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ECONOMIC REVIEW

OF

AGRICULTURE

2011

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Acronyms

ADB	:	African Development Bank
AFC	:	Agricultural Finance Corporation
ARD	:	Agricultural and Rural Development
ASAL	:	Arid and Semi Arid Lands
ASCU	:	Agricultural Sector Coordination Unit
ASPS	:	Agricultural Sector Program Support
CBK	:	Coffee Board of Kenya
CBK	:	Central Bank of Kenya
CPPMU	:	Central Planning and Project Monitoring Unit
DFZ	:	Disease Free Zones
DPIS	:	Department of Planning and Information Services
ERA	:	Economic Review of Agriculture
FAO	:	Food and Agriculture Organization
FPEAK	:	Fresh Produce Exporters Association of Kenya
GDP	:	Gross Domestic Product
GIEWS	:	Global Information and Early Warning Systems
GTZ	:	German Technical Cooperation
Ha	:	Hectare
HCDA	:	Horticultural Crops Development Authority
ICAC	:	International Cotton Advisory Committee
IFA	:	International Fertilizer Association
IFAD	:	International Fund for Agricultural
KARI	:	Kenya Agricultural Research Institute
KASDC	:	Kenya Agricultural Sector Data Compendium
KAPP	:	Kenya Agricultural Productivity Project
KDB	:	Kenya Dairy Board
KEPHIS	:	Kenya Plant Health Inspectorate Services
KNBS	:	Kenya National Bureau of Statistics
KRA	:	Kenya Revenue Authority
KSB	:	Kenya Sugar Board
KShs	:	Kenya Shillings
KTDA	:	Kenya Tea Development Agency
KGs	:	Kilograms
MoA	:	Ministry of Agriculture
MoLD	:	Ministry of Livestock Development
NASEP	:	National Agriculture Sector Extension Policy
PATTEC	:	Pan African Tsetse and Trypanosomiasis Eradication Campaign
PBK	:	Pyrethrum Board of Kenya
PCPB	:	Pest Control Products Board
PER	:	Public Expenditure Review
UPOV	:	Union for the Protection of New varieties of Plants
US$	:	United States dollar
USDA	:	United States Department of Agriculture
WASDE	:	World Agriculture Supply and Demand Estimates

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Forward

This 6th Edition of the Economic Review of Agriculture (ERA) is a continuation of the Ministry's efforts in data consolidation and dissemination and analyses production trends. It also provides domestic macro indicators and international perspectives (production and prices) that help in comparative analysis. The ERA is supplemented by the half-yearly Agricultural Outlook that highlights half-year results and prospects in the production calendar. Other efforts include the publication of the Kenya Agricultural Sector Data Compendium (KASDC 2007); an attempt to consolidate agricultural data to inform better policy formulation, monitoring & evaluation and is available on: www2.kilimo.go.ke. The web-site is now up and updated with datasets on Agriculture commodities, Livestock, Fisheries and Cooperatives and also the general agricultural macro indicators. This publication has also offered good sources of data for countrystat (www.countrystat.org/ken)

This year's publication becomes the second to provide indicators for Livestock sub-sector that contributes about 40 percent of the agricultural sector share of GDP (24 percent). Efforts are still underway to include other sub-sectors in the Agriculture & Rural Development (ARD) in future publications.

This edition comprises of eight [8] main chapters; chapter One [1] provides basic analysis on aggregate national economic indicators for five years. The general level in price movements especially on food items is highlighted through the average annual inflation; thus highlighting price movements especially on food items as triggered by behavior on the supply side (production).

Chapter Two [2], highlights sector and sub-sector budget allocations for the period under review. Analysis of the actual and printed estimates is provided in this section for the main votes. Key policy interventions and reforms initiated in the two sub-sectors are covered in Chapter [3]. Extracts on the World Food situation and forecasts by FAO are analyzed in Chapter Four [4} and helps to contrast with domestic production trends. Highlights on the performance of the crops sub-sector and the livestock sub-sector are presented under Chapters [5], [6] and [7] respectively. Chapter Eight [8] presents a summary on off-take of key agricultural inputs and has a section on the level of agricultural mechanization in the country.

I am confident that as we continue to consolidate our datasets, readers and stakeholders will find it useful to access new information, contents and insights into the sector from which the Kenyan economy is so much dependent.

Roman M. Kiome, PhD, CBS
Permanent Secretary

[1]Agriculture and Livestock Sub-sectors

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1.0 OVERVIEW ON ECONOMIC PERFORMANCE

1.1 Overall Economic Performance

Provisional results for the first nine months of 2010 show that Kenya's Economic performance was better than had earlier been anticipated and might now be approaching the level reached before the 2008 post election crisis. Average growth rate for the first three quarters of 2010 was 4.4 per cent compared to 2.1 per cent and 2.3 per cent for similar periods in 2008 and 2009 respectively. It is projected to expand by between 4.5 and 5.6 percent. Subsequently, the momentum was sustained throughout the record and third quarter at 4.7 and 6.1 percent respectively.

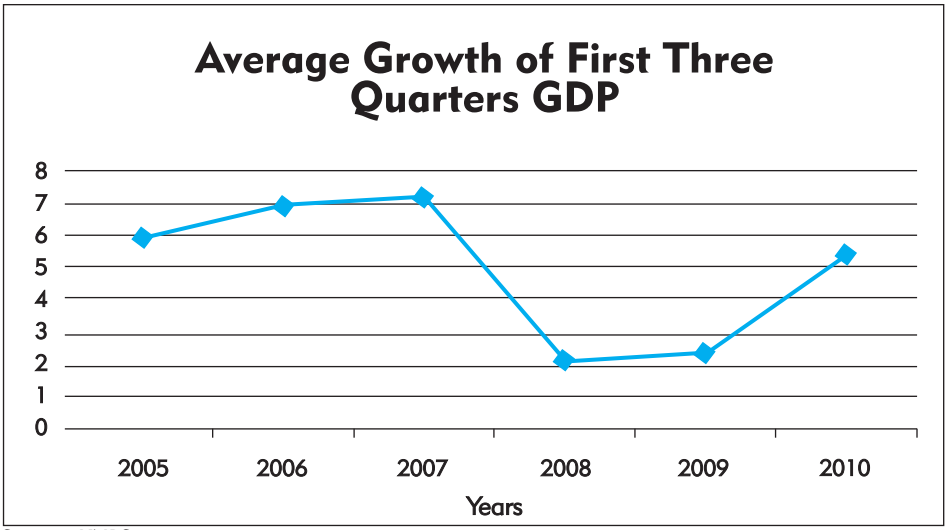
This turn of events may largely be attributed to favorable weather conditions, increased liquidity in the banking system, and prudent macroeconomic management. These factors have encouraged a steady growth since the first quarter of the year; leading to a turnaround in sectors of agriculture, electricity and water and a rebound in most of the other sectors. As a consequence, manufacturing, construction and the service industries have been favored by reliable supply of electricity and resilient domestic demand therefore compounding the growth.

