 64: Area under Sesame and Production by County from 2018-2022

County	Area (Ha)					Production (MT)				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Lamu	11,200	11,480	11,539	4,357	4,170	7,840	9,924	10,029	2,567	2,675.8
Busia	720	490	502	119	353	418	363	370	80.34	238.1
Mandera	160	230	258	169	218	96	204	220	106	136.7
Tana River	113	138	122	496	501	51.2	77.1	69	52	69.8
Bungoma	16	12	10	27	24	14.2	10.2	11.5	20	17.8
Siaya	101	98	83	19	69	69	70.1	64	6	38.8
Kakamega	5	7	6.8	1.7	4	3.6	5.7	5.3	1.4	3
Homabay	6	5	4.7	14	13	4	3.7	4.1	12.06	11.5
Total	**12,321**	**12,460**	**12,526**	**5,203**	**5,352**	**8,496**	**10,658**	**10,773**	**2,845**	**3,192**

Source: AFA-Nuts and Oil Crops Directorate

Table 65: Value of Sesame from 2018-2022

County	Values (KES) millions				
	2018	2019	2020	2021	2022
Lamu	428.11	541.3	902.61	191.23	199.33
Busia	47.9	39.9	40.7	5.59	16.57
Mandera	10.33	22.3	20.9	10.18	13.13
Tana River	0.86	0.91	5.87	4.3	5.58
Bungoma	1.04	0.99	1.15	2.3	2.04
Siaya	7.01	7.12	6.02	0.62	4.01
Kakamega	0.46	0.77	0.74	0.14	0.3
Homabay	0.52	0.51	0.51	1.21	1.15
Total	**496.2**	**613.8**	**978.5**	**215.6**	**242.1**

Source: AFA-Nuts and Oil Crops Directorate

4.7 Canola

4.7.1 Agriculture Information

Canola is primarily grown by large scale farmers for soil improvement the crop used for rotation with wheat, maize and barley, however in the recent past, the main processing company has contracted small scale farmers to supplement raw material supplies from their own farms.

The area under Canola increased from 4,236 Ha in 2021 to 4,381 Ha recorded in 2022. The increased acreage is attributed to increased demand for locally produced edible oil as a result of supply chain disruption from international sources in Asia. The production of canola stood at 14,594 MT in 2022 from 14,431 MT reported in 2021, an increase of 163 MT. For more details, refer to Table 66.

Table 66: Area under Canola, Production and Value 2021-2022

County	Area (Ha)		Quantity (MT)		Value KES (millions)	
	2021	2022	2021	2022	2021	2022
Nakuru	1,157	1,179	4,091	4,267	205	233
Laikipia	1,170	1,240	3,811	3,832	171	172
Meru	720	836	1,944	2,056	89	158
Narok	237	215	832	793	37	36
Uasin Gishu	175	187	603	645.6	30	36
Nyeri	173	197	523	575.7	24	28
Trans Nzoia	138	132	628	612.3	30	32
Baringo	98	56	506	414	26	29
Samburu	124	116	477	449.7	24	27
Nyandarua	135	148	501	481.8	27	31
Elgeyo Marakwet	75	52	386	369.8	20	24
Bungoma	34	23	129	97.3	6	5
Total	**4,236**	**4,381**	**14,431**	**14,594**	**690**	**811**

Source: AFA-Nuts and Oil Crops Directorate

4.7.2 Market performance

During the year under review the farm gate prices ranged between KES 45-50 per Kg. The prices in the subsector are however not competitive as the crop is only sold to one major processing company which contracts farmers across the country for use in margarine and vegetable oil production.

4.8 Sunflower

4.8.1 Agriculture Information

Sunflower farming is primarily grown for production of animal feeds and oil production at cottage level. The commonly grown variety is Kenya Fedha because of its high oil content and drought tolerance as compared to other varieties. Farmers also prefer the Kenya Fedha because it is readily available and open pollinated hence can be easily reused in the succeeding seasons. During the year under review, the area under sunflower was estimated at 2,046 Ha producing 483 MT valued at KES 16.49 million. The NOCD will roll out a promotion programme that will provide subsidized inputs to the farmers in order to boost production of sunflower in the country. For more details, refer to Table 67.

Table 67: Area under Sunflower, Production and Value 2022

County	Area (Ha)	Production (MT)	Value millions (KES)
Bungoma	1,362	330.70	**9.92**
Busia	300	60.70	**2.12**
Nakuru	161.87	39.30	**1.97**
Uasin Gishu	40.46	13.10	**0.65**
Kitui	41.28	8.02	**0.24**
Kilifi	28	7.37	**0.52**
Kakamega	40	6.47	**0.26**
Meru	20.23	4.91	**0.20**
Lamu	18	4.37	**0.26**
Makueni	12.14	2.65	**0.11**
Embu	10.12	2.46	**0.10**
Taita Taveta	6.7	1.76	**0.09**
Kwale	4.8	1.00	**0.06**
Total	**2,046**	**483**	**16.49**

Source: AFA - Nuts and Oil Crops Directorate

4.9 Edible Oils

4.9.1 Market Performance

Kenya is a net importer of edible oil. This is mainly attributed to the fact the country has a limited supply of raw materials due to low production volumes. Currently, the country's domestic source of edible oil is canola, coconut and avocado which are produced in small volumes and hence insufficient to meet the country's consumption and processing requirements.

The global edible oil markets have faced turbulence and supply chain disruptions exposing Kenya to high prices at the retail level due to her over-reliance on imports (mainly as crude oil). For instance, the price of cooking oil has more than doubled (over 100% increase). The depreciation of the Kenyan shilling and scarcity of US dollars has further aggravated the situation.

In the year under review the volume of imports reduced from 888,799 MT reported in 2021 to 734,759 MT. In terms of value however there was an increase from KES 117.213 billion reported in 2021 to KES 120.69 billion reported in 2022. This increased value was a result of the depreciated value of the Kenya shilling against the USD during the year under review. For more details, refer to Table 68.

Table 68: Imports of Edible Oil 2021-2022

Edible oil	Volume (MT)		Value KES millions	
	2021	2022	2021	2022
Palm oil	853,689.33	701,456.00	111,282.33	113,743.31
Coconut oil	15,580.34	14,689.53	2,660.70	2,825.47
Sunflower oil	7,638.76	12,742.07	1,166.25	2,561.64
Soya bean oil	5,900.97	2,242.22	937	510.91
Castor oil	2,908.90	-	543.71	-
Rapeseed oil	2,249.08	2,559.64	341.19	654.87
Olive oil	816.21	1,037.11	278.08	387.19
Sesame oil	12.45	29.16	3.53	9.05
Peanut oil	2.98	3.48	0.53	0.47
Total	**888,799.02**	**734,759.91**	**117,213.32**	**120,692.91**

Source: AFA - Nuts and Oil Crops Directorate

Challenges and Interventions

Edible Oil Crops Promotion Project

The major challenges facing the edible oil crops subsector include: Low production resulting from the high cost of farm inputs such as seeds and fertilizers, low farm gate prices which demoralizes farmers, unstructured market linkages, overreliance on crude palm oil as compared to locally produced oil seeds, undeveloped cottage level processing facilities and an inadequate policy framework for the development of edible oil crops subsector.

To address production challenges, the NOCD is rolling out a promotional programme that will support the farmers by availing affordable and quality inputs such as seed and fertilizer, as well as offering technical support on production. The marketing system will be made effective through the formation of production clusters which will be linked to the training and cottage-level processing incubation centers. These facilities will assist in produce aggregation and guarantee processors a steady supply of raw materials. The farmers will benefit from economies of scale through bulk selling, access to technical skills in marketing and assured market outlets. An enabling regulatory framework will be realized by supporting the development and implementation of standards, strategies and policies which will enhance the development and promotion of edible oil crops subsector.

Scope of the Project

The Edible Oil Crops Promotion Project will be implemented in Kwale, Kilifi, Meru, Nyeri, Lamu, Makueni, Uasin Gishu, Trans Nzoia, Nakuru, Homa Bay, Migori, Kakamega, Siaya and Bungoma counties. The targeted counties were selected based on their current production trends and their ecological suitability for the selected crops.

Project Outcome

In order to address the edible oil deficit in the country, there is need to develop a sufficient raw material base for the processing facilities in Kenya which are operating below capacity. The project outputs include increasing production area for oil crops (sunflower, soya and coconut) from 60,000 Ha to 200,000 Ha, and increasing production from 80,000 MT to 240,000 MT in 5 years by providing raw material for processors and utilizing the oil seed crops by-products for commercial uses.

During the project cycle, various categories of value chain players will benefit from the project. A total 20,000 coconut farmers organized into aggregation clusters will benefit from market access through technical support and linkage to processors. 10,000 sunflower farmers and 10,000 soya bean farmers will be supported through provision of clean high-quality planting materials.

The productivity which is currently low at an average of 0.3-05 MT/Ha will increase to 2.0 MT/Ha as a result of interventions from this project. As part of the planned interventions, the project will promote cottage-level processing through SMEs training and business incubation on value addition. A total of 100 SME business owners drawn from the 18 target counties will benefit from skills and technology transfer from the trainings in the incubation centers. The incubation centers will be domiciled in ATDCs and or KSA campuses, KALRO and ADC centers under the Ministry of Agriculture across the country in all the target counties for the project.

Additionally, 50,000 direct and 200,000 indirect jobs will be generated along the value chains from input suppliers, farmers, traders, processors and consumers during the next 5 years. The country will also benefit through KES 25 billion anticipated forex savings from reduced importation of edible oil.

FIBRE CROPS

Chapter 5: Fibre Crops

Introduction

Fiber Crops Directorate is mandated to promote, regulate and develop sisal and cotton value chains in the country.

5.1 Cotton

5.1.1 Introduction

Cotton is majorly grown in the Arid and Semi-Arid Areas (ASAL) mostly rainfed. The crop is grown in 24 counties in Kenya but the number reduced in 2021 to only 22 counties. During the year under review the number of counties that the crop was grown dropped to a further 19 which are Lamu, Homabay, Siaya, Meru, Kitui, Kisumu, Baringo, Busia, Taita Taveta, Kwale, Kilifi, Makueni, Tharaka Nithi, Embu, Elgeyo Marakwet, Kirinyaga, Machakos, Bungoma, Migori and Laikipia. The crop is also grown under irrigation, albeit in only 100 acres, mainly in Bura/Hola Irrigation Scheme in Tana River County, though there is a potential of up to 35,000 Ha of land for irrigation.

5.1.2 Area under Cotton and Seed Cotton Production

The total area under cotton dropped by 19 percent, from 10,640 Ha in 2021 to 8,585 Ha in 2022 attributed to late disbursement of planting materials (cotton seed) and pesticides to farmers.

Despite the decrease in area under cotton, the total production of seed cotton increased by 2,462 MT from 1,300 MT recorded in 2021 to 3,762 MT in 2022. The increase in production was as a result of good agriculture practices by the growers.

The average productivity increased from 122 Kgs per Ha in 2021 to 438 Kgs per Ha in the period under review mainly attributed to farmers adhering to GAPs. Refer to Table 69 for more details.

Table 69: Area, Production and Productivity 2018-2022

YEAR	2018	2019	2020	2021	2022
Area (Ha)	13,617	18,000	9,837	10,640	8,585
Seed Cotton production (MT)	5,321	3,015	3,390	1,300	3,762
Yield (Kg/Ha)	391	168	345	122	438

Source: AFA - Fibre Crops Directorate

5.1.3 Market Performance

The value of seed cotton increased from KES 65,155,072 in 2021 to KES 211,822,217 in the period under review. Refer to Table 70 for more details. Besides the higher volume in the current period which was main contributing factor for a higher value, the growers also received better farm gate prices which ranged from KES 50-KES 68.

Table 70: Area, Production and Value 2021 and 2022

COUNTY	2021	2022	2021	2022	2021	2022
	Area (Ha)		Production (MT)		Total Value (KES)	
Lamu	800	1,134	203	2,267	10,129,560	131,521,101.00
Homa Bay	840	1,822	224	487	11,597,233.25	25,299,274.00
Siaya	1,400	1,053	191	331	9,152,371.00	18,719,337.00
Meru	2,688	1,518	211	128	10,541,820	6,915,606.00
Kitui	834	304	100	111	5,227,482	6,099,924.00
Kisumu	60	130	34	110	1,738,320	6,263,852.00
Baringo	148	211	69	88	3,429,000	4,711,103.10
Busia	1,400	951	36	68	1,783,000	3,628,260.00
Taita Taveta	40	40	18	37	881,298	1,907,048.00
Kwale	24	31	13	32	650,000	1,643,733.00
Kilifi	20	44	2	28	93,050	1,387,282.00
Makueni	458	223	31	16	1,361,120	1,026,637.50
Tharaka Nithi	812	425	24	15	1,215,928	749,683.00
Embu	396	336	7	12	366,080	585,214.00
Elgeyo Marakwet	24	23	20	9	994,986	216,297.50
Kirinyaga	28	31	7	8	355,420	391,560.00
Machakos	520	162	31	7	1,529,250	309,465.00
Bungoma	72	101	3	6	125,000	327,240.00
Migori	20	40	10	2	500,000	119,600.00
Tana River	56	-	65	-	3,459,155	-
Laikipia	-	6	-	-	-	-
Uasin Gishu	-	-	1	-	25,000	-

COUNTY	2021	2022	2021	2022	2021	2022
	Area (Ha)		Production (MT)		Total Value (KES)	
TOTALS	10,640	8,585	1,300	3,762	65,155,072	211,822,217

Source: AFA - Fibre Crops Directorate

5.1.4 Lint Production

During the period under review, a total of 6,779 bales of lint was produced in 2022 comparison to 3,019 bales in 2021. This was a high increase of 124 percent of lint. This increase could be attributed to the higher volumes of seed cotton produced by the growers during the period under review.

The value of lint during the period almost tripled during the period under review from a low of KES 106 million in the 2021 to KES 282 million in the current period under review. The high value of lint was mainly due to favorable prices during the period under review due to low supply of lint in the international market from the major players of China and USA. This scenario saw the price of lint rising to fetch an average KES 230 per Kg in the international market. For more details, refer to Table 71.

Table 71: Lint production and Value 2018-2022

YEAR	2018	2019	2020	2021	2022
Bales of Lint cotton (185 Kg)	10,674	5,432	6,106	3,019	6,779
Average Price of Lint (KES/Kg)	164	190	180	190	230
Value of Lint (KES million)	324	190	203	106	282

Source: AFA - Fibre Crops Directorate

It is also worth noting that almost all the seed cotton produced during the period under review was grade AR, forming approximately 99 percent of the total seed cotton produced, while the rest, a meagre 1 percent was the lower grade BR. For more details, refer to Table 72.

Table 72: Seed Cotton & Lint Production 2022

County	SEED COTTON PRODUCTION							LINT PRODUCTION	
	Area (HA)	PROD. GRADE AR (MT)	VALUE GRADE AR (KES)	PROD. GRADE BR (MT)	VALUE GRADE BR (KES)	TOTAL PROD. GRADE AR+BR (MT)	Total Value AR+BR (KES)	Total Lint No. of Bales (*1 bale=185 Kgs*)	Lint Value (KES)
Lamu	1,134	2,256	135,204,296.00	11	336,307.00	2,267	131,521,101.00	4,085	163,281,551.67
Homa Bay	1,822	487	25,299,274.00	-	-	487	25,299,274.00	877	37,444,000.00
Siaya	1,053	330	12,712,095.00	1	1,242.00	331	18,719,337.00	597	27,531,118.00
Meru	1,518	124	6,787,512.00	4.5	128,094.00	128	6,915,606.00	231	10,337,086.95
Kitui	304	103	5,899,388.00	8	200,536.00	111	6,099,924.00	200	9,262,127.06
Kisumu	130	102	6,021,461.00	8	242,391.00	110	6,263,852.00	199	8,628,400.00
Baringo	211	87	4,703,842.80	0.5	7,260.30	88	4,711,103.10	158	7,488,800.00
Busia	951	66	3,572,640.00	2	55,620.00	68	3,628,260.00	123	5,844,180.00
Taveta	40	37	1,905,696.00	0.5	1,352.00	37	1,907,048.00	67	2,686,200.00
Kwale	31	31	1,626,352.00	1	17,381.00	32	1,643,733.00	58	2,442,000.00
Kilifi	44	25	1,325,896.00	2.45	61,386.00	28	1,387,282.00	50	2,238,500.00
Makueni	223	13	930,020.00	3	96,617.50	16	1,026,637.50	29	976,800.00
Tharaka Nithi	425	14	735,484.00	1	14,199.00	15	749,683.00	26	1,144,244.25
Embu	336	10	550,512.00	1.5	34,702.00	12	585,214.00	21	763,946.50
Elgeyo Marakwet	23	9	216,297.50	-	-	9	216,297.50	16	651,200.00
Kirinyaga	31	7	371,800.00	1.4	19,760.00	8	391,560.00	15	492,100.00
Machakos	162	5	275,444.00	1.4	34,021.00	7	309,465.00	12	659,746.15
Bungoma	101	6	320,760.00	0.5	6,480.00	6	327,240.00	12	529,420.00
Migori	40	2	119,600.00	-	-	2	119,600.00	4	203,500.00
Laikipia	6	-	-	-	-	-	-	-	-
TOTALS	**8,585**	**3,715**	**208,578,370**	**48**	**1,257,349**	**3,762**	**211,822,217**	**6,779**	**282,604,920.58**

Source: AFA - Fibre Crops Directorate

Challenges in the Cotton sub sector

1. Unfavorable Weather

- Extreme dry weather spell experienced during the production season led to total crop failure in most of the cotton growing counties. Laikipia, which had already planted 15 acres, lost the entire crop due to the drought. Serious drought in lower and upper eastern part of the country saw a major drop in production and productivity during the period under review
- In counties like Baringo and Elgeyo Marakwet farmers had to repeat planting as

the rains came in April, then stopped, and the first crop dried up. Those who replanted in June were few because they had to purchase the seed, unfortunately the crop could not cope with the minimal rains.