Real Gross Domestic Product is estimated to have increased by 6.1 per cent in the third quarter of 2010 compared to a growth of 0.5 per cent in the same period of 2009, reaching almost the 2007 level. This growth was against a backdrop of upswing of activities in Agriculture, Manufacturing, Financial Intermediaries, Construction, Wholesale and Retail trade, Transport and Communication, and Electricity and Water. All sectors of the economy recorded positive growths of different magnitude. Financial Intermediaries recorded the fastest growth of 20.3 per cent while public administration recorded the slowest growth of 0.9 per cent. In addition, Taxes (less subsidies) on products which grew by 5.8 per cent also contributed substantially to the growth.

1.2 Performance of the Agricultural sector

Agriculture and Forestry sector reversed the negative growth in the third quarter since 2007 to increase to 6.8 per cent compared to a contraction of 3.4 per cent in a similar period in 2009. While the sector has recorded improvements in the first three quarters of 2010, compared to the corresponding period of 2009, the production levels are yet to reach those attained in 2007. Therefore, the current growth may be interpreted as a recovery from effects of unfavorable weather coupled with subdued demand for horticultural exports in 2008 and 2009. The sector contributed 22.0 per cent of real GDP for the third quarter of 2010. Horticultural produce for exports notably vegetables and cut flowers, declined in the third quarter of 2010 compared to 2009 whereas exports of fruits increased over the same period. Industrial crops including sugar cane production and the quantities of tea and coffee marketed recorded a decline in third quarter of 2010. However, food crops recorded higher output in the third quarter of 2010 compared to a similar period in 2009, as a result of well distributed rainfall in most parts of the country.

Figure 1.1: Kenya's Agric-GDP Growth Rates, 2005 – 2009

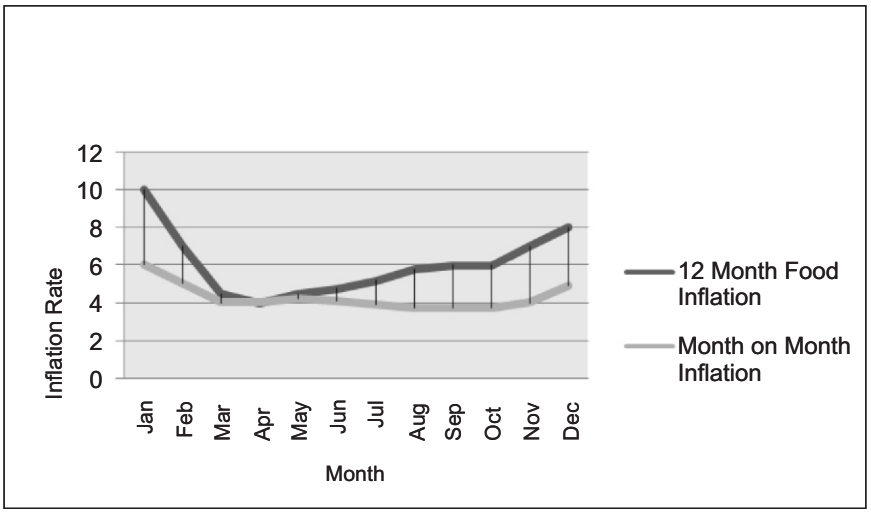


Source: KNBS

1.3 Inflation

Overall 12-month inflation increased from 3.8 percent in November 2010 to 4.5 percent in December 2010, but remained below the 5.3 percent inflation recorded in December 2009. The pickup in overall inflation is attributed to pressure from food and fuel prices. Food inflation increased from 6.7 percent to 7.8 percent, while transport inflation rose from 5.5 percent to 7.6 percent. The rise in food prices partly reflect the onset of the dry weather and the demand created by the holiday season which caused prices of items such as beef, milk and cooking fat to rise. The rise in the cost of transportation reflected the higher fuel and gas prices.

Figure 1.2: Underlying and Overall Inflation rates in 2010



Source: Central Bank of Kenya

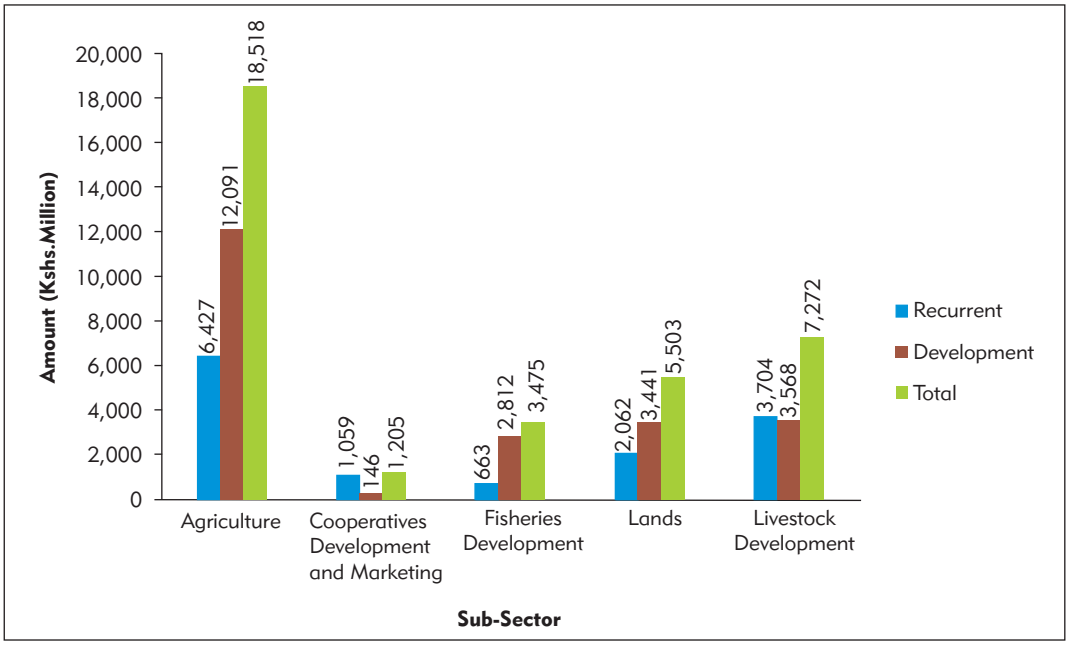
2.0 TRENDS IN BUDGET ALLOCATION TO AGRICULTURE

2.1 Sector Budget

Government budgetary allocations to the Agricultural and Rural Development sector significantly increased in the 2010/11 financial year. Table 2.1 shows that the 2010/11 budgetary allocation to the sector increased from Kshs 26.2 billion in 2009/2010 to Kshs. 35.97 billion in 2010/11. This increase was due to enhanced allocation in development budget which rose by about 2.5 times to Kshs. 22 billion in 2010/11 from Kshs. 8.3 billion in 2009/10. On the other hand, the recurrent budget declined in 2010/11 to Kshs. 13.9 billion compared to the 2009 allocation of Kshs. 15.6 billion.