- In Busia County, the challenge was that of hailstones, which completely destroyed the crop. As they replanted after losing the first crop, a dry spell that followed meant only a small percent could be salvaged.

2. Delayed seed delivery

- The challenge of late delivery of seed stood out during the period under review. This affected the crop as late planting, made the farmers not take advantage of the meagre rains which were being experienced during the season.
- Tana River County did not plant the seed which they received late, though grown under irrigation, they would plant as they explained that it would interfere with the cropping programmes of the Irrigation scheme.

3. Lack of seed

- Majority of farmers, having adopted the Bt cotton farming, were not ready to go back to conventional seed, as the Bt seed was not adequate for all the farmers, who had prepared their land in anticipation. This was due to budget cuts under Cotton Revitalization Project, during the period under review.

4. Poor adaptability of BT cotton to local environment

- It has been noted that there is poor adaptability of the Bt cotton to the local environment, as it requires irrigation or high precipitation in comparison to the conventional seeds. Any reduction in rainfall, translates to marked fall in production and productivity in comparison to the conventional seeds.

Possible Intervention

1. The need to strengthen group approach to cotton farming.
2. Upscaling extension service provision to cotton farmers.
3. Provision of affordable credit (Co-operative based revolving Funds).
4. Enhanced pesticide support program.
5. Capacity building of County Extension staff on Bt cotton.
6. Increased forward and backward linkages among the actors.

7. Early procurement for seed to avoid delays.

5.2 Sisal

Sisal production is predominantly grown by large plants spread mainly in the Coast, Eastern and Rift Valley regions.

5.2.1 Estates

The sisal estates are operated by seven proprietors. These estates have organized production and processing system, with clear targets of production every year, with minimal variance on area under production, quantities produced and processed over the years. Once processed, the fibre is dried in the open field, graded then exported by their marketing agencies who are licensed by the Fibre Directorate.

5.2.2 Smallholder Growers

Smallholder growers on the other hand are spread all over arid and semi-arid lands, most of whom grow the crop along the boundary, hedge rows and as a conservation measure to prevent erosion. This category of growers cut the leaf and sell it to licensed processors for domestic and export purposes. Others use rudimentary decorticating equipment and sell their fibre to licensed exporters or dealers. Majority of the smallholder growers with sisal along the boundaries do not use the crop for any economic or business sense. However, a few counties among them Taita Taveta, Makueni, Kitui, Machakos, Migori, Taita Taveta, Homabay and Siaya have come out strongly to make business sense out of this hedgerow sisal.

5.2.3 Area under Sisal

The total area under sisal was estimated at 36,959 Ha during the period under review a decrease of 6.72 percent compared to 39,624 Ha recorded in 2021. In 2022, the estates contributed 94 percent of total area at 34,684 Ha, while the area under smallholder farmers was 2,335 Ha. Refer to Table 73 for more details.

Table 73*: Area under Sisal*

COUNTY	AREA (Ha)					% Contribution
	2018	2019	2020	2021	2022	
Makueni	5,250	5,250	5,250	5,250	5,250	14.20
Kilifi	4,599	4,599	4,599	5,250	5,250	14.20
Taita Taveta	12,175	12,175	12,175	11,524	11,524	31.18
Baringo	2,520	2,520	2,520	2,520	2,520	6.82
Kwale	5,880	5,880	5,880	5,880	5,880	15.91
Nakuru	4,200	4,200	4,200	4,200	4,200	11.36
Others*	6,072	6,072	6,077	5,000	2,335	6.32
TOTALS	**40,696**	**40,696**	**40,701**	**39,624**	**36,959**	**100**

** Main counties include Kitui, Makueni, Machakos, Taita Taveta, Siaya, Baringo, Homa Bay, Migori and Kisumu*

Source: AFA - Fibre Crops Directorate

5.2.4 Sisal Production

During the period under review a total of 32,251.14 MT of fibre was produced (an equivalent of 1,075,038 MT of green leaf (assuming only 3 percent of a whole leaf is fibre) valued at KES 6.51 billion compared to 32,208.93 MT valued at KES 5.12 billion recorded in 2021. The increase in value was attributed to the weaking of the Kenya shilling in 2022. For more details, refer to Table 74 and 75.

Table 74: Sisal production and value for 2021 and 2022

COUNTY	Quantity (MT)		Value (KES)	
	2021	2022	2021	2022
Baringo	2,524.75	2,371.10	409,497,231.21	490,707,315.15
Kilifi	3,639.10	4,220.30	590,237,201.34	873,405,626.98
Kwale	2,814.00	1,716.20	456,411,608.52	355,173,503.55
Makueni	6,279.15	6,975.45	1,018,435,306.20	1,443,593,412.96
Nakuru	2,905.73	3,005.13	471,289,588.92	621,922,008.34
Taita Taveta	12,801.90	12,563.95	2,076,380,871.04	2,600,152,744.37
Others*	1,244.22	1,399.01	99,537,600.00	146,721,963.79
TOTAL	**32,208.93**	**32,251.14**	**5,121,789,407.22**	**6,531,676,575.13**

** Main counties include Kitui, Makueni, Machakos, Taita Taveta, Siaya, Baringo, Homa Bay, Migori and Kisumu*

Source: AFA - Fibre Crops Directorate

Table 75: Sisal production trends from 2018 – 2022 in Metric Tons

County	2018	2019	2020	2021	2022
Makueni	6,878.00	6,791.90	6,651.05	6,279.15	6,975.45
Kilifi	4,894.55	4,681.52	4,674.70	3,639.10	4,220.30
Taita Taveta	8,173.75	7,952.00	10,975.40	12,802.00	12,563.95
Baringo	1,131.55	1,688.90	2,275.50	2,524.75	2,371.10
Nakuru	1,851.75	2,333.14	2,947.72	2,905.73	3,005.13
Kwale	735	2,282.00	2,120.00	2,814.00	1,716.20
Others*	584.6	910.74	879	1,244.20	1,399.01
TOTAL	**24,249.20**	**26,640.20**	**30,523.37**	**32,208.93**	**32,251.14**

** Main counties include Kitui, Makueni, Machakos, Taita Taveta, Siaya, Baringo, Homa Bay, Migori and Kisumu*

Source: AFA - Fibre Crops Directorate

5.2.5 Market Performance

Quantity and value of exports

Of all the total fibre produced, 90 percent was exported to thirty-three destinations while the rest was locally utilized in manufacture of cordage (ropes and twines), dartboard (for export market) and production of hand-weaved artifacts like traditional baskets (cyondos) by mainly women groups engaged in rural cottage industry. Most of the hand - weaved traditional baskets were exported to markets in Europe and USA.

During the period under review, a total 28,888 MT of raw fibre was exported to various destinations in the world valued at KES 5.95 billion or USD 50.67 million. The highest volume of exports was in the month of September while the lowest was in October. For more details refer to Table 76.

Table 76: Monthly export volumes and values in 2022

Month	Exports (MT)	Total value in USD	Total value KES
January	2,535	4,336,466	491,087,103
February	2,245	3,636,458	412,841,468
March	2,790	4,859,906	554,718,266
April	2,325	3,948,128	453,595,482
May	2,318	3,957,714	459,143,057
June	2,595	4,602,549	538,955,362

Month	Exports (MT)	Total value in USD	Total value KES
July	2,028	3,523,789	415,989,358
August	2,030	3,545,761	422,634,670
September	3,282	5,951,577	713,440,594
October	1,892	3,508,602	424,096,141
November	2,477	4,483,509	545,377,326
December	2,371	4,319,433	517,875,217
TOTAL	**28,888**	**50,673,893**	**5,949,754,044**

Source: AFA - Fibre Crops Directorate

Prices

Sisal exports volume have consistently continued to rise due to the ever-increasing unmet demand over time. This has also seen rising in prices as the demand and supply forces play out over the years. The average price (FOB) during the period under review was KES 206.91 per Kg. The highest average price of KES 225.62 per Kg was realized in December while the lowest average price in February at KES 189.99 per Kg. For more details, refer to Table 77.

Table 77: Monthly Average Price FOB (KES/KG) 2022

Month	Average FOB Price per Kg
January	195.06
February	189.99
March	199.38
April	191.86
May	199.59
June	207.22
July	207.03
August	206.55
September	219.01
October	222.1
November	219.52
December	225.62
Average	**206.91**

Source: AFA - Fibre Crops Directorate

Exports by Grades

During the period under review, a total of eight (8) grades out of nine (9) were traded in the export market. Grade No. 2 was not traded during the period under review. For the first time, Grade SSUG took the lead as the most popular export grade ahead of UG, which traditionally has been the most popular. This could be attributed to the harsh drought during the period under review, which limited most of the estates to achieve processing the higher quality grade of UG, due to lack of enough water as most sources like dams and boreholes had dried up. In addition, the sap of leaves had tremendously decreased due to the drought, making decortication more difficulty in achieving the required quality for grade UG.

A total of 12,895.75 MT of SSUG was exported, representing 45 percent of all fibre traded during the year, followed by UG with 12,704.75 MT, representing 44 percent. The other grades contributed 11 percent of the traded volume. For more details refer to Table 78.

Table 78: Volume (MT) and value (in KES and USD) of sisal exports by Grade in 2022

Grade	MT	AVG Price FOB/MT USD	Total value USD	Avg Price FOB per MT (KES)	Total value KES
SSUG	12,895.75	1,734.45	22,263,951.00	204,157.23	2,628,267,960.84
UG	12,704.75	1,883.82	23,447,706.36	222,209.59	2,737,175,427.39
TOW.1	1,523.10	1,234.24	1,882,104.00	145,413.16	221,336,731.67
3L	834.00	2,042.05	1,725,690.00	240,739.57	203,328,178.57
UHDS	438.50	1,296.20	557,810.00	154,144.11	65,662,321.63
TOW.2	415.00	1,524.65	645,310.00	179,313.78	76,263,105.53
NO.3	51.75	2,027.67	101,761.25	236,673.57	11,846,407.11
NO.1	24.00	2,065.00	49,560.00	244,746.28	5,873,910.68
TOTAL	**28,888**		**50,673,893**		**5,949,754,043**

Source: AFA - Fibre Crops Directorate

Sisal exports by Destinations

In the period under review, there were a total of 33 export destinations. Nigeria was the leading sisal fibre exports destination, with a total of 11,224.20 MT representing a market share of 39.26 percent of all fibre exports. The top five major sisal exports destinations in total represented 76 percent of the total exports. For more details, refer to Table 79.

Table 79: Sisal exports volumes and value 2022

Destination	Quantity Exports (MT)	Total value in USD	% Market Share
Nigeria	11,224.20	19,896,982.00	39.26
Saudi Arabia	3,697.00	7,009,745.00	13.83
Ghana	3,385.95	5,062,278.00	9.99
China	2,396.40	4,043,413.75	7.98
Spain	1,360.00	2,491,648.00	4.92
Morocco	1,051.00	1,814,193.00	3.58
Philippines	831	1,346,889.86	2.66
Egypt	804.3	1,432,390.00	2.83
Belgium	528	1,117,920.00	2.21
Senegal	477	917,458.00	1.81
Togo	451.5	761,549.00	1.50
Ivory Coast	394	630,545.00	1.24
India	392	728,000.00	1.44
Benin	242.1	396,043.00	0.78
UAE	230	444,300.00	0.88
Italy	175	297,522.50	0.59
Mauritania	159	244,188.00	0.48
Japan	154	258,529.00	0.51
Iraq	146	276,380.00	0.55
Libya	138.9	241,471.00	0.48
Indonesia	112	193,060.00	0.38
Germany	101.5	210,962.50	0.42
Syria	82	165,400.00	0.33
Guinea	55	96,825.00	0.19
Israel	55	99,475.00	0.20
Jordan	54	124,675.00	0.25
Burkina Faso	28	54,600.00	0.11
Chad	28	54,600.00	0.11
Gambia	28	57,400.00	0.11
Mali	28	60,200.00	0.12
Yemen	28	49,000.00	0.10
Bangladesh	25	43,125.00	0.09
South Africa	25	53,125.00	0.10
TOTAL	**28,888**	**50,673,893**	**100**

Source: AFA - Fibre Crops Directorate

Domestic Market for Sisal

The prices for sisal fibre in the domestic market ranged between KES 80-100 per Kg. This is the main market for smallholder sisal farmers, which found its way to factories manufacturing dartboards, sisal ropes, twines and coffee drying clothes.

Although no data was readily available, a lot of fibre was also sold to handloom weavers and hand weavers for making local basketry and other sisal artefacts.

FOOD CROPS

Chapter 6: Food Crops

Introduction

The agricultural sector is the backbone of the economy, contributing approximately 33 percent of Kenya's gross domestic product (GDP). The agriculture sector employs more than 40 percent of the total population and 70 percent of the rural population.

Currently, the annual crop production stands at 6 million MT of food crops, supporting 10 million households. Crop diseases, pests, weeds and unevenly distributed rainfall greatly reduce the potential of the food crops in quality and quantity.

Underlying causes of food price crisis and food insecurity include both demand side and supply side factors. Demand side factors include: rapid population growth, rapid urbanization, low income, poverty and increasing demand. Supply side factors include: declining agricultural productivity, high input prices, decline in world food stocks, under investment in rural infrastructure, climate change and climate variability, under investment in agriculture, poor markets and market access by smallholder farmers.

The 2022 rains were poorly distributed in space and time and were below average across most of the food producing regions. Maize is the most common food crop grown throughout the country, with beans, green grams and cowpeas ranking second in semi-arid counties. However, the poorly distributed rains during the long rains season Had a negative impact on the achieved production in most areas of the country, resulting in crop failure in some counties.

6.1 MAIZE

6.1.1 Crop Performance

Maize is Kenya's main staple food crop, immensely contributing to food security. The crop is mostly grown in Trans Nzoia, West Pokot, Elgeyo Marakwet, Laikipia, Nakuru, Kisii, Bungoma, Nandi and Kiambu counties. Different varieties are grown in different counties depending on the altitude and the rainfall distribution.

The area under the crop reduced by 12,227 Ha from 2,168,603 Ha in 2021 to 2,156,376 Ha in 2022, translating to 0.56 percent drop, attributed to some farmers shifting to other competing enterprises.

The country's production for the dry maize during the period under review dropped by 224,529 from 3,314,430 MT in 2021 to 3,089,901 MT in 2022, leading to 6.8 percent reduction. The production of the green maize also reduced 2,1925 MT from 298,299 in 2021 to 276,374 in 2022, decreasing by 7.4 percent. This was as a result of the reducing yield per unit area of land and the erratic weather pattern.

The average productivity for 90 Kg bag per Ha decreased from 17 bags in 2021 to 16 bags in 2022, a reduction of 1 bag which was as a result of poor rainfall experienced. The consumption for the period under review decreased by 171,835 MT, from 3,429,904 MT in 2021 to 3,258,069 MT, leading to 5 percent drop, attributed to reduction in the local production increasing local prices hence, consumers shifting to consumption of other products.