The budgetary allocation to the sector as a proportion of the national budget increased from 2.8% in 2009/10 to 4.4% in 2010/11 financial year. This allocation is however still below the recommended level by the Maputo Declaration of 2003. The declaration sought to raise budget allocation to agriculture sector to at least 10% of government budget. In the 2011/12 budget, the budgetary allocation to the sector is projected to decline slightly to Kshs. 33.2 billion which will be 3.9% of the national budget.

Figure 1.3: Budgetary Allocation for the Agriculture Sector Ministries (Kshs. Million 2010/11)



Source: Treasury Budget Circular 2011

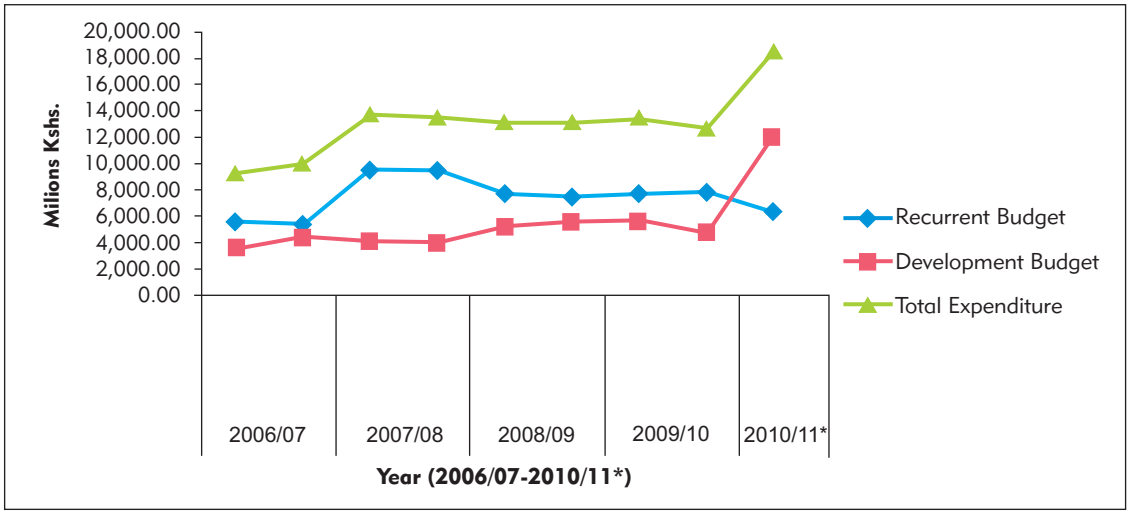
2.2 Sub-Sector Budget

2.2.1 Agriculture Sub-sector

The budgetary allocation to the Ministry of Agriculture has been on an increasing trend for the last five years. This momentum was sustained in the 2010/11 fiscal year whereby the Ministry was allocated Kshs. 18.52 billion up from Kshs.13.47 billion in 2009/2010. For a long time, recurrent budget has been higher than development budget. This trend was however reversed in 2010/11 budget where development budget accounted for Kshs. 12.1 billion while recurrent budget was Kshs. 6.43 billion as shown in Table 2.2. The development budget more than doubled in the year under review compared to 2009/10 financial year. Recurrent budget declined by over Kshs. 1 billion. Provisional figures indicate that the Ministry's budget will decrease to Kshs. 17.4 billion in 2011/2012 financial year.

An analysis of Ministry's budget expenditure from 2006/07 to 2009/10 indicates that absorption capacity has been above 95% for both recurrent and development expenditure except for development expenditure for 2009/10 which was 84.4%. The low absorption in development expenditure was attributed to disbursement bottlenecks and lengthy procurement process.

Figure 1.4: Trends in Budget Execution



Source: PER, MoA, ARD Reports
*Provisional

Table 2.1: Expenditure for the Ministry of Agriculture (Kshs. Million 2006/07 – 2010/11)

	2006/07		2007/08		2008/09		2009/10		2010/11*
	Printed	Actual	Printed	Actual	Printed	Actual	Printed	Actual	Printed
Recurrent Budget	5,658.40	5,464.50	9,598.30	9,500.90	7,805.00	7,530.20	7,799	7,911	6,427
Development Budget	3,651.80	4,478.00	4,156.10	4,022.20	5,289.90	5,608.40	5,673	4,788	12,091
Total Expenditure	9,310.20	9,942.50	13,754.40	13,523.10	13,094.90	13,138.60	13,472.00	12,699.00	18,518.00
Total Expenditure as % of GDP	0.73	0.56	0.75	0.74	0.63	0.63	0.59	0.56	0.74
Total Expenditure as % of total GOK expenditure	1.83	1.96	2.08	2.04	1.95	1.96	1.52	1.44	1.52
Development as % of total expenditure	38	36	43	29.84	40	42.7	42.1	37.7	65.3
Recurrent as % of total expenditure	62	64	57	70.16	60	57.3	57.9	62.3	34.5
Budget to Agric. Sector	17,963.50	16,921.20	24,506.00	22,388.10	21,933.40	21,440.80	26,194.90	24,736	35,973
Agric as % of total budget	3.5	3.3	3.7	3.4	3.3	3.2	3	2.8	4.4

Source: PER, MoA, ARDS Reports,
* Provisional

2.2.2 Livestock Sub-Sector

The recurrent budget of the Ministry of Livestock Development increased in 2009/2010 to Kshs. 4.77 billion from Kshs. 3.58 billion in 2008/09 fiscal year as shown in tale 2.2. On the other hand, there was a decline in development budget in 2009/10 which was Kshs. 1.67 billion down from Kshs. 2.28 billion in 2008/09.

Table 2 2: Analysis of Livestock sub-sector Expenditure (Kshs. Million 2006/07 – 2009/10)

	Original Budget Estimates				Actual expenditure			
	2006/07	2007/08	2008/09	2009/10	2006/07	2007/08	2008/09	2009/10
Recurrent	2,211	2,441	3,579.30	4774.5	2,362	3,258	3,425.30	4112
Development	2,185	1,896	2,279.30	1667.5	722	750	1,095.80	987.1
Total Expenditure	4,396	4,337	5,859	6,442	3,084	4,008	4,521	5,099
Rec. as % of Total	50.3	56.3	61.1	74.1	76.6	81.3	75.8	80.6
Dev. as % of Total	49.3	46.7	38.9	25.9	23.4	19.7	24.2	19.4

Source: PER, MoLD, ARD Reports, * Provisional

3.0 KEY RECENT REFORMS

3.1 STATUS OF MINISTRY OF AGRICULTURE/SECTOR POLICIES AND BILLS AS AT JANUARY 2011

No.	Sub–sector	Organization	Name of Policy Document, Bill or Cabinet Memo	Stage of Processing	Action Required
1.	Pyrethrum	PBK	Sessional Paper for the Revitalization of the Pyrethrum Industry.	Review of Policy, Cabinet memo and Bill on liberalization of the sub sector is ongoing	Draft Policy and Bill submitted. Awaiting presentation to the Minister.
2.	Seed Industry	KEPHIS	i) National seed Policy	Policy Paper approved by Cabinet on 11th September 2008.	Preparation for launch in 2011. Printing and CD complete.
			ii) Seeds and Plant Varieties (Amendment Bill), 2008	Approved by Cabinet on 11th September 2008.	Awaiting harmonization of concerns raised by the AG on clauses that will impact on KEPHIS Bill; on 3 areas -Plant Genetic Resources -Penalties. - Aligning it with UPOV 1991.
3.	Sugar	KSB	i) Sessional Paper on Revitalization of the Sugar Industry	Sessional Paper, Bill and Cabinet Memo ready.	Joint Cabinet Memo on privatization of the 5 public owned Sugar Companies has been forwarded to the Cabinet Office. Divesture on-going under guidance of the Treasury and MoA. -Incorporation of privatization (share holding and Board membership) -Management of SDF.
			ii) The Sugar (Amendment) Bill, 2008 and Cabinet Memo on the Bill	Sessional Paper, Bill and Cabinet Memo ready.	

Serial Number	Sub–sector	Organization	Name of Policy Document, Bill or Cabinet Memo	Stage of Processing	Action Required
4.	Extension		National Agriculture Sector Extension Policy (NASEP)	Policy approved by Cabinet.	Policy awaits publication and tabling in Parliament. With ASCU for preparation of Sessional paper
5.	Food Security and Safety		i)National Food and Nutrition Policy	Joint Cabinet Memo and Policy was forwarded to the Cabinet Office for consideration in September, 2009.	Memo differed for mainstreaming New Constitution.
			ii)National Cereals and Produce (Amendment) Bill, 2007	Bill has been reviewed to address outstanding issues on Grain Development Levy and increase of Strategic Grain Levels from 6 to 8 Million bags.	Bill awaiting feedback from NCPB.
6.	Coffee	CBK	Amendment of the Coffee Act No. 9 of 2001	Amendment Bill, 2008 was cleaned by the AG in late 2008.	AG's draft Bill has been reviewed and emerging issues from the stakeholders have been incorporated. With Coffee Board of Kenya for fine tuning. To be forwarded to the PS.
7.	Soil Fertility and Fertilizers	KEPHIS	i) Soil Fertility Policy.	Policy on Soil Fertility and Bill, 2006 was ready on March, 2006.	Awaiting finalization of the Animal Feedstuffs Bill and Policy by the Ministry of Livestock Development.
			ii)Fertilizer and Soil Conditioners Bill	Fertilizers and Soil Conditioners Bill ready.	

Serial Number	Sub–sector	Organization	Name of Policy Document, Bill or Cabinet Memo	Stage of Processing	Action Required
8.	Horticulture	HCDA	National Horticultural Development Policy	The draft Policy is being reviewed by ASCU, FPEAK, KEPHIS, Kenya Flower Council, Directorate of Crops, HCDA and Policy Directorate.	Regional stakeholder consultations have been conducted. Awaiting to be subjected to a national stakeholders' forum.
9.	Commodity and input regulation	KEPHIS	KEPHIS Bill	KEPHIS draft Bill is complete and has been approved by Cabinet.	Bill with the AG as harmonization is done.
10.	Oil crops	OCDA	Oil Seed Crops Development Policy and Bill	Policy to be combined with Nut Crops policy.	Awaiting to be combined with Nut Crops policy. Work in progress for quarter 3.
11.	Nut Crops		Nut crops Development Policy and Bill	Policy to be combined with Oil Crops Policy.	Awaiting to be combined with Oil Crops Policy. Work in progress for quarter 3.
12.	Emerging Crops		National Emerging Crops Policy	Draft Policy has been subjected to the stakeholders.	Awaiting incorporation of stakeholders' views. Stakeholder forum held on 10th June, 2010.
13.	Urban and Peri-Urban Agriculture and Livestock(UPAL)		National Urban and Peri-Urban Agriculture and Livestock Policy	Stakeholders' views have been collected.	Awaiting incorporation of stakeholders' views. Stakeholder forum held on 9th June, 2010. Work in progress.
14.	Extension Regulation		Agricultural Professionals, Registration and Licensing Bill	Draft Bill ready and submitted to AG for cleaning in 2008. Cabinet Memo with the Minister for Livestock for signature.	Consultations with Cabinet office.

Serial Number	Sub–sector	Organization	Name of Policy Document, Bill or Cabinet Memo	Stage of Processing	Action Required
15.	Agriculture Sector Legislation	ASCU	Consolidated Agriculture Sector Reform Bill	Draft Bill formulated and given to ASCU for progressing in October 2008.	Consultants incorporating stakeholder views. Work in progress.
16.	Agricultural Finance	AFC	Agriculture Finance Corporation Amendment Bill, 2009.	Draft Amendment Bill and Memorandum of Reasons from AFC ready.	Cabinet Memo and Bill prepared and forwarded to the AG.
17.	Tea	KTDA	Tea Amendment Bill, 2009.	Draft Bill and Cabinet Memorandum have been prepared.	The Bill passed by parliament.
18.	Agribusiness	ASCU	National Agribusiness Policy	First Draft Policy ready.	Awaiting completion by the technical team and ASCU. Work in progress.
19.	Root and Tuber Crops Policy		National Root and Tuber Crops Policy	Draft Policy is ready.	National stakeholder forum held on 25-11-2010. Awaiting inputting of stakeholders' views

3.2 LEGAL NOTICES AND GAZZETTE NOTICES

1. Draft Seed Tribunal Rules, 2009 ready. Forwarded to the CJ awaiting response.
2. Draft Sugar Rules 2008, finalized by Kenya Sugar Board and submitted for Gazattement.
3. HCDA Orders to accommodate the expanded mandate of HCDA forwarded to AG. Awaiting response.