The average farm gate price of a 90 kg bag increased by KES 1,900 from KES 2,600 in 2021 to KES 4,500 in 2022 leading to an increase in 73.1 percent, as a result of increase in the cost of production.

6.1.2 Market Performance

The average wholesale price of a 90 kg bag increased by KES 2,075 from KES 2,724 in 2021 to KES 4,799 in 2022 leading to 76.2 percent increase, attributed to high inflation experienced.

The total value of locally produced maize increased by 58.7 billion from 95.8 billion in 2021 to 154.5 billion in 2022, resulting to 61.3 percent increase. This can be attributed to increase in farm gate prices due to higher demand as a result of decrease in local production.

The imports of maize increased by 288,150 MT from 474,000 MT in 2021 to 762,150 MT in 2022, translating to an increase in 60.8 percent, attributed to a reduction in local production and duty-free imports imposed by the government.

The exports of maize decreased by 3,900 MT from 4,000 MT in 2021 to 1,100 MT in the year under review, representing 72.5 percent decrease as a result of decline in local production and good prices in the local markets. For more details refer to table 80

Table 80: Maize Production and Market Performance 2018 - 2022

Year	2018	2019	2020	2021	2022
Area (Ha)	218,9113	2,196,136	2,171,695	2,168,603	2,156,376
Production					
90 kg bag (dry maize)	44,601,416	44,004,283	42,168,559	36,826,994	34,332,233
MT (dry maize)	4,014,127	3,960,385	3,795,170	3,314,430	3,089,901
Est. 115 kg bags (green maize)	3,453,247	3,099,432	2,970,133	2,593,902	2,403,256
MT (green maize)	310,792	356,434.70	341,565	298,299	276,374
Yield (90 kg bag/Ha)	22	20	19	17	16
Consumption (MT)	3,324,299	3,201,057	3,368,337	3,429,904	3,258,069
Price (KES)					
Average Farm Gate (90 kg bag)	1,873	2,576	2,798	2,600	4,500
Average Wholesale (90 kg bag)	2,036	3,068	2,885	2,724	4,799
Total Value of Locally Produced Maize (KES billion)	98.5	121.3	126.3	95.8	154.5
Import (MT)	182,000	188,000	367,000	474,000	762,150
Export (MT)	0	70	12	4,000	1,100

Source: State Department for Crops Development & Agricultural Research (SDCDAR) and Kenya Revenue Authority.

6.2 WHEAT

6.2.1 Crop Performance

Kenya is one of the largest wheat producers in Africa, with the crop being the second most import cereal crop after maize. Wheat is a versatile crop mostly grown in Meru, Laikipia, Nakuru, Uasin Gishu and Narok counties and can be used in many ways, from making bread and cakes to animal feeds. Wheat farming Has evolved over the years, with farmers adopting modern farming techniques.

The area under the crop reduced by 10,980 Ha from 134,070 Ha in 2021 to 123,090 Ha in 2022, dropping by 8.2 percent attributed to some farmers shifting to different crops in some counties and land fragmentation.

The country's production during the period under review dropped by 78,356 MT from 349,056 MT in 2021 to 270,700 MT, decreasing 22.4 percent. This was as a result of reduced yield per hectare of land and the erratic weather conditions faced.

The productivity for a 90 Kg bag per Ha decreased by 5 bags from 29 bags in 2021 to 24 bags. This was as a result of poor rainfall and increase in the prices of key farm inputs.

The consumption for the period under review increased by 133,525 MT, from 2,038,202 MT in 2021 to 2,171,727 MT, an increase in 6.6 percent, attributed to increased demand of wheat products.

The average farm gate price of a 90 Kg bag increased by KES 386 from KES 3,168 in 2021 to KES 3,554 in 2022 an increase in 12.2 percent, attributed to increase in the costs incurred in production.

6.2.2 Market Performance

The average wholesale price of a 90 Kg bag increased by KES 1,976 from KES 4,593 in 2021 to KES 6,569 in 2022 leading to 43 percent increase, attributed to high inflation experienced.

The total value of locally produced wheat decreased by 1.7 billion from 12.3 billion 2021 to 10.6 billion in 2022, leading to 13.8 percent decrease attributed to decline in the local wheat production.

The imports of wheat decreased by 466,053 MT from 2,128,153 MT in 2021 to 1,662,100 MT in 2022, dropping by 21.9 percent. This was as a result of decreased imports from Ukraine and the regulation under the wheat purchase programme where the millers must mob the allocated locally produced wheat before being allowed to import.

The exports of wheat decreased from 139,791 MT to 1,970 MT, a 98.6 percent drop during the year under review. This was as a result of decrease in local production and better local prices. For more details, refer to Table 81.

Table 81: Wheat Production and Market Performance 2018-2022

Year	2018	2019	2020	2021	2022
Area (Ha)	133,147	139,307	132,231	134,070	123,090
Production					
90 Kg bag	4,560,667	3,552,440	4,496,611	3,878,405	3,007,778
MT	410,460	319,720	404,695	349,056	270,700
Yield (90 Kg/Ha)	34	26	34	29	24
Consumption (MT)	1,975,106	1,988,175	2,001,616	2,038,202	2,171,727
Price (KES)					
Average Farm Gate (90 Kg bag)	2,761	2,780	2,941	3,168	3,554
Average Wholesale (90 Kg bag)	3,200	3,863	4,031	4,593	6,569
Total Value of Locally Produced Wheat (KES billion)	11	10	13	12.3	10.6
Import (MT)	1,512,034	1,998,900	1,835,983	2,128,153	1,662,100
Export (MT)	2,282	2,032	155,540	139,791	1,970

Source: State Department for Crops Development & Agricultural Research (SDCDAR) and Kenya Revenue Authority.

6.3 BARLEY

6.3.1 Crop Performance

Barley is a cereal grain and a member of the grass family, mainly grown in temperate regions. The crop is mainly used by the brewing industries and can also be used as fodder for animals. The crop is mainly grown in Narok, Nyandarua, Nakuru and Laikipia counties.

The area under the crop reduced by 5,807 Ha from 13,319 Ha in 2021 to 7,512 Ha in 2022, leading to a drop by 43.6 percent. This is mainly attributed to some farmers shifting to other crops in some regions and land sub division.

The country's production during the period under review dropped by 13,038 MT from 33,117 MT in 2021 to 20,079 MT, reducing by 39.4 percent. This was as a result of poor rainfall distribution in most of the producing regions.

The average productivity for a 90 Kg bag per Ha increased by 3 bags from 27 bags in 2021 to 30 bags in 2022. This was as a result of good agricultural practices and more farmers embracing contractual farming due to benefits such as easy access to market and financial support.

The consumption for the period under review increased by 120 MT, from 4,935 MT in 2021 to 5,055 MT, 2.4 percent increase attributed to increased demand from the brewing industries.

The average farm gate price of a 90 kg bag increased by KES 764 from KES 3,016 in 2021 to KES 3,780 in 2022, representing a 25.3 percent increase. This was as a result of an increase in the cost of production such as farm input costs. Refer to Table 82 for more details.

6.3.2 Market Performance

The total value of locally produced barley decreased by 0.27 billion from 1.11 billion in 2021 to 0.84 billion in 2022, decreasing by 24.3 percent. This was attributed to decreased local production and lower prices in the local markets.

The imports of barley into the country decreased by 1,590 MT from 1,600 MT in 2021 to 10 MT in 2022, drastically dropping by 99.3 percent. This was due to good prices in the country. Refer to Table 82, for more details.

Table 82: Barley Production and Market Performance 2018 - 2022

Year	2018	2019	2020	2021	2022
Area (Ha)	23,474	13,430	11,051	13,319	7,512
Production					
90 Kg bag	869,633	661,522	388,366.00	367,967	223,100
MT	78,267	59,537	34,953	33,117	20,079
Yield (90 Kg/Ha)	37	49	35	27	30
Consumption (MT)	4,650	4,756	4,847	4,935	5,055
Price (KES)					
Average Farm Gate (90 kg bag)	2,127	2,890	2,955	3,016	3,780
Total Value of Locally Produced Barley (KES billion)	1.85	1.91	1.15	1.11	0.84
Imports (MT)	-	110	8,000	1,600	10

Source: State Department for Crops Development & Agricultural Research (SDCDAR) and Kenya Revenue Authority.

6.4 RICE

6.4.1 Crop Performance

Rice can be considered as an alternative cereal to supplement maize as it is preferred by households in ASAL regions. In Kenya, 80 percent of the rice is grown in irrigated ecosystems that the government and local people Have created. The remaining 20 percent is grown in rain-fed conditions. The Mwea Irrigation Scheme in Kirinyaga County is where rice is largely grown, but it is also grown in other regions of the nation, such as Ahero in Kisumu County and Bunyala in Busia County. Rice production is also extending to Garissa County as the land Has the potential with fertile alluvial soils, River Tana waters throughout the year, availability of the labor and unparalleled market because the Garissa Community prefer rice as staple food.

The area under the crop increased by 437 Ha from 31,591 Ha in 2021 to 32,028 Ha in 2022, leading to 1.4 percent increase, attributed to the development of new production areas in the country.

The country's rice production during the period under review increased by 5,110 MT from 180,890 MT in 2021 to 186,000 MT, a 2.8 percent increase. This was as a result of an increase in the area under irrigation.

The average yield in 90 kg bag per Ha increased by 21 bags from 44 bags in 2021 to 65 bags in 2022. This was as a result of good agricultural practices and use of improved varieties.

The rice consumption increased by 326,784 MT from 1,090,660 MT in 2021 to 1,417,444 MT in 2022, an increase of 30 percent attributed to increased demand in ASAL regions and affordability.

The average farm gate price of a 50 kg bag increased by KES 319 from KES 2,481 in 2021 to KES 2,800 in 2022, an increase of 12.9 percent. This was as a result of an increase in the cost of production and increasing the demand.

6.4.2 Market Performance

The average wholesale price of a 50 Kg bag increased by KES 1,129 from KES 5,000 in 2021 to KES 6,129 in 2022, an increase of 22.6 percent, mainly attributed to increased demand.

The total value of locally produced rice increased by 1.43 billion from 8.98 billion in 2021 to 10.41 billion in 2022 leading to 16 percent increase. This can be attributed to increased local production experienced and good local prices.

The imports of rice into the country increased by 65,929 MT from 598,271 MT in 2021 to 664,200 MT in 2022 causing an increase of 11 percent. This can be attributed to the increase in local demand for consumption with readily available market.

The rice exports reduced by 146 MT from 342 MT in 2021 to 196 MT in 2022 accounting for 42.7 percent reduction. This was also as a result of a high demand and good prices in the country. For more details, refer to Table 83.

Table 83: Rice Production and Market performance 2018-2022

Year	2018	2019	2020	2021	2022
Area (Ha)	21,949	27,383	32,324	31,591	32,028
Production					
90 Kg bag	1,225,822	1,143,607	1,444,589	2,009,889	2,066,667
MT	110,324	112,605	160,585	180,890	186,000
Yield (90 Kg/Ha)	47	49	51	44	65
Consumption (MT)	987,553	1,051,164.40	1,071,083	1,090,660	1,417,444
Price (KES)					
Average Farm Gate (50 Kg bag)	3,206	3,515	3,185	2,481	2,800
Average Wholesale price (50 Kg bag)	6,500	6,000	6,000	5,000	6,129
Total Value of Locally Produced Rice (KES billion)	7.07	5.99	6.10	8.98	10.41
Import (MT)	435,390	597,230	587,984	598,271	664,200
Export (MT)	423	892	402	342	196

Source: State Department for Crops Development & Agricultural Research (SDCDAR) and Kenya Revenue Authority.

6.5 SORGHUM

6.5.1 Crop Performance

Sorghum is a conventional high-value crop mainly grown in western, northern rift valley, eastern and some parts central in Kenya. The crop contains numerous minerals such as vitamin B, potassium, phosphorus, zinc, and iron.

The area under the crop increased by 11,692 Ha from 197,403 Ha in 2021 to 209,095 Ha in 2022 leading to an increase in 5.9 percent. This was mainly attributed to the development of contractual farming practiced in Kitui county and good market prices motivating farmers.

The country's production during the period under review dropped by 18,781 MT from 131,769 MT in 2021 to 112,988 MT, leading a decrease in 14.3 percent. This was as a result of reduced yield per hectare of land as a result of the erratic weather conditions faced.

The average productivity for a 90 Kg bag per Ha decreased by 1 bag from 7 bags in 2021 to 6 bags in 2022. This was as a result of poor rainfall experienced during the season and the use of uncertified seeds by some smallholder farmers.

The consumption for the period under review decreased by 46,807 MT, from 148,053 MT in 2021 to 101,246 MT, a 31.6 percent decrease, attributed to decreased demand in the local market due to high prices.

The average farm gate price of a 90 Kg bag increased by KES 1,289 from KES 3,223 in 2021 to KES 4,512 in 2022 resulting to 40 percent increase. This was as a result of an increase in the cost of production during the period.

6.5.2 Market Performance

The average wholesale price of a 90 kg bag increased by 1,607 from KES 4,495 in 2021 to KES 6,102, an increase of 35.8 percent. The increase in price was attributed to the inflation faced during the period.

The total value of locally produced sorghum increased by 0.94 billion from 4.72 billion in 2021 to 5.66 billion in 2022, leading to 20 percent increase, attributed to increase in farm gate prices.

The imports of sorghum decreased by 42,940 MT from 97,400 MT in 2021 to 54,460 MT in 2022, representing a 44.1 percent drop occasioned by the decrease in demand of sorghum due to higher local prices.

Exports also significantly dropped by 58,030 from 63,040 MT in 2021 to 5,010 MT in 2022 a 92.1 percent drop as a result of good local prices in the market and South Sudan shifting to import from Tanzania due to lower prices. For more details, refer to Table 84.

Table 84: Sorghum Production and Market Performance 2018-2022

Year	2018	2019	2020	2021	2022
Area (Ha)	228,733	240,200	219,657	197,403	209,095
Production					
90 kg bag	2,284,556	3,486,559	3,513,956	1,464,100	1,255,422
MT	205,610	313,790	316,256	131,769	112,988
Yield (90 kg/Ha)	10	15	16	7	6
Consumption (MT)	88,091	142,692	155,776	148,053	101,246
Price (KES)					
Average Farm Gate (90 kg bag)	2,714	3,360	2,873	3,223	4,512
Average Wholesale (90 kg bag)	4,147	4,411	4,260	4,495	6,102
Total Value of Locally Produced Sorghum (KES billion)	6.20	10.80	10.10	4.72	5.66
Imports (MT)	53,800	89,600	33,200	97,400	54,460
Exports (MT)	75,000	57,800	77,200	63,040	5,010

Source: State Department for Crops Development & Agricultural Research (SDCDAR) and Kenya Revenue Authority.

6.6 MILLET

6.6.1 Crop Performance

The area under the crop decreased by 11,692 Ha from 125,439 Ha in 2021 to 106,022 Ha in 2022, a decrease in 15.5 percent, attributed to farmers shifting to other competing enterprises.

The country's production during the period under review increased by 633 MT from 62,333 MT in 2021 to 62,996 MT. This was as result of increase in productivity per unit area observed during the period.

The average productivity for a 90 Kg bag per Ha increased by 1 bag from 6 bags in 2021 to 7 bags in 2022. This was as a result of good agricultural practices and favorable weather during the period under review.

The consumption for the period under review decreased by 13,534 MT, from 64,157 MT in 2021 to 50,623 MT, representing 21.1 percent decrease majorly attributed to the decrease in demand in the local market due to high prices.

The average farm gate price of a 90 Kg bag increased by KES 952 from KES 6,850 in 2021 to KES 7,802 in 2022, a 13.9 percent increase. This was as a result of an increase in the cost of production during the period under review.

6.6.2 Market Performance

The average wholesale price increased by KES 943 from KES 8,210 in 2021 to KES 9,153 in 2022, as a result of high cost of inputs.

The total value of locally produced millet increased by KES 0.94 billion from KES 4.72 billion in 2021 to KES 5.66 billion in 2022, a 20 percent increase, attributed to an increase in farm gate prices in the local market.