3.3 Reforms in Livestock Sub-Sector in Year 2009/10

- National Poultry and Beekeeping policies finalized.
- Formulation the Animal Feeds Policy in order to address establishment of livestock feed reserve, The Ministry also initiated the legal framework for establishing livestock restocking devolvement fund.
- Finalization of two bills namely the Veterinary Surgeons and Paraprofessional bill and the Veterinary Medicines and Poisons bill has been done.
- Development of poultry development bill is ongoing.

3.3.1 Projects within the Ministry

- **The ADB funded PATTEC project:**, the project covers 39 tsetse infested districts and is designed to eradicate tsetse and trypanosomiasis.
- **ASAL Based Livelihoods Project:** The project is funded by African Development Bank (ADB).
- Small holder Dairy Commercialization Programme – commenced in 2006. It is funded by International Fund for Agricultural Development (IFAD).
- **Establishment of two (2) Disease Free Zones (DFZs):** This is at the Coast and Laikipia-Isiolo Complex to improve the health and quality of livestock and enhance export of livestock and livestock products into the world market.

The Ministry collaborates with the Ministry of Livestock in implementing various programmes/ projects e.g. NALEP II, PSDA, KAPAP and various IFAD funded projects like MKEP & SNCDP

4.0 WORLD COMMODITY AND FERTILIZER SITUATION

4.1 Cereals

As indicated in Table 4.1, world cereal production is expected to be 1.4 percent below 2009 but still the third highest on record. This year's decline in cereal production will be entirely due to lower output in developed countries while in developing countries production is forecast to rise by a significant 3.8 percent. World wheat production is currently forecast to reach 653 million tons, down 4 percent from the previous year. Global production of coarse grains is expected to register a small decline to 1,110 million tons, while rice production is put at 466 million tons, up 2.3 percent from 2009.

The world supply and demand balance for cereals is still expected to tighten considerably with total utilization exceeding world production in the 2010/11 marketing year. As a result, a reduction of some 6 percent (or over 32 million tons) in carryover stocks will be required to meet consumption needs. The tightening of the cereal market anticipated in the 2010/11 marketing year has already resulted in a sharp increase in world prices of all major cereals in recent months with wheat and coarse grains currently trading at around 50 percent above the previous year's levels. Any significant deterioration in crop prospects would therefore add new thrust to the price increase.

World cereal consumption in 2010/11 is currently forecast to reach 2 260 million tons, up 1.8 percent from the previous season. The projected growth is slightly higher than was anticipated earlier, with food and feed utilization of major cereals keeping pace with recent trends. Among the major cereals, in percentage terms, the largest increase in utilization is forecast for rice but wheat and coarse grains usages are also expected to increase.

World cereal stocks for crop seasons ending in 2011 are likely to fall to 524 million tons, down nearly 6 percent from their relatively high opening levels. Coarse grain stocks are forecast to decline most, by over 11 percent, and wheat inventories could decrease by 6 percent but rice stocks are expected to increase by 5 percent. Based on the current expectations for production and utilization this season, world cereal stocks-to-use ratio in 2010/11 is forecast to decline by almost 2 percentage points to 23 percent but would still be well above the 30-year low of 19.6 percent registered in 2007/08.

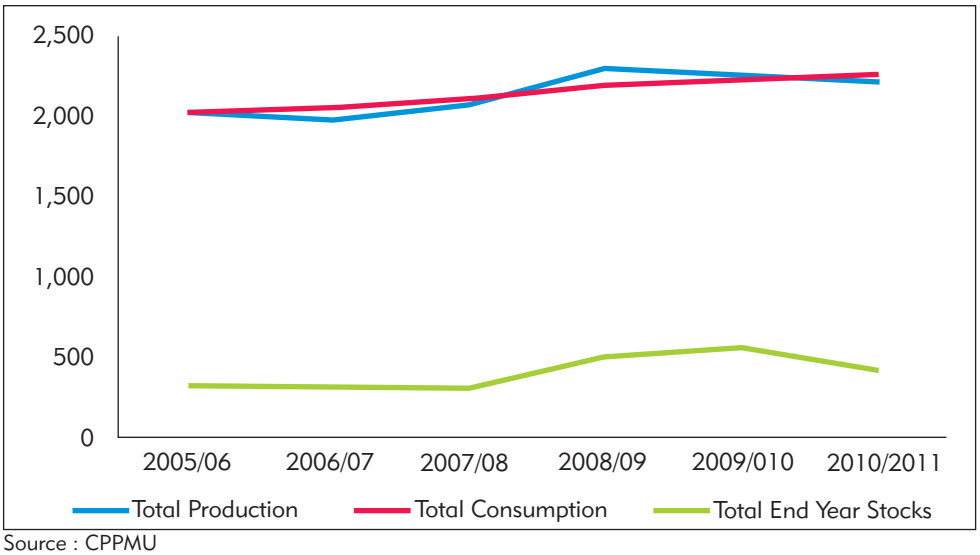
Table 4.1: World Cereals Situation, 2005 – 2010 (million tons)

Year	2005/06	2006/07	2007/08	2008/09	2009/010	2010/2011*
Wheat	620.1	592.0	603.6	681.4	682.0	653.0
Coarse grains	977.6	967.2	1,051.9	1 143.1	1,123.0	1,110.0
Rice	416.3	415.3	420.6	459.6	455.0	466.0
Total Production	2,014.0	1,974.5	2,076.1	2,284.1	2,260.0	2,229.0
Wheat	624.4	618.2	619.0	647.6	659.0	667.0
Course grains	989.2	1,014.4	1,062.5	1 095.7	1,113.0	1,133.0
Rice	413.1	417.7	423.7	446.3	449.0	460.0
Total Consumption	2,026.8	2,050.2	2,105.1	2,189.6	2,221.0	2,260.0
Wheat	120.8	166.4	109.7	172.3	202.0	189.0
Course grains	119.3	81.3	126.0	208.9	225.0	199.0
Rice	81.3	78.3	72.1	124.4	130.0	136.0
Total End Year Stocks	321.4	326.0	307.7	505.6	557.0	524.0

Source: FAO, GIEWS, * Projections as at Feb.2011

Figure 4.1 shows that the world cereals production will be below total consumption in 2010/011 which will lead to reduction in stocks. Consequently, the world market prices for cereals are projected to be on the rise.