Millet imports decreased by 9,984 MT from 10,000 MT in 2021 to 16 MT in 2022, a 99.8 percent decrease due to decreased demand of millet during the period under review and the increase in local production. For more details, refer to Table 85.

Table 85: Millet Production and Market Performance 2018 - 2022

Year	2018	2019	2020	2021	2022
Area (Ha)	115,200	142,185	118,411	125,439	106,022
Production					
90 kg bag	922,822	1,496,811.10	1,732,311	693,000	699,956
MT	83,054	134,713	155,908	62,333	62,996
Yield (90 kg/Ha)	8	11	15	6	7
Consumption (MT)	46,364	61,833	68,152	64,157	50,623
Price (KES)					
Average Farm Gate (90 kg bag)	4,335	5,460	5,148	6,850	7,802
Average Wholesale price (90 kg bag)	7,102	6,688.30	6,656	8,210	9,153
Total Value of Locally Produced Millet (KES billion)	4.00	8.20	8.90	4.75	5.55
Imports (MT)	7,500	6,900	4,600	10,000	16

Source: State Department for Crops Development & Agricultural Research (SDCDAR) and Kenya Revenue Authority.

6.7 BEANS

6.7.1 Crop Performance

Beans is considered as one of the most important legumes worldwide due to its nutritious nature and nitrogen-fixing ability. It is one of the major food crops in Kenya mainly grown in almost all regions in the country.

The area under the crop decreased by 11,692 Ha from 1,171,869 Ha in 2021 to 1,043,288 Ha in 2022, a decrease in 11 percent, attributed to farmers shifting to other competing enterprises.

The country's production during the period under review decreased by 160,706 MT from 670,735 MT in 2021 to 510,029 MT which could be attributed to reduction in acreage and depressed rains.

The average yield in 90 Kg bag per Ha decreased from 6.4 bags in 2021 to 5.4 bags in 2022. This was brought on by the uneven distribution of rainfall in some areas, which reduced the output and yield.

The average farm gate price of a 90 Kg bag increased by KES 2,659 from KES 6,341 in 2021 to KES 9,000 in 2022, leading to 42 percent increase. This was as a result of an increase in the cost of production during the period and decrease in supply.

6.7.2 Market Performance

The average wholesale price increased by KES 1,253 from KES 7,936 in 2021 to KES 9,189 in 2022 leading to 15.8 percent increase. This was attributed to increase in costs from farm to the point of sale.

The total value of locally produced beans increased by KES 3.7 billion from KES 47.3 billion in 2021 to KES 51 billion in 2022, leading to 7.8 percent increase attributed to increase in farm gate prices in the local market due to inflation.

The imports of beans decreased by 89,700 MT from 138,100 MT in 2021 to 48,400 MT in 2022, leading to 65.1 percent decrease. For more details, refer to Table 86.

Table 86: Beans Production and Market Performance 2018 - 2022

Year	2018	2019	2020	2021	2022
Area (Ha)	1,149,985	1,188,678	1,147,709	1,171,869	1,043,288
Production					

Year	2018	2019	2020	2021	2022
90 kg Bag	8,510,856	8,310,456	8,604,067	7,452,610	5,666,989
MT	765,977	747,941	774,366	670,735	510,029
Yield (90 kg/Ha)	7.4	7.1	7.5	6.4	5.4
Price (KES)					
Average Farm gate (90 kg bag)	4,966	6,210	6,030	6,341	9,000
Average Wholesale (90 kg bag)	5,810	6,661	7,447	7,936	9,189
Total Value of Locally Produced Beans (KES billion)	42.32	51.60	51.80	47.34	51.00
Imports (MT)	76,500	31,100	48,100	138,100	48,400

Source: State Department for Crops Development & Agricultural Research (SDCDAR) and Kenya Revenue Authority.

6.8 COWPEAS

6.8.1 Crop Performance

The area under the crop decreased from 235,734 Ha in 2021 to 222,898 Ha in 2022, a decrease in 5.4 percent attributed to depressed rains. The country's production during the period under review decreased from 250,060 MT in 2021 to 131,118 MT in 2022 a decrease in 47.6 percent. This decrease was as a result of the decreased yield per Ha of land during the period.

The average productivity in 90 Kg bag per Ha decreased from 11.8 bags in 2021 to 6.5 bags in 2022. This was as a result of erratic rainfall pattern in some regions lowering the production and the use of uncertified seeds.

The average farm gate price of 90 Kg bag increased from KES 5,354 in 2021 to KES 6,400 in 2022 a 19.5 percent increase. This was as a result of an increase in the cost of production during the period and decrease in supply.

6.8.2 Market Performance

The average wholesale price decreased from KES 8,427 in 2021 to KES 7,672 in 2022, resulting to 9.1 percent decrease attributed to unhealthy competition among the traders in the value chain.

The total value of locally produced cowpeas increased from KES 8.9 billion in 2021 to KES 9.3 billion in 2022 a 4.5 percent increase. This can be attributed to increase in farm gate prices in the local market.

The imports of cowpeas into the country decreased from 136 MT in 2021 to 83.9 MT in 2022 leading to 38.3 percent decrease. This can be due to decreased demand in the country during the period under review due to increased prices. For more details, refer to Table 87.

Table 87: Cowpeas Production and Market Performance 2018 - 2022

Year	2018	2019	2020	2021	2022
Area (Ha)	258,732	242,274.88	239,131	235,734	222,898
Production					
90 kg bag	1,990,078	2,471,045.20	2,935,111	1,655,788	1,456,867
MT	179,107	222,394	264,160	250,060	131,118
Yield (90 kg/Ha)	7.7	10.2	12.3	11.8	6.5
Price (KES)					
Average Farm gate (90 kg bag)	3,354	5,430	5,269	5,354	6,400
Average Wholesale (90 kg bag)	6,598	6,815	7,187	8,427	7,672
Total Value of Locally Produced Cowpeas (KES billion)	6.7	13.4	15.4	8.9	9.3
Imports (MT)	0	0.3	1.1	136	83.9

Source: State Department for Crops Development & Agricultural Research (SDCDAR) and Kenya Revenue Authority.

6.9 GREEN GRAM

6.9.1 Crop Performance

The area under the crop decreased from 272,401 Ha in 2021 to 259,451 Ha in 2022 leading to a decrease in 4.8 percent. This was mainly attributed to poor rainfall in some of the green gram producing regions during the period under review.

The country's production during the period under review decreased from 138,056 MT in 2021 to 123,938 MT in 2022 resulting to a decrease in 10.2 percent. This decrease can be attributed to decreased yield per Ha of land during the period due to poor rainfall pattern experienced in some regions and infestation of pests and diseases.

The average yield of 90 Kg bag per Ha decreased from 5.6 bags in 2021 to 5.3 bags in 2022. This was as a result of erratic rainfall pattern in some regions lowering the production and the use of uncertified seeds.

The average farm gate price of 90 Kg bag increased from KES 6,512 in 2021 to KES 9,063 in 2022 a 39.2 percent increase. This was as a result of an increase in the cost of production during the period and decrease in supply.

6.9.2 Market Performance

The average wholesale price increased from KES 9,925 in 2021 to KES 11,223 in 2022 leading to 13.1 percent increase. This was because of its high demand in export markets and reduced local production.

The total value of locally produced green gram increased from KES 10.1 billion in 2021 to KES 12.5 billion in 2022 accounting for 23.8 percent increase. This can be attributed to increase in farm gate prices in the local market and the higher local demand.

The imports of green gram increased from 304 MT in 2021 to 1,852 MT in 2022 an increase of 509.2 percent. This was due to increased demand in the country during the period under review due to increased prices as a result of decreased local production.

The exports during the year under review decreased from 19,230 MT to 4,656 MT a 75.8 percent drop. This was due to decrease in local production and higher demands in the local markets because of good prices both at farm gate and wholesale. For more details, refer to Table 88.

Table 88: Green Grams Production and Market Performance 2018 - 2022

Year	2018	2019	2020	2021	2022
Area (Ha)	362,939	305,323.10	285,071	272,401	259,451
Production					
90 kg bag	2,295,767	2,065,793.90	2,356,133.30	1,533,308	1,377,089
MT	206,619	185,921	212,052	138,056	123,938
Yield (90 kg/Ha)	6.3	6.8	8.3	5.6	5.3
Price (KES)					
Average Farm gate (90 kg bag)	4,246	9,160	7,010	6,512	9,063
Average Wholesale (90kg bag)	7,716	102,42.7	8,672	9,925	11,223
Total Value of Locally Produced Green grams (KES billion)	9.7	18.9	16.5	10.1	12.5
Imports (MT)	660	14,470	2,160	304	1,852
Exports (MT)	24,466	586	8,756	19,230	4,656

Source: State Department for Crops Development & Agricultural Research (SDCDAR) and Kenya Revenue Authority.

6.10 PIGEON PEAS

6.10.1 Crop Performance

The area under the crop increased from 126,601 Ha in 2021 to 146,487 Ha in 2022 leading to an increase in 15.7 percent. This was mainly attributed to more farmers investing in pigeon farming for its high value and drought tolerability.

The country's production during the period under review decreased from 104,008 MT in 2021 to 83,816 MT in 2022 a decrease in 19.4 percent. This decrease was as a result of decreased yield per hectare of land during the period due to poor rainfall pattern experienced in some regions.

The average yield in 90 kg bag per hectare decreased from 9 in 2021 to 6 in 2022. This was as a result of erratic rainfall pattern in some regions lowering the production and yield.

The average farm gate price of 90 kg bag increased from KES 5,111 in 2021 to KES 7,802 in 2022 leading to an increase by 52.7 percent. This was as a result of an increase in the cost of production during the period and decrease in supply.

6.10.2 Market Performance

The average wholesale price increased from KES 5,878 in 2021 to KES 8,752 in 2022 accounting for 48.9 percent increase due to its high demand in the local markets.

The total value of locally produced pigeon peas increased from KES 6 billion in 2021 to KES 7.3 billion in 2022 a 21.7 percent increase, attributed to an increase in farm gate prices and high local demand.

The imports of pigeon peas increased from 573 MT in 2021 to 7,645 MT in 2022 an increase. This was due to increased demand in the country during the period under review to meet the deficit caused by reduced local production.

The exports during the year under review decreased from 532 MT to 99 MT, 81.4 percent drop. This was due to decrease in local production and higher demand in the local markets because of good prices both at farm gate and wholesale. For more details, refer to Table 89

Table 89: Pigeon Peas Production and Market Performance 2018 - 2022

Year	2018	2019	2020	2021	2022
Area (Ha)	108,326	136,388	133,525	126,601	146,487
Production					
90 kg bag	921,589	1,194,989	1,373,637	1,155,649	931,289
MT	82,943	107,549	123,627	104,008	83,816
Yield (90 kg bag /Ha)	9	9	10	9	6
Price (KES)					
Average Farm gate (90 kg bag)	4,695	5,718	5,171	5,111	7,802
Average Wholesale (90 kg bag)	4,500	6,300	5,925	5,878	8,752
Total Value of Locally Produced Pigeon Peas (KES billion)	4	7	7	6	7.3
Imports (MT)	1,142	31,222	6,145	573	7,645
Exports (MT)	11,881	6,258	16,648	532	99

Source: State Department for Crops Development & Agricultural Research (SDCDAR) and Kenya Revenue Authority.

6.11SWEET POTATOES

6.11.2 Crop Performance

The area under the crop increased from 53,043 Ha in 2021 to 53,552 Ha in 2022 leading to a marginal increase of 0.96 percent. The slight increase in the area indicates that the crop is mostly grown for subsistence farming.

The country's production during the period under review decreased from 674,348 MT in 2021 to 608,682 MT in 2022, contributing to 9.7 percent drop. This informs that the production reduced as a result of poor rainfall distribution experienced.

The average yield decreased from 12.7 MT per Ha in 2021 to 11.4 MT per Ha in 2022. This was as a result of poor rainfall distribution in some regions lowering the production and yield and the use of uncertified vines for planting.

The consumption during the year under review decreased from 922,866 MT in 2021 to 658,099 MT which accounted for 28.7 percent drop as a result of increase in farmgate prices.

The average farm gate price of 98 kg bag increased from KES 2,940 in 2021 to KES 3,492 in 2022 leading to an increase 18.8 percent. This was as a result of an increase in the cost of production during the period.

6.11.2 Market Performance

The average wholesale price increased from KES 3,832 in 2021 to KES 5,030 in 2022 resulting to 31.3 percent increase due to high transportation costs incurred from farm to the point of sale.

The total value of locally produced sweet potato increased from KES 20 billion in 2021 to KES 21.7 billion in 2022 leading to an increase by 8.5 percent attributed to increase in farm gate prices. For more details, refer to Table 90

Table 90: Sweet Potatoes Production and Market Performance 2018 - 2022

Year	2018	2019	2020	2021	2022
Area (Ha)	64,301	57,535	54,007	53,043	53,552
Production					
MT	871,010	976,691	685,687	674,348	608,682
Yield (MT/Ha)	13.5	16.9	12.7	12.7	11.4
Consumption (MT)	862,370	889,447	906,301	922,866	658,099
Price (KES)					
Average Farm gate (98 kg bag)	2,115	3,218	3,212	2,940	3,492
Average Wholesale (98 kg bag)	2,985	3,478	3,655	3,832	5,030
Total Value of Locally Produced Sweet Potatoes (KES billion)	18.8	32	24.5	20	21.7

Source: State Department for Crops Development & Agricultural Research (SDCDAR) and Kenya Revenue Authority.

6.12 CASSAVA

6.12.1 Crop Performance

The area under the cassava increased from 61,201 Ha in 2021 to 65,769 Ha in 2022 leading to an increase of 7.5 percent. The increase in area indicates that more farmers are embracing its production due to good prices in the market and low maintainance costs.

The country's production during the period under review increased from 711,890 MT in 2021 to 775,998 MT in 2022, leading to an increase of 9 percent. This was as a result of increase in productivity due to good agricultural practices and low post-harvest losses.

The average productivity increased from 11.6 MT per Ha in 2021 to 11.8 MT per Ha in 2022 as a result of favorable weather conditions during the period under review.

The consumption of cassava for the period under review reduced from 1,006,763 MT in 2021 to 911,214 MT, a 9.5 percent drop. The average farm gate price of 100 Kg bag decreased from KES 3,366 in 2021 to KES 3,200 in 2022 leading to 4.9 percent decrease. This can be as a result some traders exploiting farmers who happen to be less informed about the market performance.

6.12.2 Market Performance

The average wholesale price increased from KES 4,348 in 2021 to KES 4,852 in 2022 a 11.6 percent increase as a result of high transportation costs.

The total value of locally produced cassava increased from KES 15 billion in 2021 to KES 27.7 billion in 2022 an increase of 84.7 percent. This can be attributed to increase in production during the period under review. For more details, refer to Table 91.

Table 91: Cassava Production and Market Performance 2018 - 2022

Year	2018	2019	2020	2021	2022
Area (Ha)	61,583	59,630	61,754	61,201	65,769
Production					
MT	945,991	845,342	898,110	711,890	775,998
Yield (MT/Ha)	15.4	14.1	14.5	11.6	11.80
Consumption (MT)	945,826	970,306	881,108	1,006,763	911,214
Price (KES)					
Average Farm gate (100 kg bag)	1,982	2,838	3,273	3,366	3,200
Average Wholesale (99 kg bag)	2,544	3,237	3,483	4,348	4,852
Total Value of Locally Produced Cassava (KES billion)	18.9	24	32	15	27.7

Source: State Department for Crops Development & Agricultural Research (SDCDAR) and Kenya Revenue Authority.

6.13 IRISH POTATO

6.13.1 Crop Performance

Irish Potato farming is practiced by over 800,000 farmers in Kenya, due to its high lucrative value. Irish Potatoes are highland crops that grow well in most parts of Kenya including Nakuru, Nyandarua, Elgeyo Marakwet, Meru, Nyeri, Kirinyaga and Bungoma counties.

The area under the crop decreased from 214,600 Ha in 2021 to 209,770 Ha in 2022 leading to a decrease of 2.3 percent as a result of poor rainfall distribution in some Irish potato producing regions.

The country's production during the period under review decreased from 2,107,824 MT in 2021 to 1,754,130 MT, a decrease of 16.8 percent. This was as a result of poor rainfall performance, use of uncertified seeds and poor agricultural practices by most small-scale farmers.

The average productivity decreased from 9.8 MT per Ha in 2021 to 8.4 MT per Ha in 2022 due to poor rainfall distribution and the use of uncertified seeds by most of the small-scale farmers.