Figure 4.1: Trend in World Cereals Production Consumption and Stocks; 2005 – 2010 (Million tons)



Source : CPPMU

4.1.1 Wheat

International prices of wheat increased 11 percent in the first half of December compared to their November average. The benchmark US wheat price (US Hard Red winter) reached USD 325 per ton, about 70 percent higher than at the beginning of the marketing season in July. The market is supported by concerns over the quality of the Australian wheat crop after heavy rains at harvest. Dry weather conditions for the 2011 winter crop in some main producing countries also added support to markets.

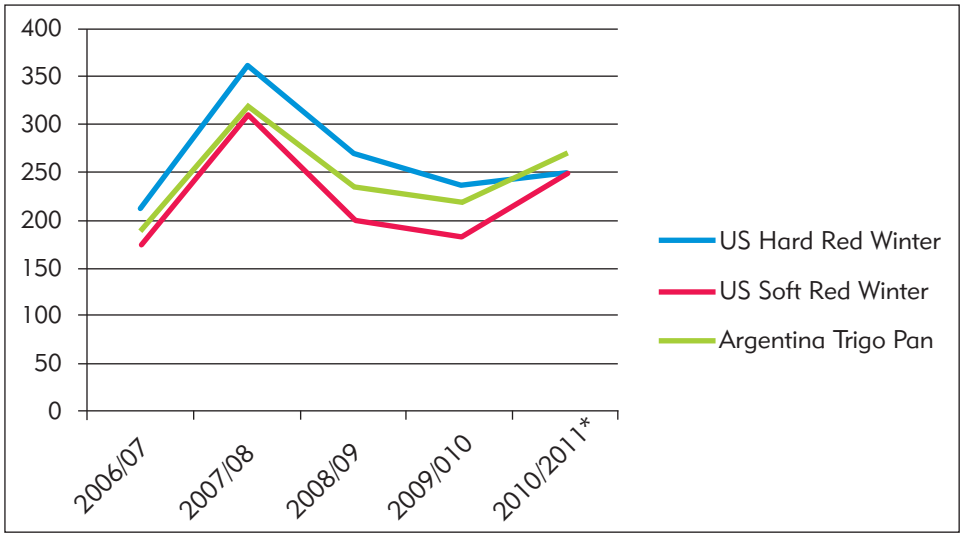
In the first half of December, the benchmark US wheat price was 47 percent above its value during the corresponding period a year ago, although still 33 percent below the record reached in March 2008.

Table 4.2: Selected International Prices for Wheat, 2006 – 2010 (US$/ton)

Source	2006/07	2007/08	2008/09	2009/010	2010/2011*
US Hard Red Winter	212	361	270	236	249
US Soft Red Winter	176	311	201	183	248
Argentina Trigo Pan	188	318	234	218	269

Sources: International Grain Council and USDA, **Average for eleven months Jan 010 – Nov. 010.*

Figure 4.2: Trend in Selected International Prices for Wheat (US$/ton)



Source: FAO

4.1.2 Coarse Grains

Export prices of coarse grains that were firm in November increased 4 percent in the first half of December 2010. At this level, prices are 50 percent higher than at the beginning of the 2010/11 marketing season in July. The recent strengthening of prices follows some concerns about the potential impact of dry weather on the final area sown and yields in Argentina. Higher wheat prices also provided support to this trend. In the first half of December, the benchmark US maize price (US, Yellow) averaged USD 245 per ton, 48 percent higher than a year earlier and only 13 percent below the peak reached in June 2008.

FAO latest forecast for world production of course grains in 2010/011 stands at 1,110 million tons. This will be a decrease from 1,123 million tons recorded in 2009/010, which translates to 1.2 percent as shown in Table 4.3.

World utilization of coarse grains in 2010/011 is forecast to increase from 1113 to 1133 metric tons an equivalent of 1.7 percent from the previous season compared to almost 1.2 percent growth in 2009/010. Unlike in 2009/010 season all prices for coarse grains are expected to be on an upward trend in 2010/011 season but lower than those recorded n 2008. This is in response to decreased production as indicated in Table 4.3. Price of US yellow maize is expected to increase from US$ 160 per ton in 2009/010 to US$ 179 per ton in 2010/011, an equivalent of 12 percent. The price of Argentina maize is also expected to increase from US$ 165 per ton in 2009/010 to US$ 184 per ton in 2010/011.

In Eastern Africa, maize prices, which have seasonally increased in most countries of the sub region in recent months, stabilized in November in Ethiopia, Kenya and Tanzania. Prices of sorghum and millet declined in Sudan. However, in Somalia, prices of coarse grains surged in November on concerns about the impact of dry weather on the 2010/11 secondary crop season to be harvested from March.

Table 4.3: Selected International Prices of Coarse Grains, 2006 – 2010 (US$/ton)

Source	2006/07	2007/08	2008/09	2009/010	2010/011*
US Yellow Maize	150	168	188	160	179
Argentina Maize	145	172	180	168	180
US Sorghum	155	181	170	165	184

Sources: International Grain Council and FAO, *Average for eleven months Jan. – Nov. 010.*

4.1.3 Rice

International rice prices have been on a steady upward trend since June, with growth accelerating in November and the first half of December when the benchmark Thai price (Thai100%B) reached USD 566 per ton. At this level, however, the Thai export rice price was still 8 percent lower than a year earlier and 41 percent below its peak of mid-2008. The recent increase in prices reflects a tightening of supplies in Thailand and Vietnam together with a sustained import demand, including importers such as Bangladesh, Indonesia and the Philippines.

The outlook for global rice production for 2010/011 has improved and prices are generally expected to decline as indicated in table 4.4. Based on the latest information, the 2010/011 global rice production is forecast at 466 million tons in milled terms, which would represent a 2.4 percent increase from 455 million tons recorded in 2009/010 season.