The average farm gate price of 1 kg of irish potato increased from KES 21 in 2021 to KES 35.8 in 2022 representing 70.5 percent increase attributed to high demand and increase in the costs of inputs during the period under review.

6.13.2 Market Performance

The average wholesale price of 50 Kg bag increased from KES 1,788 in 2021 to KES 3,606 in 2022 leading to an increase of 101.7 percent due high production costs during the year under review.

The total value of locally produced Irish potato increased from KES 48 billion in 2021 to KES 62.7 billion in 2022 an increase of 30.6 percent attributed to the increase in farmgate prices. For more details, refer to Table 92.

Table 92: Irish Potato Production and Market Performance 2018-2022

Year	2018	2019	2020	2021	2022
Area (Ha)	217,315	212,976	176,252	214,600	209,770
Production					
MT	1,870,375	1,978,952	1,859,776	2,107,824	1,754,130
Yield (MT /Ha)	8.6	9.3	10.5	9.8	8.4
Consumption (MT)	1,428,011	1,664,740	1,562,628	1,727,286	1,619,936
Price (KES)					
Farmgate (per kg)	42	31.8	24.8	21	35.8
Wholesale (50 kg bag)	3,115	2,898	2,453	1,788	3,606

Year	2018	2019	2020	2021	2022
Total Value of Locally Produced Irish Potato (KES billion)	40.8	62.9	46.1	48	62.7

Source: State Department for Crops Development & Agricultural Research (SDCDAR) and Kenya Revenue Authority.

HORTICULTURAL CROPS

Chapter 7: Horticultural Crops

7.1 Agriculture performance

In 2022, the area under horticulture increased from 434,796 Ha in 2021 to 466,704 Ha, representing a 7.3 percent rise. In addition, the production increased by 300,105 MT a 3.8 percent rise while the value increased by KES 13.3 billion a 7.7 percent increase compared to the value achieved in 2021. The biggest increase came from fruits and exotic vegetables whose value increased by KES 5.1 billion and KES 5.08 billion. Aromatic vegetables and Africa Leafy vegetables value increased by 15 and 24 percent respectively while the Asian vegetables suffered a 7.4 percent drop in value. Refer to table 93, for more details.

Table 93: Horticultural Crops Performance 2020-2022

Crops Type	Area (Ha)			Volume (MT)			Value (KES) millions			% of the total value 2022
	2020	2021	2022	2020	2021	2022	2020	2021	2022	
Fruits	226,721	212,913	231,906	4,409,637	4,143,370	4,326,331	85,681	82,454	87,555	**47**
Exotic Vegetables	158,291	158,567	167,084	3,426,683	3,137,522	3,225,836	71,441	72,650	77,731	**42**
ALV	56,136	44,976	48,321	299,628	277,929	294,016	8,846	8,282	10,299	**6**
Aromatics	11,330	15,056	16,268	184,767	218,429	234,871	7,037	8,323	9,576	**5**
Asian Vegetables	3,258	3,284	3,124	33,926	43,804	40,104	1,139	1,458	1,349	**1**
Total	**455,736**	**434,796**	**466,704**	**8,354,641**	**7,821,054**	**8,121,159**	**174,145**	**173,166**	**186,510**	**100**

Source: AFA-Horticulture Crops Directorate

7.2 Fruits

During the period under review, the area under fruit increased from 212,913 Ha in 2021 to 231,906 Ha accounting for 8.9 percent increase. Fruits production and value increased by 182,961 MT and KES 5.1 billion representing 4.4 and 6.2 percent increase respectively compared to 2021. This was attributed to increase in area especially under banana and mango as a result of increase in area under irrigation. Refer to table 94, for more details.

Table 94: Summary of Fruits Production 2020-2022

Crop	Area (Ha)			Volume (MT)			Value (KES) millions		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
Banana	72,486	68,032	71,800	1,871,521	1,984,282	2,052,606	29,029	26,960	27,454
Avocado	27,141	26,561	27,807	492,724	432,969	455,279	9,542	12,391	12,642
Mango	62,234	56,668	66,235	793,280	738,321	758,374	14,968	12,246	13,614
Pineapple	9,838	8,384	8,784	330,331	251,935	257,022	10,399.23	10,699.04	9,925.34
Water Melon	19,548	21,405	20,105	386,261	349,630	337,496	8,055	8,227	9,420

Crop	Area (Ha)			Volume (MT)			Value (KES) millions		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
Orange	12,604	12,109	12,097	145,445	121,184	130,319	3,522.83	2,728.46	3,425.66
Pawpaw	7,913	5,553	6,052	118,924	74,770	122,333	3,141.22	2,634.69	3,276.26
Tree Tomato	1,322	1,617	1,495	21,776	47,615	30,478	1,864.27	2,125.34	1,842.26
Purple Passion	2,574	2,480	2,748	70,176	25,586	31,068	1,110.47	1,556.66	1,742.41
Lime	2,951	3,063	3,758	82,110	46,312	36,381	2,161.38	975.77	699.53
Lemons	1,687	2,405	4,629	16,741	22,019	33,029	449.11	654.99	1,032.89
Yellow Passion	1,362	1,207	724.1	13,710	11,605	6,297	363.34	394.02	455.82
Tangerine	1,307	1,133	3,794	25,733	10,655	51,483	568.05	215.60	1,399.77
Others	3,754	2,296	1,879	40,905	26,487	24,166	505.83	644.30	624.96
Total	**226,721**	**212,913**	**231,906**	**4,409,637**	**4,143,370**	**4,326,331**	**85,681**	**82,454**	**87,555**

Source: AFA-Horticultural Crops Directorate

7.2.1 Banana

The banana crop is extensively cultivated as a staple food and also as income-generating activity by many local communities. During the period under review, the area under banana increased from 68,032 Ha in 2021 to 71,800 Ha, a 5.5 percent increase. Banana production jumped up from 1,984,282 MT in 2021 to 2,052,606 MT in 2022, a 3.4 percent increase that was attributed to increased area under production.

The value increased by 2 percent from KES 26.96 billion in 2021 to KES 27.45 billion in 2022 which was not comensulate to the increase in production as a result of depressed farm gate prices in the main growing areas of Meru Murang'a and Taita Taveta counties. For more details, refer to Table 95.

Table 95: Summary of Banana Production 2020-2022

County	Area (Ha)			Volume (MT)			Value (KES) millions		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
Meru	14,012	14,209	14,660	484,936	776,678	741,027	6,843	8,720	8,062
Murang'a	7,338	8,626	8,579	161,859	253,476	208,600	2,303	3,241	3,050
Kirinyaga	4,312	3,859	3,837	185,133	149,377	183,826	2,283	1,858	2,136
Taita Taveta	4,909	3,195	3,183	238,750	88,758	154,023	2,805	1,415	1,704
Kisii	6,019	5,332	5,762	119,662	111,767	115,903	1,565	1,206	1,411
Nyamira	3,316	2,842	4,118	43,550	40,450	52,670	878	817	976
Bungoma	2,401	2,235	2,430	64,450	42,132	50,200	1,010	775	635
Tharaka Nithi	4,283	1,564	1,541	54,980	56,443	53,553	682	756	679

County	Area (Ha)			Volume (MT)			Value (KES) millions		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
Kiambu	2,140	2,189	2,233	60,921	79,490	62,340	1,197	730	661
Kakamega	2,518	2,745	3,394	38,380	34,587	51,797	742	576	722
Homabay	1,254	1,422	1,601	16,700	19,136	20,278	464	544	596
Siaya	1,446	1,873	2,255	15,106	21,006	21,774	464	539	314
Lamu	2,001	1,845	1,875	63,924	19,000	19,500	1,550	496	485
Migori	1,613	1,614	1,729	44,246	32,280	37,017	614	479	519
Kericho	466	530	548	12,872	14,321	15,228	505	448	463
Nyeri	1,352	1,333	1,143	37,459	32,556	36,219	399	411	415
Embu	1,304	1,121	1,130	44,870	36,580	36,090	611	386	518
Makueni	539	504	400	10,631	11,005	9,740	324	378	273
Others	11,264	10,994	11,382	173,093	165,240	182,821	3,790	3,186	3,836
Total	**72,486**	**68,032**	**71,800**	**1,871,521**	**1,984,282**	**2,052,606**	**29,029**	**26,960**	**27,454**

Source: AFA-Horticultural Crops Directorate

7.2.2 Avocado

The area reported under Avocado increased from 26,561 Ha in 2021 to 27,807 Ha in 2022 while production was 455,279 MT up ftom 432,969 MT reported in 2021 a 5.2 percent increase. The value on the other hand increased marginary from KES 251 million representing 2 percent rise compared to the value reported in 2021. For more details, refer to Table 96.

The major challenges in avocado production are inadequate availability of clean planting material, false condling moth, fruit fly infestations, anthracnose especially on Fuerte variety, harvesting of immature avocados and poor postharvest handling of the fruit.

Table 96: Summary of Avocado Production 2020-2022

County	Area (Ha)			Volume (MT)			Value (KES) millions		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
Murang'a	5,890	6,128	6,208	137,561	115,774	121,450	2,924	2,748	2,922
Kisii	2,641	2,746	1,891	73,102	67,177	60,743	748	1,544	1,416
Kiambu	1,676	1,770	1,830	51,584	33,531	33,982	989	1,237	1,167
Meru	2,575	2,545	3,021	17,499	29,404	26,430	387	1,209	641
Nakuru	1,553	1,589	2,069	24,501	21,037	30,594	701	945	1,566
Nyamira	2,660	2,768	2,970	31,269	38,710	37,476	552	838	670
Uasin Gishu	511	834	775	2,117	6,759	7,384	106	490	481
Bomet	687	398	559.25	11,566	7,803	9,120	363	426	435

County	Area (Ha)			Volume (MT)			Value (KES) millions		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
Nyeri	1,352	669	655.05	34,199	9,890	13,549	311	420	329
Kirinyaga	709	687	713	12,940	16,435	15,935	348	372	402
Embu	538	563	585	18,727	16,040	15,650	355	330	313
Trans Nzoia	296	349	380	1,047	5,915	8,932	21	271	397
Nandi	368	368	240.4	7,661	7,661	3,236	258	258	114
Bungoma	273	466	355	7,300	8,648	3,236	105	147	186
Others	5,413	4,681	5,555	61,651	48,184	67,562	1,375	1,157	1,601
TOTAL	**27,141**	**26,561**	**27,807**	**492,724**	**432,969**	**455,279**	**9,542**	**12,391**	**12,642**

Source: AFA-Horticultural Crops Directorate

7.2.3 Mango

During the period of review, the area under mangoes increased from 56,668 Ha in 2021 to 66,235 Ha which was 17 percent increase while production increased by 20,053 MT a 3 percent rise compared to the production realised 2021. There was substantial increase in value by KES 1.36 billion from KES 12.2 billion in 2021 to KES 13.6 billion realised in 2022 attributed to an increase in production and improved average farm gate prices. For more details, refer to Table 97.

Table 97: Summary of Mango Production 2020-2022

County	Area (Ha)			Volume (MT)			Value (KES) millions		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
Makueni	21,985	20,414	22,422	159,622	281,398	245,367	3,033.54	4,163.47	3,614.95
Lamu	5,604	6,248	7,000	165,820	136,576	78,000	2,921.40	1,698.64	1,003.20
Kilifi	7,589	6,374	8,974	83,675	50,236	153,931	1,882.38	969.26	2,355.24
Meru	3,638	4,417	5,625	58,974	49,773	47,854	1,244.08	937.44	883.57
Kitui	3,696	2,701	2,651	53,090	27,010	13,255	883.99	539.75	293.58
Tana River	1,255	1,243	2,486	36,526	19,764	39,292	509.82	533.52	1,081.44
Kwale	3,725	2,105	1,956	63,943	25,254	20,250	1,293.55	505.08	390.22
Machakos	2,300	2,740	2,782	21,655	24,497	24,046	398.71	413.88	656.63
Elgeyo Marakwet	1,086	895	985	14,630	11,716	20,000	351.50	262.49	463.60
Siaya	1,435	1,059	2,550	12,028	10,360	19,531	342.78	220.53	674.31
Migori	519	494	504	7,544	7,211	7,871	207.36	236.56	204.13
Baringo	478	211	297	6,229	3,051	3,977	111.57	74.98	122.66
Bungoma	173	239	181	5,711	3,603	3,034	106.10	68.08	106.19
Embu	1,540	1,610	1,770	17,962	18,159	10,140	262.90	240.85	281.70
Tharaka Nithi	2,231	1,274	1,204	13,461	11,461	11,556	261.11	275.61	275.13

County	Area (Ha)			Volume (MT)			Value (KES) millions		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
Kirinyaga	462	396	370	5,610	11,452	9,172	124.35	170.35	192.81
Murang'a	959	945	931.8	13,056	10,183	11,555	198.48	165.39	203.68
Taita Taveta	482	272	423	7,822	4,236	7,200	106.02	55.14	87.18
Garissa	640	642	649	7,608	7,862	6,656	101.61	106.50	92.90
Others	2,439	2,390	2,474	38,315	24,519	25,687	627.15	608.70	631.12
Total	**62,234**	**56,668**	**66,235**	**793,280**	**738,321**	**758,374**	**14,968.39**	**12,246.21**	**13,614.23**

Source: AFA-Horticultural Crops Directorate

7.2.4 Watermelon

The area under watermelon reduced from 21,405 Ha recorded in 2021 to 20,105 Ha in the period under review. Similarly, there was a decline in production from 349,630 MT in 2021 to 337,496 MT in 2022, a decrease of 3.5 percent mainly attributed to infestation of pests (melon fruit fly, aphids and thrips) and diseases (powdery mildew and fusarium wilt).

The value on the other hand increased by KES 1.2 billion from KES 8.2 billion in 2021 to KES 9.4 billion realised in the period under review. The increase was attributed to high farmgate prices. For more details, refer to Table 98.

Table 98: Summary of Watermelon Production 2020-2022

County	Area (Ha)			Volume (MT)			Value (KES) millions		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
Lamu	8,515	10,030	8,925	212,875	174,750	180,500	4,257.50	3,843.00	5,366.00
Migori	2,593	2,419	2,516	46,262	44,409	49,443	1,061.20	1,119.84	1,261.70
Kajiado	136	860	538	2,566	21,198	7,290	135.78	573.75	246.47
Makueni	854	670	854	18,723	20,265	19,205	206.80	489.66	494.53
Mandera	351	420	439	3,998	4,642	4,483	202.05	284.52	174.93
Taita Taveta	489	464	359	12,934	11,929	9,304	202.20	252.62	200.12
Kitui	626	846	559	11,955	12,784	5,713	186.20	251.06	121.19
Elgeyo Marakwet	184	365	364	4,643	8,560	8,266	232.60	218.73	216.70
Kisumu	186	183	176.8	4,218	5,169	3,895	124.25	137.54	120.17
Machakos	366	385	458	2,539	3,881	3,389	67.23	102.22	140.66
Tana River	603	373	373	12,114	7,115	7,115	198.12	97.67	97.67
Homabay	246	225	249	5,333	4,253	4,609	108.96	90.12	103.98
Kirinyaga	194	206	177	4,862	2,969	2,021	98.67	80.68	71.06
Meru	225	159	145	6,624	3,127	2,875	158.13	80.63	73.83

County	Area (Ha)			Volume (MT)			Value (KES) millions		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
Narok	86	49	58	2,580	1,470	1,064	63.93	70.65	32.69
Tharaka Nithi	99	118	99	1,400	3,191	3,172	33.55	69.44	74.19
Murang'a	110	181	185	2,195	2,624	2,822	59.53	51.95	76.71
Others	1,665	1,431	1,608	30,441	17,294	22,330	658.81	412.78	547.71
Total	**19,548**	**21,405**	**20,105**	**386,261**	**349,630**	**337,496**	**8,055.49**	**8,226.86**	**9,420.30**

Source: AFA-Horticultural Crops Directorate

7.3 Exotic Vegetables

In 2022, the area and production of exotic vegetables were 167,084 Ha and 3.2 million MT valued at KES 78 billion. The area increased from 158,567 Ha in 2021 to 167,084 Ha in the period under review, representing 5.4 percent increase while production jumped up from 3.1 milion MT worth KES 72.6 billion in 2021 to 3.2 million MT worth KES 78 billion in 2022. The increase in value was attributed to improved farm gate prices realized in cabbages, Kales and Spinach whose demand was high. For more details, refer to Table 99.

Table 99: Summary of Exotic vegetables 2020-2022

Crop	Area (Ha)			Volume (MT)			Value (KES) millions		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
Tomato	31,486	30,882	28,331	973,304	686,667	616,617	20,685.27	23,611.37	22,521.70
Cabbage	30,288	31,540	34,791	978,054	1,098,929	1,381,936	10,504.36	12,727.53	15,803.79
Kales	37,871	38,037	38,586	668,666	695,513	609,272	10,454.66	11,092.79	13,398.21
Garden peas	26,354	27,375	30,724	278,152	248,427	203,814	12,500.57	10,128.66	9,567.05
Spinach	9,349	10,764	11,557	238,452	156,558	156,068	3,729.36	3,815.88	4,253.22
French beans	8,180	6,935	8,228	83,530	60,013	69,124	4,205.30	3,121.54	3,412.19
Runner beans	534	564	564	15,628	16,094	16,094	2,342.22	2,365.15	2,365.15
Carrots	5,454	5,582	5,682	87,512	97,296	93,965	2,214.75	1,808.91	1,768.65
Snow peas	2,537	2,244	2,342	25,308	24,581	22,884	1,708.66	1,808.67	1,992.61
Snap peas	1,014	551	2332.5	10,021	6,638	17,675	494.88	512.42	946.11
Bell pepper	2,236	1,391	1,697	26,462	11,148	14,404	1,043.50	576.50	620.72
Broccoli	380	297	327.15	4,815	3,173	4,762	236.71	236.82	413.88
Butternuts	915	707	753.5006	14,609	9,544	9,812	382.77	192.82	272.20
Courgette	613	646	675.7	3,918	3,735	3,640	139.33	128.21	131.08
Baby corns	819	800	222.4	15,294	15,898	3,441	691.65	389.22	101.63
Others	261	252	271.092	2,958	3,308	2,328	107.35	133.28	109.70
TOTAL	**158,291**	**158,567**	**167,084**	**3,426,683**	**3,137,522**	**3,225,836**	**71,441.34**	**72,649.77**	**77,731.29**

Source: AFA-Horticultural Crops Directorate

7.3.1 Tomato

In 2022, the area, volumes and values decreased by 8.3, 10.2, and 4.6 percent respectively. The area under tomato was 28,331 Ha producing 616,617 MT worth KES 22.52 billion down from 30,882 Ha producing 686,667 MT worth KES 23.61 billion realized in 2021. Pests and diseases remain major challenges in tomato production especially in central Kenya. For more details, refer to Table 100.

Table 100: Summary of Tomato Production from 2020-2022

County	Area (Ha)			Volume (MT)			Value (KES) millions		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
Kirinyaga	3,157	2,935	2,604	64,038	116,341	77,510	1,793.23	3,169.07	2,609.11
Taita Taveta	3,515	3,546	2,358	71,077	104,028	69,177	1,620.84	2,978.13	1,635.01
Narok	1,701	2,226	1,866	31,855	39,484	69,765	1,183.47	1,879.90	2,139.88
Lamu	645	1,274	679	12,390	31,800	8,334	788.40	1,588.75	670.08
Siaya	1,227	1,741	1,954	13,496	26,932	27,491	482.48	1,229.44	1,357.20
Murang'a	1,330	1,392	1,355	27,543	31,795	31,442	1,079.44	1,049.75	1,043.64
Kajiado	3,033	1,681	1,740	62,510	32,330	31,910	1,830.28	993.90	1,097.60
Machakos	2,022	2,641	2,953	21,407	29,932	31,568	660.37	918.95	1,495.86
Trans Nzoia	762	785	937.6	14,149	19,463	24,735	716.95	872.78	1,133.58
Kitui	956	967	733.5	25,085	26,900	12,150	755.00	756.01	487.75
Meru	549	626	537	14,632	18,877	16,547	453.54	663.49	632.89
Makueni	1,273	702	721	34,229	20,710	17,231	1,126.39	663.11	516.90
Bungoma	694	633	1013.2	19,397	16,285	30,350	826.43	656.13	1,377.17
Laikipia	626	543	410	20,425	14,130	9,490	802.87	590.20	459.75
Nakuru	549	328	361.5	19,821	10,612	10,499	799.69	495.05	469.01
Homabay	716	551	585	15,560	8,073	7,509	810.17	476.52	439.86
Kiambu	874	771	671	19,955	19,781	18,578	738.67	336.81	363.71
Bomet	1,234	292	329	28,120	6,247	8,043	1,124.80	251.23	456.79
Others	6,624	7,248	6,523	457,616	112,947	114,288	3,092.25	4,042.18	4,135.93
Total	**31,486**	**30,882**	**28,331**	**973,304**	**686,667**	**616,617**	**20,685.27**	**23,611.37**	**22,521.70**

Source: AFA-Horticulture Crops Directorate

7.3.2 Cabbage

The total area under cabbage increased from 31,540 Ha in 2021 to 34,791 Ha in 2022 while production rose from 1,098,929 MT in 2021 to 1,381,936 MT in 2022 representing 25.75 percent increase attributed to favourable weather conditions in the main production areas. The value of cabbage increased from KES 12.7 bilion to KES 15.8 bilion in 2022 a 24.17 percent increase due to high farmgate prices. For more details, refer to Table 101.

Table 101: Summary of Cabbage Production 2020-2022

County	Area (Ha)			Volume (MT)			Value (KES) millions		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
Nyandarua	10,245	11,970	14,141	373,690	527,700	779,381	1,969.07	5,123.62	6,504.34
Nakuru	2,207	2,319	2,412	97,042	75,132	123,596	981.32	1,166.68	1,381.89
Nyeri	2,150	1,707	2,240	78,050	67,896	70,580	724.62	1,001.64	1,249.43
Meru	1,904	2,388	2,719	64,993	76,382	72,732	902.37	950.86	1,053.30
Narok	1,952	1,749	1,577	73,174	58,855	42,675	1,031.06	822.66	568.53
Bomet	1,014	828	813.9	38,010	39,927	38,819	584.97	463.81	460.37
Elgeyo Marakwet	930	887	897	23,504	24,824	28,087	487.41	367.13	525.26
Murang'a	930	569	641	23,504	32,789	9,105	487.41	345.08	302.08
Kiambu	2,287	2,212	2,395	50,668	28,835	42,192	709.65	240.96	1,003.26
Trans Nzoia	483	261	423	12,600	8,468	13,804	300.43	159.71	232.20
Makueni	317	359	171	6,407	6,980	3,164	209.93	139.60	131.54
Bungoma	599	451	876	15,339	12,214	33,519	171.21	137.30	392.98
Kisii	857	308	352.7	28,661	11,435	12,108	666.86	136.47	176.97
Laikipia	421	335	245	9,819	7,140	4,425	196.04	121.23	87.75
Others	3,991	5,198	4,887	82,593	120,353	107,749	1,082.03	1,550.77	1,733.89
Total	**30,288**	**31,540**	**34,791**	**978,054**	**1,098,929**	**1,381,936**	**10,504.36**	**12,727.53**	**15,803.79**

Source: AFA-Horticultural Crops Directorate

7.3.3 Kales

In 2022, the area under kales (sukuma wiki) increased by 549 Ha from 38,037 Ha in 2021 to 38,586 Ha representing 1.4 percent increase. Despite the increase in area, the production decreased by 12.4 percent from 695,513 MT in 2021 to 609,272 MT in the period under review attributed to depressed rains experienced in the main growing areas. The value on the other hand increased from KES 11 billion in 2021 to KES 13.4 billion in 2022 representing 20.8 percent rise as a result of improved farmgate prices. Refer to Table 102, for more details.

Table 102: Summary of Kales Production 2020-2022

County	Area (Ha)			Volume (MT)			Value (KES) millions		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
Kiambu	4,356	4,433	4,178	107,355	99,819	79,924	1,258.60	1,086.68	1,918.67

County	Area (Ha)			Volume (MT)			Value (KES) millions		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
Narok	1,441	1,362	1,361	66,579	64,725	54,820	709.13	996.34	1,114.88
Nyamira	898	1,294	989	13,940	49,280	24,040	204.15	743.15	524.56
Kitui	1,394	1,350	1,016	26,580	26,980	15,240	553.60	710.09	468.60
Murang'a	1,101	1,122	1,083	29,832	36,239	34,405	565.99	683.48	664.18
Nakuru	1,762	1,677	1,477	49,059	47,628	38,342	844.74	665.52	667.75
Machakos	2,140	3,380	3,611	21,498	32,128	11,863	521.55	646.89	455.46
Kisii	1,825	2,549	1,945	24,381	75,442	28,863	493.51	605.39	520.91
Migori	3,131	3,232	3,181	26,575	26,497	24,047	328.86	446.67	450.97
Bungoma	1,020	1,020	1,239	18,548	18,548	26,936	373.36	373.36	560.63
Homabay	2,261	1,196	1,565	21,597	15,974	17,638	380.68	371.62	482.52
Kisumu	486	950	794	4,637	10,360	6,895	138.42	355.29	280.18
Kakamega	2,270	1,864	1,530	9,257	9,041	23,205	228.00	299.24	606.51
Makueni	1,175	580	591	67,392	10,970	11,033	814.31	246.96	291.59
Siaya	1,765	1,965	2,809	22,868	9,995	11,190	612.96	202.30	330.13
Nyandarua	735	825	899	12,100	16,185	15,546	72.80	199.66	364.23
Lamu	355	725	605	8,813	7,743	15,030	178.15	189.39	330.90
Meru	731	724	649	15,330	15,555	15,550	170.31	178.13	404.48
Bomet	1,491	754	868	18,730	7,941	18,665	256.88	166.02	223.28
Elgeyo Marakwet	557	564	637	7,718	9,562	10,442	109.14	151.15	171.07
Kirinyaga	458	456	377	5,620	9,786	8,240	56.82	99.66	137.78
Busia	777	461	801	8,291	2,775	3,782	262.78	88.67	244.83
Trans Nzoia	745	351	671	9,909	3,833	15,127	144.00	81.28	189.84
Others	4,997	5,203	5,710	72,056	88,508	98,449	1,175.94	1,505.87	1,994.25
Total	**37,871**	**38,037**	**38,586**	**668,666**	**695,513**	**609,272**	**10,454.66**	**11,092.79**	**13,398.21**

Source: AFA-Horticultural Crops Directorate

7.4 Aromatic plants

During the period under review, the area under aromatic plants increased from 15,056 Ha in 2021 to 16,268 Ha. The production increased from 218,429 MT worth KES 8.32 billion in 2021 to 234,871 MT worth KES 9.6 billion in 2022.

The leading crops in this category were bulb onions, spring onions, coriander and garlic accounting for 67.2, 11.3, 7.2 and 4.9 percent respectively. For more details, refer to Table 103.

Table 103: Summary of aromatic plants production 2020-2022

Crop Categories	Area (Ha)			Volume (MT)			Value (KES) millions			% of Total Value 2022
	2020	2021	2022	2020	2021	2022	2020	2021	2022	
Bulb Onions	6,793	9,024	9,771	117,651	129,864	161,434	5,055.41	5,242.58	6,435.08	**67.2**
Spring Onions	2,455	2,892	2,944	43,686	34,354	33,667	1,113.70	931.27	1,083.22	**11.3**
Corriander	885	1,123	1,227	8,942	15,605	17,857	273.77	775.49	692.00	**7.2**
Garlic	25	207	299.8	198	18,103	3,486	8.10	383.85	470.97	**4.9**
ABC	607	339	520.95	6,791	7,274	3,269	337.18	368.11	113.99	**1.2**
Long Cayenne	92	797	723.5	1,045	6,499	7,040	34.82	260.65	309.60	**3.2**
Rosemary	140	276	368.81	1,369	3,377	4,697	55.64	182.09	289.56	**3.0**
Celery	4	10	7.5	25	380	69.32	1.40	40.71	7.62	**0.1**
Bullet Chilli	92	136	149.75	1,045	1,121	1,421	34.82	38.14	50.71	**0.5**
Ginger	84	78	75.76	1,683	925	916.4	38.19	36.70	35.84	**0.4**
Chives	22	114	114	145	448	448	8.70	26.07	26.07	**0.3**
Basil	13	11	11.4	149	147	154.4	19.02	19.28	38.50	**0.4**
Leeks	34	47	46.22	356	320	393.8	18.06	17.24	20.80	**0.2**
Turmeric	84	3	8	1,683	12	18	38.19	0.60	1.60	**0.0**
Total	**11,330**	**15,056**	**16,268**	**184,767**	**218,429**	**234,871**	**7,037.00**	**8,322.77**	**9,575.57**	**100**

Source: AFA-Horticultural Crops Directorate

7.5 African Leafy Vegetables (ALV)

In 2022, the area, volumes and values increased by 7.4, 5.8, and 24 percent respectively. The area under ALV was 48,321 Ha producing 294,016 MT worth KES 10.29 billion up from 44,976 Ha producing 277,929 MT worth KES 8.28 billion realized in 2021. Table 104 below shows the summary of ALV.

Table 104: Summary of African Leafy Vegetables Production 2020-2022

Crop Categories	Area (Ha)			Volume (MT)			Value (KES) millions		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
African Nightshade	5,629	6,250	8,158	54,097	59,724	77,126	1,707.98	2,345.99	3,236.73
Cowpea	36,438	26,284	26,058	114,583	100,712	96,298	3,378.19	2,209.52	2,694.86
Spider Plant	3,949	3,541	3,783	36,445	33,649	30,696	1,315.53	1,232.03	1,338.27
Leaf Amaranthus	3,237	4,500	5,017	38,172	38,877	44,230	831.08	1,074.51	1,531.05
Pumpkin Fruits	1,755	1,391	1,456	35,829	22,587	21,015	813.60	677.69	690.41
Jute Mallow	657	649	1320.6	3,373	6,363	5,439	155.03	288.86	153.58
Pumpkin Leaves	870	1,011	1,010	6,030	5,813	6,395	153.53	131.44	151.46
Grain Amarantha	511	424	424	2,459	2,513	2,513	127.45	117.74	117.74
Slender	841	470	528.4	5,605	2,148	3,063	260.73	91.59	127.54

Crop Categories	Area (Ha)			Volume (MT)			Value (KES) millions		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
Vine Spinach	217	226	166.8	1,030	1,410	2,092	29.48	46.84	165.27
Russian Confrey	163	138	185	1,354	3,500	4,051	50.32	40.10	57.81
Malabor	70	92	214.1	652	633	1098.4	23.34	26.06	33.95
Total	**56,136**	**44,976**	**48,321**	**299,628**	**277,929**	**294,016**	**8,846.26**	**8,282.38**	**10,298.68**

Source: AFA-Horticultural Crops Directorate

7.6 Asian Vegetables

During the year under review, the area under asian vegetables decreased from 3,284 Ha to 3,124 Ha while the volume dropped from 43,804 MT in 2021 to 40,105 MT. Similarly, the value dropped from KES 1.4 billion in 2021 to KES 1.3 billion in 2022 mainly due to decrease in production and low average farm gate prices realized in 2022. Refer to Table 105, for more details.

Table 105: Summary of Asian Vegetables by Area, Volume and Value 2020-2022

Crop	Area (Ha)			Volume (MT)			Value (KES) millions			% of Total Value 2022
	2020	2021	2022	2020	2021	2022	2020	2021	2022	
Eggplant	1,197	1,063	1,239	16,526	17,531	19,129	537.06	545.07	601.07	**44.5**
Okra	1,774	1,188	1,560	15,105	14,008	16,513	479.16	362.15	594.43	**44.1**
Dudhi	87	485	77.5	1,028	6,472	415	61.65	297.59	18.14	**1.3**
Karella	72	369	76.4	521	3,393	462.4	38.45	163.80	16.15	**1.2**
Turia	94	108	8.6	509	675	25	14.61	19.65	1.32	**0.1**
Tindori	15	57	78.4	150	1,658	2605.9	4.50	66.31	85.61	**6.3**
Valore	19	14	84.5	88	67	954	3.95	3.05	32.73	**2.4**
Total	**3,258**	**3,284**	**3,124**	**33,926**	**43,804**	**40,104**	**1,139.37**	**1,457.62**	**1,349.44**	**100.0**

Source: AFA-Horticultural Crops Directorate

7.7 Horticulture Export

The total value of Horticultural produce exported dropped from KES 157.7 billion in 2021 to KES 147.08 billion in 2022 representing a 6.7 percent decrease. This was attributed to decrease in volumes exported by 14,089.77 MT a 3 percent drop compared to what was exported in 2021.