However, consumption will increase from 449 million tons to 460 million tons over the same period, representing an increase of 2.4 percent. The rice stocks at the close of 2010/011 marketing season are projected to stand at 136 million tons from 130 million tons registered in 2009/010. The 2010 level of world trade in rice is now forecast at 31.5 million tons, 6 per cent more than in 2009. This was primarily

driven by greater imports by Asian countries, either to compensate for production shortfalls, curb domestic inflationary pressure or reconstitute stocks. As for exports, much of the increase can be attributed to Vietnam, Pakistan, Thailand and the United States.

Harvest of rice in Asian countries is forecast at a record level of 627 million tons or 2.1 percent over the harvest of 2009 mainly reflecting a recovery in India and the Philippines. Trade in rice, the main food commodity in the region, is expected to be sluggish in 2011. Rice exports are anticipated to be lower due to the decline in supplies in some of the leading exporting countries, particularly Pakistan and Vietnam. Aggregate rice imports by all Far East countries in 2011 are also expected to decline slightly from the previous year, mainly due to the lower import requirements in Philippines and Bangladesh on account of the anticipated improved harvests in those countries.

In contrast with the sharp price increases witnessed in the wheat and maize markets, world rice prices in 2010 were down by 7 per cent compared with one year earlier, influenced by the relatively low quotations that prevailed in the second and third quarters of the year.

As for the coming months, relatively abundant supplies are expected to moderate the pressure stemming from other grain markets. Much will depend, however, on how the rice crops that are still in the field will fare.

Table 4.4: Selected International Prices for Rice, 2006 – 2010 (US$/ton)

Source	2006	2007	2008	2009	2010
Thai 100% B second grade	311	335	695	584	518
Thai all super	217	275	506	329	386
US Long grain 2.4%	394	436	782	545	510
Pakistan Basmati	516	677	1,077	937	881
Indica	137	161	295	253	212
Japonica	153	168	314	344	264

Source: FAO prices indices for Rice

4.2 Cotton

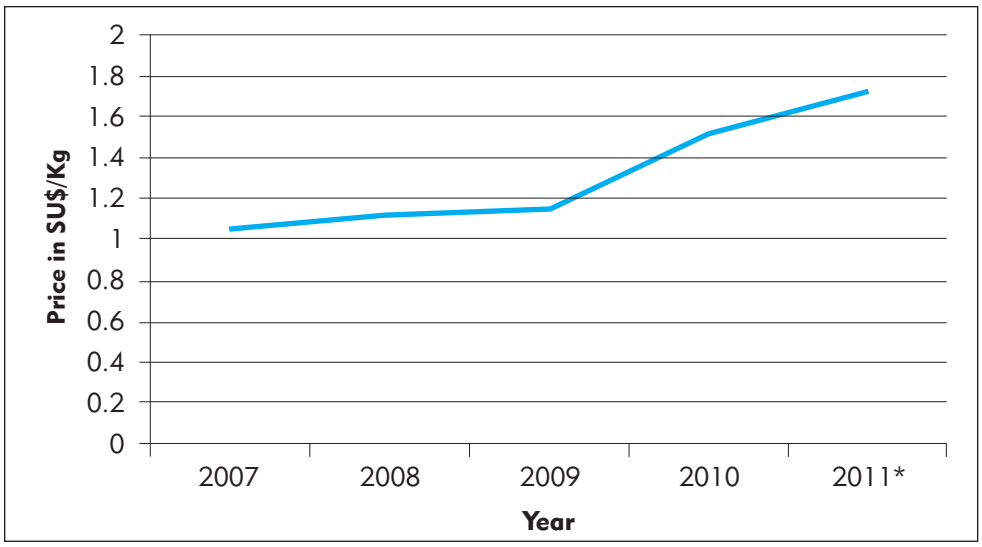
Table 4.5 indicates world cotton production is forecast to increase to 115.5 million bales in 2010/11, up 14 percent from 2009/10. Harvested area is forecast to increase to 32.3 million hectares, up 7 percent from the previous year. Yields are forecast at 768 kilograms per hectare, up from 739 kilograms in 2009/10 and compared to the 5-year average of 759 kilograms. Many producing countries are contributing to the increase. U.S. output is forecast at 16.7 million bales, up 4.5 million from last year, and India production is forecast at 25.0 million bales, up 1.5 million. Brazil's output is forecast 0.95 million bales higher, with Pakistan up 0.7 million, Uzbekistan up 0.5 million and Turkey up 0.4 million. After the cotton industry faced excess cotton stocks for the 2008/09 marketing year and low prices starting in late 2008, the industry saw a reversal with diminished stocks in 2009/10 and higher prices from mid-2009. An improving world economy, especially in Asia, resulted in increased demand which has kept world cotton prices attractive and induced the rising output levels projected for 2010/11. World average yield decreased in 2009/10 with relatively poor crops in Australia, the United States, India, the EU-27, and Burkina Faso.

Table 4.5: World Cotton Situation, 2005/06 – 2010/011 (Mil. Bales)

	2005/06	2006/07	2007/08	2008/09	2009/010	2010/011*
Production	118	122		107	102	116
Consumption	116	124	126	110	119	116
End of Year Stock	60	61	57	62	44	43

Source: USDA – WASDE,*Projection as at March 2011

Figure 4.3: Trend in Average World Cotton Prices 2006 – 2010



Source: International Cotton Advisory Committee, Projection as at Feb. 2011

International Cotton Advisory Committee (ICAC) reports that very low world stocks of cotton, limited supply, robust demand and a depreciation of the U.S. dollar have caused the surge in prices this season. This price is expected to trigger an increase in World cotton production, projected to rise by 14 percent during 2010/11.

Other factors that have contributed to this phenomenon are; daily volatility in the cotton futures market which increased in 2008/09 and continued to rise in 2009/010, fundamental market conditions, such as, the tightest global stocks-to-use ration in 15 years and the smallest U.S. stocks in 85 years. As of 2009 prices moved outside of the relatively narrow range that they had been trading in. However, this market conditions do not account for the unprecedented price volatility of recent months, when future prices moved up or down the limit 30 of the last 45 trading days.

In the face of tight global stocks and China's depleted reserves, the impact of uncertainty regarding China's import needs, has also lead to great volatility. Another source of uncertainty is the lack of transparency in India's export program on cotton and yarn. Since the initial restrictions on cotton exports were announced in April, the program has changed frequently and unexpectedly.

4.3 Sugar

As indicated in table 4.6, World sugar output is projected to increase by 5.3 percent to 169 million tons in 2010/11. This is as a result of a 27 million tons increase in Indian production, transforming India from a net importer to a net exporter. The likely price effects of this increase in production is however unclear, since the stock-to-use ratio remains below historic levels. This may support a favorable price outlook for 2010/11, particularly due to the current unfavorable weather in Brazil.