During the period under review, the value of flowers exports decreased by KES 6.9 billion from KES 110.9 billion in 2021 to KES 103.8 billion. In addition, the value of vegetable exports dropped by 17.1 percent from KES 28.46 billion in 2021 to KES 23.59 billion. The value of fruit exports increased by 6.7 percent from KES 18.38 billion in 2021 to KES 19.63 billion in 2022.

In 2022, flower exports accounted for 70.6 percent of the total horticultural export values while vegetables and fruits accounted for 16 and 13.3 percent of the total value respectively. For more details, refer to Table 106.

Table 106: Summary of Horticultural Exports 2020-2022

Crop Category	Volume (MT)			Value (KES) millions*			% of Total Value 2022
	2020	2021	2022	2020	2021	2022	
Flowers	146,033.55	210,135.89	198,735.40	107,508.57	110,849.27	103,849.28	**70.6**
Vegetables	62,575.41	78,138.85	62,142.73	24,228.43	28,461.52	23,599.44	**16.0**
Fruits	105,059.55	117,321.80	130,628.64	18,426.94	18,382.91	19,632.84	**13.3**
Total	**313,668.51**	**405,596.54**	**391,506.77**	**150,163.95**	**157,693.70**	**147,081.56**	**100.0**

** Valued at FOB*

Source: AFA-Horticultural Crops Directorate

ANNEXURE

Table 107: Coffee Exports by Destinations 2020/21 and 2021/22

No	Destination	2020/21 Weight (MT)	2020/21 Value (USD million)	2021/22 Weight (MT)	2021/22 Value (USD million)	%-change Weight (MT)	Value (USD million)	%-market share individual	cumulative
1	USA	6,168	37.44	8,104	62.32	1,936.41	24.88	18.91%	18.91%
2	Belgium	8,928	58.29	8,085	63.99	-843.56	5.7	18.86%	37.77%
3	Germany	5,547	28.13	6,089	36.71	541.25	8.58	14.21%	51.98%
4	South Korea	4,039	22.85	4,348	31.49	308.44	8.64	10.14%	62.12%
5	Sweden	2,952	17.78	2,194	14.94	-758.06	-2.85	5.12%	67.24%
6	Tunisia	0	0	1,437	3.7	1,437.08	3.7	3.35%	70.60%
7	Australia	1,413	9.3	1,302	8.26	-110.5	-1.04	3.04%	73.63%
8	Denmark	1,185	6.61	1,281	8.35	96.6	1.75	2.99%	76.62%
9	Norway	1,411	39.58	1,235	10.63	-175.32	-28.95	2.88%	79.51%
10	Japan	1,765	12.89	1,175	9.73	-590.34	-3.15	2.74%	82.25%
11	United Kingdom	710	4.54	1,046	7.61	335.81	3.07	2.44%	84.69%
12	Netherlands	523	2.57	973	5.17	449.37	2.6	2.27%	86.96%
13	Finland	1,432	8.8	850	5.82	-582.89	-2.99	1.98%	88.94%
14	Romania	454	17.33	416	3.25	-38.4	-14.09	0.97%	89.91%
15	China	316	2.18	413	3.13	97.46	0.95	0.96%	90.87%
16	Canada	1,260	8.1	404	2.9	-856.02	-5.2	0.94%	91.82%
17	Spain	317	1.84	353	2.16	36.17	0.32	0.82%	92.64%
18	Taiwan	255	1.92	303	2.43	47.84	0.51	0.71%	93.35%
19	United Arab Emirates	333	0.95	280	1.24	-53.04	0.3	0.65%	94.00%
20	Switzerland	11	0.02	270	1.92	259.02	1.89	0.63%	94.63%
21	New Zealand	163	0.95	256	0.75	93.4	-0.21	0.60%	95.23%
22	Italy	309	0.7	217	0.98	-91.86	0.28	0.51%	95.74%
23	Russia	191	1.24	209	1.48	17.6	0.24	0.49%	96.22%
24	Jordan	325	1.39	197	1.22	-128.58	-0.17	0.46%	96.68%
25	India	427	1.05	176	0.93	-250.8	-0.12	0.41%	97.09%
26	Turkey	88	0.38	144	0.69	56.46	0.31	0.34%	97.43%
27	Latvia	28	0.21	123	0.96	95.04	0.75	0.29%	97.72%
28	South Africa	54	0.25	122	0.57	67.64	0.32	0.28%	98.00%
29	Iran	135	0.32	117	0.8	-18.34	0.48	0.27%	98.27%
30	Egypt	0	0	116	0.69	115.8	0.69	0.27%	98.54%
31	Saudi Arabia	92	0.53	100	0.74	8.05	0.22	0.23%	98.78%
32	France	356	1.39	94	0.65	-262.42	-0.74	0.22%	99.00%
33	Ireland	189	1.23	85	0.66	-104.4	-0.57	0.20%	99.19%
34	Guatemala	0	0	78	0.35	77.8	0.35	0.18%	99.37%
35	Syria	154	0.31	58	0.17	-96	-0.13	0.13%	99.51%
36	Ukraine	30	0.12	41	0.23	10.92	0.11	0.10%	99.61%
37	Somalia	68	0.14	35	0.19	-33.28	0.05	0.08%	99.69%

No	Destination	2020/21	2020/21	2021/22	2021/22	%-change	Value (USD million)	%-market share	
		Weight (MT)	Value (USD million)	Weight (MT)	Value (USD million)	Weight (MT)		individual	cumulative
38	Greece	41	0.31	20	0.15	-20.76	-0.15	0.05%	99.73%
39	Burundi	0	0	19	0.08	19.2	0.08	0.04%	99.78%
40	Croatia	0	0	19	0.03	19.2	0.03	0.04%	99.82%
41	Oman	39	0.1	19	0.06	-20.46	-0.04	0.04%	99.87%

Source: AFA-Coffee Directorate

Table 108: Coffee Area and Production 1962/63 - 2021/22

No	YEAR	ESTATE		SMALLHOLDER		COUNTRY TOTAL	
		AREA(HA)	PROD(MT)	AREA(HA)	PROD(MT)	AREA(HA)	PROD(MT)
1	1962/63	32,538	24,800	49,121	16,000	81,659	41,400
2	1963/64	32,538	28,405	49,121	15,373	81,669	43,778
3	1964/65	32,423	22,393	51,577	14,774	84,000	37,167
4	1965/66	32,267	25,683	53,097	25,523	85,364	51,296
5	1966/67	31,964	25,231	52,450	27,558	84,414	52,789
6	1967/68	31,188	13,246	54,087	20,515	85,275	33,761
7	1968/69	30,690	22,342	54,984	23,264	85,674	45,606
8	1969/70	29,903	26,521	54,057	26,275	83,960	52,796
9	1970/71	29,900	28,600	53,800	26,302	83,700	54,902
10	1971/72	29,535	29,984	55,555	28,362	85,090	58,346
11	1972/73	29,535	39,956	55,287	34,734	84,222	74,690
12	1973/74	29,129	31,152	55,600	40,864	84,729	72,016
13	1974/75	28,603	29,985	57,786	35,464	86,389	65,449
14	1975/76	28,603	37,675	56,595	36,135	85,198	73,810
15	1976/77	27,821	49,685	56,600	47,660	84,421	97,345
16	1977/78	30,888	33,685	56,600	47,744	87,488	81,429
17	1978/79	29,195	26,809	62,574	46,079	91,769	72,888
18	1979/80	31,232	39,109	71,172	51,900	102,404	91,009
19	1980/81	32,861	34,744	84,710	64,007	117,571	98,751
20	1981/82	33,635	34,392	97,473	52,531	131,108	86,923
21	1982/83	33,605	32,981	100,967	52,469	134,572	85,450
22	1983/84	35,711	54,258	114,235	74,682	149,946	128,941
23	1984/85	35,711	28,922	116,328	67,717	152,039	96,639
24	1985/86	38,627	45,542	117,677	68,385	156,304	113,927
25	1986/87	38,487	36,881	116,056	67,907	154,534	104,288
26	1987/88	36,677	44,506	116,353	84,356	153,030	128,862
27	1988/89	39,579	38,649	116,087	78,340	155,666	116,989
28	1989/90	38,084	34,356	117,459	69,483	115,543	103,839
29	1990/91	38,024	37,520	120,238	41,977	158,262	79,497
30	1991/92	38,160	32,781	120,563	42,426	158,723	75,207

No	YEAR	ESTATE		SMALLHOLDER		COUNTRY TOTAL	
		AREA(HA)	PROD(MT)	AREA(HA)	PROD(MT)	AREA(HA)	PROD(MT)
31	1992/93	38,372	33,037	122,660	39,747	161,032	71,787
32	1993/94	38,372	38,735	122,660	52,264	161,032	90,999
33	1994/95	38,372	40,109	122,660	56,885	162,410	96,994
34	1995/96	39,750	29,737	122,660	38,260	162,470	67,997
35	1996/97	39,750	22,050	122,720	33,584	167,398	55,634
36	1997/98	40,127	28,591	127,271	40,086	167,398	68,677
37	1998/99	40,127	38,585	127,271	62,265	167,398	100,850
38	1999/00	40,127	26,743	127,271	23,800	167,398	50,543
39	2000/01	42,000	26,900	128,000	25,000	170,000	51,900
40	2001/02	42,000	23,073	128,000	28,822	170,000	51,895
41	2002/03	42,000	21,417	128,000	34,026	170,000	55,443
42	2003/04	42,000	18,473	128,000	29,958	170,000	48,431
43	2004/05	42,000	20,745	128,000	24,500	170,000	45,245
44	2005/06	42,000	21,257	128,000	27,046	170,000	48,303
45	2006/07	42,000	25,000	120,720	28,368	162,720	53,368
46	2007/08	40,680	19,740	122,040	22,260	162,720	42,000
47	2008/09	24,521	24,650	84,263	29,370	108,784	54,020
48	2009/10	24,521	19,720	84,263	22,280	108,784	42,000
49	2010/11	24,521	16,690	84,263	19,630	108,784	36,629
50	2011/12	24,606	25,001	85,189	31,256	109,795	49,960
51	2012/13	24,606	13,773	85,189	26,092	109,795	39,865
52	2013/14	24,700	16,805	85,300	32,652	110,000	49,475
53	2014/15	26,067	14,808	87,433	27,230	113,500	42,038
54	2015/16	25,800	15,267	88,200	30,758	114,500	46,121
55	2016/17	25,900	14,151	88,800	24,468	114,700	38,620
56	2017/18	25,155	10,994	90,415	30,381	115,570	41,375
58	2018/19	25,349	14,103	90,844	30,881	116,193	44,989
59	2019/20	26,049	10,972	93,626	25,901	119,675	36,873
60	2020/21	25,026	11,671	83,173	22,840	108,199	34,512
61	2021/22	25,300	15,554	84,085	36,299	109,385	51,853

Source: AFA-Coffee Directorate

Table 109: Average Coffee Auction Price in USD Per Bag by Grades 2017/18 - 2021/22

Grade	2017/18	2018/19	2019/20	2020/21	2021/22
AA	345.52	255.07	311.31	339.63	367.76
AB	247.17	182.4	219.21	316.01	313.5
C	171.48	112.9	156.67	269.26	264.69
E	252.52	279.2	190.71	269.6	272.8
PB	219.26	153.72	207.55	302.34	302.52
T	84.04	68.48	90.06	116.13	167.6

Grade	2017/18	2018/19	2019/20	2020/21	2021/22
TT	155.61	104.38	147.5	232.62	250.98
HE	87.49	72.08	102.74	131.18	198.14
SB	28.84	21.46	38.17	64.5	80.81
UG	65.23	61.04	90.99	130.01	140.31
UG1	95.99	77.12	107.27	179.63	219.74
UG2	69.15	50.49	74.19	109.47	153.72
UG3	47.17	34.33	56.98	65.34	84.16
MH	87.1	70.51	86.05	102.9	190.69
ML	55.84	38.59	54.25	71.58	92.23
All Grades	**203.53**	**153.86**	**189.06**	**281.07**	**293.07**

Source: AFA-Coffee Directorate

Table 110: Coffee Cost of Production/ Gross Margins Year 2021/22

Parameters	Improved varieties				Traditional Varieties		
	Ruiru11 (KES/Acre)		Batian KES/Acre		SL28, SL 34 and K7 (KES/acre)		
Yield per tree	10Kgs	5Kgs	10Kgs	5Kgs	10Kgs	5Kgs	2Kgs
Farmer type	Expert	Average	Expert	Average	Expert	Good	Average
Yield Cherry by tree (kg/tree)	10	5	10	5	10	5	2
No. of Trees/acre	1,000	1,000	770	770	540	540	540
Yield Cherry (kg/acre)	10,000	5,000	7,700	3,850	5,400	2,700	1,080
Cherry price KES/kg	71	71	71	71	71	71	71
Cherry to Green Bean ratio (turn rate) 1:7	1428	714	1,100	550	771	386	154
Yield Green Bean (kg/acre)	1,400	700	1,078	539	756	378	151
GROSS REVENUE (KES/acre)	710,000	355,000	546,700	273,350	383,400	191,700	76,680
Cost of production							
Fertilizer Application	131,300	65,650	105,300	52,300	73,244	36,622	22,911
Fertilizer Application Labour	12,210	6,290	10,360	8,880	7,400	5,180	2,775
Fungicide Application	0	0	0	0	43,365	14,850	2,250
Fungicide Application Labour	0	0	0	0	5,550	2,220	1,110
Pesticide Application	10,360	4,225	8,450	4,000	3,700	1,850	0
Pesticide Application Labour	2,220	2,220	1,850	1,850	2,220	1,110	0
Canopy Management	46,300	46,300	33,270	33,270	17,760	17,760	4,170
Harvesting	107,142	53,571	82,500	41,250	57,857	28,928	11,571
Transport	10,000	5,000	7,700	3,850	5,400	2,700	1,080
PRODUCTION COST (KES/acre)	283,819	165,399	221,930	138,841	195,660	101,578	42,010
Management cost (5%)	14,191	8,270	11,097	6,942	9,783	5,079	2,101
Total Production costs	298,010	173,699	233,027	145,784	205,443	106,657	44,111
Gross Marin (KES/acre)	411,991	181,331	313,674	127,567	177,957	85,043	32,569
Cost/ Kg (KES)	30	35	31	36	38	40	42

Parameters	Improved varieties				Traditional Varieties		
	Ruiru11		Batian		SL28, SL 34 and K7		
	(KES/Acre)		KES/Acre		(KES/acre)		
Cooperative Operations Costs (Processing & Marketing) per Kg in KES	14	14	14	14	14	14	14
Total Cost per Kg (KES)	44	49	45	50	52	54	56
Gross Revenue per Kg in KES	71	71	71	71	71	71	71
Gross margin KES per Kg	27	22	26	21	19	17	15

Source: CRI-KALRO

Notes

- ✓ Labour costs have increased thus increasing the cost of harvesting, pruning and other labour costs such as weeding, and inputs application
- ✓ The cost of inputs in 2022 was high a 50 Kg bag of NPK was costing at KES 6,500 from KES 5,000 in 2021/22 and CAN KES 5,600 from Ksh 4,000

Table 111: Kenya Macadamia exports by destination from 2018-2022

Country	2018		2019		2020		2021		2022		
	Quantity MT	Value ('000,000' KES)	Quantity MT	Value ('000,000' KES)	Quantity MT	Value ('000,000' KES)	Quantity MT	Value ('000,000' KES)	Quantity MT	Value ('000,000' KES)	% contribution by value
USA	3,755	5,334.24	3,398	4,783.00	2,942	3,208.80	5,098	5,835.60	4,759	6,395.43	**52.7**
China	87	133.19	18	39.68	18	21.40	417	444.04	1,898	1,487.33	**12.2**
Germany	983	1,343.59	673	926.72	888	1,239.52	1,068	1,434.66	1,068	1,331.86	**11.0**
Netherlands	660	775.66	489	631.75	678	718.37	708	765.15	791	868.29	**7.1**
Viet Nam	188	213.31	92	88.12	191	348.22	262	437.68	295	494.36	**4.1**
Spain	30	303.46	27	498.34	139	210.31	323	402.48	171	280.86	**2.3**
Japan	173	60.77	285	53.44	123	229.06	255	365.41	170	237.21	**2.0**
Canada	100	85.79	51	66.40	120	124.91	181	233.15	133	146.86	**1.2**
Slovakia	0	1.11	2	5.81	17	26.73	53	73.15	83	132.35	**1.1**
France	16	84.98	10	37.94	10	117.03	16	35.09	66	86.46	**0.7**
New Zealand	12	14.99	0	19.28	0	0	51	17.33	63	85.87	**0.7**
South Africa	0	7.09	0	0	0	0	16	10.20	58	72.54	**0.6**
United Kingdom	15	7.39	67	0	22	0	95	57.14	53	71.84	**0.6**
Singapore	9	0	12	0	0	0	8	29.28	52	70.18	**0.6**
Area Nes	0	28.16	0	20.09	0	20.23	32	17.99	51	62.40	**0.5**
Malta	0	0	0	0	0	0	0	0	46	56.74	**0.5**
Afghanistan	0	1.82	0	39.37	0	4.79	0	76.11	44	51.90	**0.4**
Israel	81	0	48	0	68	0	22	14.81	44	44.23	**0.4**
Russian	0	0	0	0	111	2.02	85	0	41	32.91	**0.3**

Country	2018		2019		2020		2021		2022		
	Quantity MT	Value (‘000,000’ KES)	Quantity MT	Value (‘000,000’ KES)	Quantity MT	Value (‘000,000’ KES)	Quantity MT	Value (‘000,000’ KES)	Quantity MT	Value (‘000,000’ KES)	% contribution by value
Jordan	3	0	0	0	0	0	6	0	39	30.08	**0.2**
Australia	16	1.52	33	0	16	0	33	0	33	28.19	**0.2**
Lithuania	0	16.61	0	5.61	16	2.88	0	20.84	17	26.42	**0.2**
Eswatini	0	0	0	0	0	100.10	0	30.38	17	15.92	**0.1**
Hong Kong	107	29.98	49	12.04	16	11.29	33	17.44	16	12.03	**0.1**
Switzerland	1	174.22	0	55.38	0	14.48	0	35.20	16	11.80	**0.1**
Egypt	20	0	7	4.18	8	19.59	12	6.14	5	5.66	**0.0**
India	0	0	2	0	9	0	3	0	4	2.71	**0.0**
Bangladesh	0	0	0	0	0	1.17	1	0	1	1.53	**0.0**
Italy	15	32.01	0	0	0	0	1	0.54834	1	0.94366	**0.0**
Sweden	0	0	0	0	1	0	0	0	1	0.70775	**0.0**
Congo	0	0	0	0	0	0.10649	73	0.10967	0	0.23592	**0.0**
Somalia	0	0	0	0	0	0	0	0.43867	0	0.23592	**0.0**
Sudan	0	0	0	3.06	0	12.67	0	0	0	0.23592	**0.0**
Lebanon	0	0	0	0	0	0	0	63.61	0	0.11796	**0.0**
Thailand	103	0	11	0	0	0	0	0	0	0.11796	**0.0**
UAE	0	122.56	4	20.19	7	0	0	0	0	0.11796	**0.0**
Uganda	3	2.84	1	2.45	0	0.42595	0	0.87734	0	0.11796	**0.0**
Congo	0	0	0	0	0	0.10649	0	0	0	0	**0**
Denmark	0	0	0	0.10199	0	0	0	0	0	0	**0**
Georgia	15	22.89	0	0	0	0	0	0	0	0	**0**
Taiwan	16	28.77	31	49.47	0	0	0	0	0	0	**0**
Pakistan	0	0	0	0	0	0	261	88.28	0	0	**0**
Portugal	0	0	0	0	0	0	6	3.95	0	0	**0**
Qatar	0	0	0	0	0	0	1	0.658	0	0	**0**
Rwanda	0	0	0	0	0	0.31946	0	0.329	0	0	**0**
Saudi Arabia	0	0	0	0	51	124.06	16	36.63	0	0	**0**
TOTAL	**6,408**	**8,827**	**5,310**	**7,362**	**5,451**	**6,559**	**9,136**	**10,555**	**10,036**	**12,147**	**100**

Source: AFA – Nuts and Oil Crops Directorate

Table 112: Area under Cotton, Seed Cotton Production and Marketing

YEAR	Area (Ha)	Seed cotton Production (MT)	Seed Cotton Average Price (KES/Kg)	Bales (Cotton Lint)	Yield (MT/Ha)
2005	32,357	19,414	20	23,000	0.6
2006	36,277	22,492	21	51,000	0.6
2007	35,929	24,993	20	45,035	0.69
2008	43,035	15,093	22	27,027	0.35
2009	39,963	14,886	26	28,000	0.37
2010	20,533	11,822	48	21,300	0.58
2011	32,240	15,255	65	27,487	0.6
2012	25,540	13,877	35	21,450	0.55
2013	24,093	13,781	42	24,832	0.5
2014	29,108	16,500	42	30,000	0.572
2015	28,627	15,726	42	28,340	0.65
2016	28,700	15,800	42	28,468	0.55
2017	20,717	11,850	46	21,351	0.57
2018	13,432	5,321	46	10,672	0.4
2019	18,000	3,015	52	5,432	0.17
2020	9,837	3,495	48	6,196	0.35
2021	10,640	1,300	50	3,019	0.12
2022	8,585	3,762	60	6,779	0.44

Source: AFA - Fibre Crops Directorate

Table 113: Cotton Sub-Sector in Kenya

No.	Parameter	Current Production (Year 2020)	Potential
1	Number of households growing cotton	30,000	200,000
2	Area under production (Ha)	9,987	385,000
3	Average area per farmer	1 acre	2-3 acre
4	Average yield MT/Ha	0.572	3.5 MT -under irrigation
			4 MT -Hybrid seed/BT cotton
			2.5 MT-under Rainfed
5	Annual production-seed cotton (MT)	3,495	220,000 MT
6	Annual Production for Lint (No. of bales (185 kg lint)	6,196	400,000 bales (74,000 tons)
7	Seed cotton Value (KES) (52/50 per Kg)	177 million	11 billion
8	Value of lint (KES) (@ KES 180/- per Kg)	206 million	13.3 billion
9	Average national per capita consumption (The 4 Ginneries)	41,200 bales	140,000 bales (25,900MT)

No.	Parameter	Current Production (Year 2020)	Potential
		(7,600MT)	
10	Farmers	40,000	200,000
11	Types Grown in Kenya	Conventional (Hart 89, KSA 81), BT Cotton, Hybrid	Hart 89, KSA 81, BT Cotton, Hybrid, short early maturing
12	Employment	200,000	10 million

Source: AFA - Fibre Crops Directorate

Table 114: Sisal Fibre Grades

Grade	Description
No. 1	Length from 3ft. upwards, average 3ft. 6in. Free of defective decortication, properly brushed free of tow, tousled and bunchy ends, knots and harshness. Color creamy-white to cream.
No. 2	Length from 2ft. 6in. upwards. Free of defective decortication, properly brushed, free of tow, tousled or bunchy ends, knots and harshness. Color creamy-white to cream.
No. 3	Length from 2ft. upwards. Brushed fibre with minor defects in cleaning permissible, but must be free of tow, knots, barky or undecorticated fibre. Color may vary from creamy-white to yellowish, but a higher proportion of spotted or discolored fibre is permissible.
3L (3 Long)	Length from 3ft. upwards. Brushed fibre with minor defects in cleaning permissible, but it must be free of tow, knots, barky or undecorticated fibre. Color may vary from creamy-white to yellowish but a higher proportion of spotted or discolored fibre is permissible.
UG (Under grade)	Fibre that does not conform to the above grades as regards color, cleaning and length. Defects in cleaning, some imperfectly decorticated fibre or barky runners allowed but must be free from undecorticated leaf and knots. Length must not be less than 2ft.
S.C.W.F. (Short clean white fibre)	Length from 18-24in. Free of defective decortication, properly brushed, free of tow, tousled and bunchy ends, knots and harshness. Color creamy-white to cream.
U.H.D.S. (Unwashed hand decorticated sisal)	Shall not be graded in accordance with sisal grading definitions, but shall be sold by sample.
Tow 1	Proper tow from brushing machines. Free of line fibre cuttings, dirt and reasonably free of dust but entirely free of sweepings, knots, barky or undecorticated fibre. Color creamy-white to cream.

Source: AFA - Fibre Crops Directorate

Table 115: Sisal Exports in Value and Volume 2018 - 2022

Year	Exports Volume (MT)	Exports Value (KES)
2018	23,072.3	3,794,336,317
2019	22,281.7	3,618,218,551
2020	28,463.3	4,670,949,884
2021	28,927.6	5,120,991,809
2022	28,888	5,949,754,044

Source: AFA - Fibre Crops Directorate

Table 116: Sisal Exports by Destination in 2021 and 2022

Destination	Quantity Exports (MT)		Total value (USD)	
	2022	2021	2022	2021
Nigeria	11,224.20	7,870.50	19,896,982.00	12,524,139.00
Saudi Arabia	3,697.00	2,983.20	7,009,745.00	5,362,035.00
Ghana	3,385.95	2,959.75	5,062,278.00	3,903,899.50
China	2,396.40	2,749.80	4,043,413.75	4,284,215.25
Spain	1,360.00	2,402.70	2,491,648.00	4,102,350.50
Morocco	1,051.00	2,184.40	1,814,193.00	3,493,906.50
Philippines	831	1,193.00	1,346,889.86	1,957,868.10
Egypt	804.3	1,408.00	1,432,390.00	2,317,961.00
Belgium	528	528	1,117,920.00	1,019,280.00
Senegal	477	562.5	917,458.00	983,768.00
Togo	451.5	454.5	761,549.00	741,090.00
Ivory Coast	394	512.5	630,545.00	747,577.50
India	392	392	728,000.00	680,120.00
Benin	242.1	217.5	396,043.00	411,858.00
UAE	230	111.5	444,300.00	171,400.00
Italy	175	14	297,522.50	25,550.00
Mauritania	159	471	244,188.00	783,640.00
Japan	154	88	258,529.00	158,000.00
Iraq	146	106	276,380.00	183,050.00
Libya	138.9	651	241,471.00	1,087,975.00
Indonesia	112	168	193,060.00	276,325.00

Destination	Quantity Exports (MT)		Total value (USD)	
	2022	2021	2022	2021
Germany	101.5	76.5	210,962.50	150,450.00
Syria	82	196.5	165,400.00	314,685.00
Guinea	55	219	96,825.00	381,030.00
Israel	55	41	99,475.00	69,130.00
Jordan	54	28	124,675.00	51,800.00
Burkina Faso	28	28	54,600.00	50,400.00
Chad	28	28	54,600.00	50,400.00
Gambia	28	112	57,400.00	225,000.00
Mali	28	-	60,200.00	-
Yemen	28	28	49,000.00	49,200.00
Bangladesh	25	-	43,125.00	-
South Africa	25	-	53,125.00	-
Australia	-	12.5	-	23,750.00
Slovenia	-	10.2	-	12,750.00
Turkey	-	14	-	21,000.00
Oman	-	28	-	47,700.00
Sri Lanka	-	28	-	56,700.00
Mexico	-	50	-	93,875.00
TOTAL	**28,888**	**28,928**	**50,673,893**	**46,813,878**

Source: AFA - Fibre Crops Directorate

Table 117: Farm Gate and Whole Sale Prices in KES for selected food crops in 2022

Crop	Farm Gate	Wholesale	Difference	% Change
Maize (90 kg bag)	4,500	4,799	299	6.64
Wheat (90 kg bag)	3,554	6,569	3,015	84.83
Rice (50 kg bag)	2,800	6,129	3,329	118.89
Sorghum (90 kg Bag)	4,512	6,102	1,590	35.24
Millet (90 kg Bag)	7,802	9,153	1,351	17.32
Beans (90 kg Bag)	9,000	9,189	189	2.10
Cowpeas (90 kg Bag)	6,400	7,672	1,272	19.88
Green Gram (90 kg Bag)	9,063	11,223	2,160	23.83
Pigeon Peas (90 kg Bag)	7,802	8,752	950	12.18
Sweet Potato (98 kg Bag)	3,492	5,030	1,538	44.04
Cassava (100 Bag)	3,200	4,901	1,701	53.16
Irish Potato (50 kg)	1,790	3,606	1,816	101.45

Source: State Department for Crops Development & Agricultural Research (SDCDAR)

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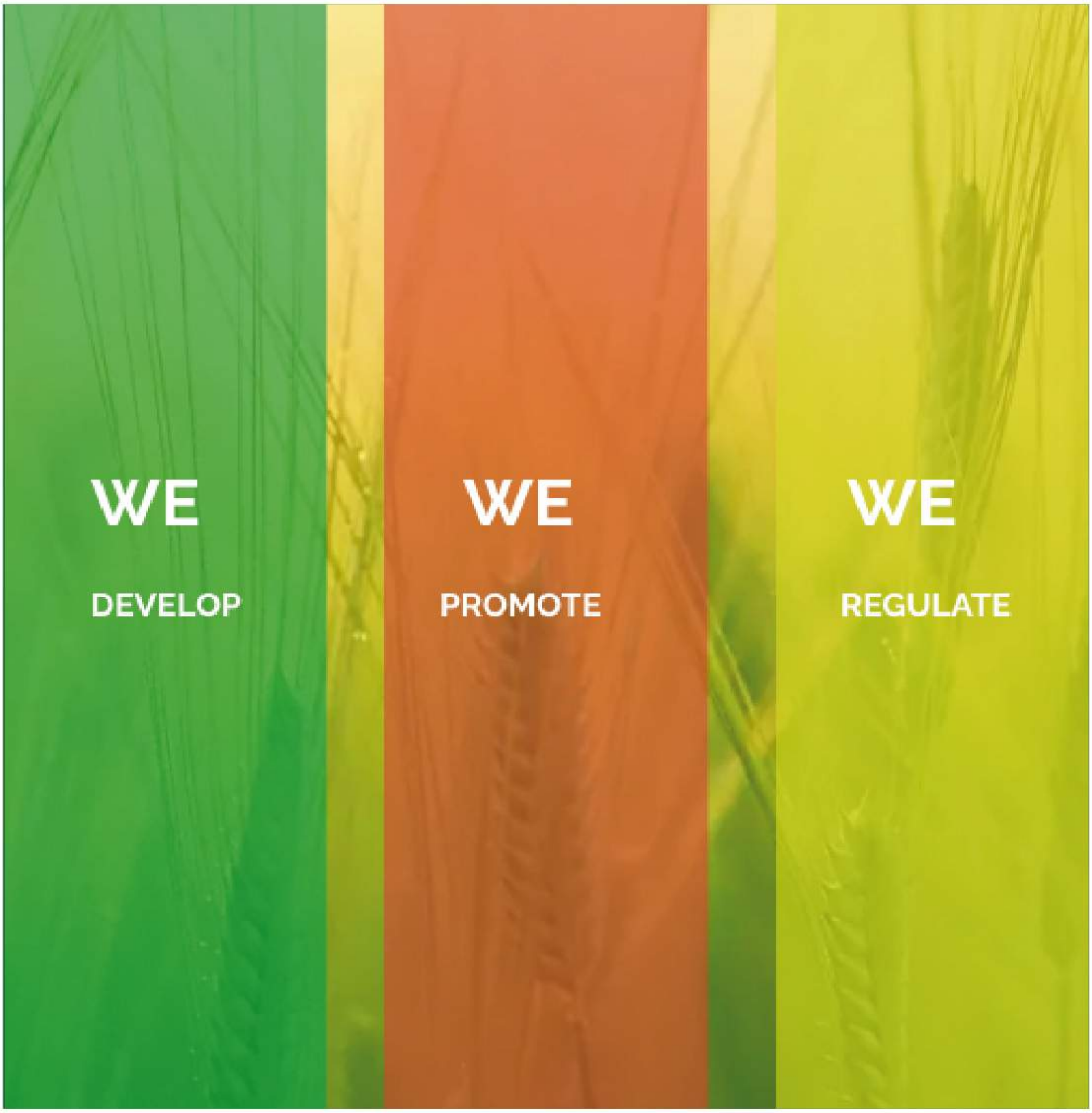

VISION

To be a World Class Regulator in the Agriculture Sector.

MISSION

To sustainably develop and promote scheduled crop value chains through effective regulation for economic gowth and sustainability.

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Customer focus
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Professionalism