The US Department of Agriculture (USDA) review of world sugar production, supply and distribution confirmed a downward adjustment of world sugar production forecasts, rising consumption and a consequent improvement in price prospects. Rising pressure on sugar prices was intensified by supply disruptions in 2009, driving prices to double the long-term average. World consumption is expected to grow at a rate still lower than the long-term 10 year average

The lower growth is attributed to record high prices in both the world market. Even so, global use of sugar is expected to reach 167.7 million tons. Therefore, the growth in global production is sufficient to cover sugar consumption.

According to USDA, prices are increasing due to tightening supply and to appreciation of the Brazilian situation. Brazilian production is projected at 39.4 million tons, 1.3 million lower than previous projections, while Asian sugar production is down 1.4 million tons compared to previous projections, despite rising Indian production. Rains and flooding in eastern Australia are also likely to significantly reduce Australia's sugar exports. Meanwhile the EU is now expected to be the world's largest sugar importer in 2010/11 at 3.6 million tons.

According to China Merchandise Reserve Management Centre, China may have a refined-sugar shortage of 2.5 million tons in 2010/2011 that will be met by imports or offloading the reserves.

Table 4.6: World Sugar Situation, 2005/06 – 2010/011

	2005/06	2006/07	2007/08	2008/09	2009/010	2010/011*
Production in million tons	144.71	155.16	169	154.7	160.5	169
Consumption in million tons	142.82	146.03	161	160.9	164.3	167.7
Price in Kshs per ton	22,762	16,990	14,360.5	21120	29139	47678
Ending Stocks (million tons)	30.97	30.91	67	68.4	57.3	58.1

Source: International Sugar Association

*Projection: Jan-November 2011

4.4 Coffee

World coffee production experienced an improved performance in 2010, recording 8.03 million tons equivalent to 8.5 percent compared to 2009 as indicated in Table 4.7. This has been the best yield recorded over the past five years and has been caused by good harvest of healthy crops by producing countries. This is expected to help rebuild depleted consumer stocks. Kenya is also expected to record an improved production which would provide an impetus for the coffee farmers given the improved prices in the world market. The world composite prices have improved as a result of the supply shortfall of the top quality Arabica from Colombia as result of bad weather.

Table 4.7: Coffee Production by Exporting Countries, 2005 – 2010

	2005	2006	2007	2008	2009	2010
Total Production by exporting countries (Million tons)	6.7	7.7	7.1	7.6	7.4	8.03
Production in Kenya(Million tons)	0.04	0.05	0.04	0.034	0.047	0.0629
Average composite prices price in Kshs per ton	157,274	168,520	189,516	218,680	196,914	224,660

Source: International Coffee Organization.

4.5 World Fertilizer Situation

The international fertilizer market is entering 2011 in a seemingly strong position, and the sector is expected to see further growth as demand levels appear to be returning to high levels and prices of all products are on the increase and significantly higher than a year ago.

According to the International Fertilizer Industry Association (IFA), fertilizer production and sales have risen strongly this year, up 13 percent and 7 percent respectively in 2010 from the depressed levels in 2009.
Consumption is forecast to grow at a further 4.7 percent in 2010/11 and by another 3.8 percent in 2011/12.
IFA expects the fertilizer industry to invest $80bn in new production capacity between 2011 and 2015, having already spent $40bn since 2008.

However, despite the current positive signals in the market, IFA also warned of rising agricultural commodity and food prices and a possible repeat of the food crisis of 2007/08. High grain prices have been playing a significant part in the increased confidence of buyers.

The year 2010 proved to be strong in terms of urea prices, which recorded prices not seen since October 2008 as shown on figure 4.4. For example, Black Sea urea prices hit a peak of $391/ton Fob (Free on board) in early December 2010, up from around $270/ton Fob at the start of the year.

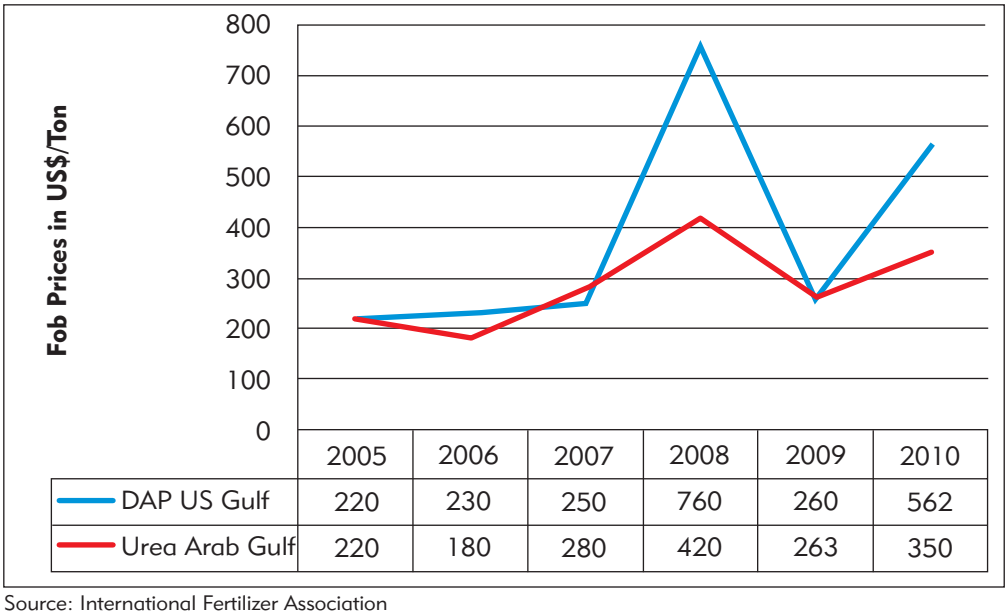
Projections indicate a healthy demand outlook in response to strong grain prices and a more prohibitive Chinese urea export regime leading to firm prices during the first quarter of 2011. China is not expected to resume normal supply until June 2011. The country has been a major exporter of urea having shipped 1 million tons of the fertilizer in January and February, 2010.

However, the outlook for 2011 may not be purely on increased fertilizer prices. Global urea demand has been forecasted to increase around 3.8 percent per year, but additional capacity is also due on stream in several countries including Qatar and Algeria, which will reduce the potential for price rises as the year progresses.

In the phosphates market, the US market looks set to support prices until India returns in February to sign contracts for 8m tons of di-ammonium phosphate (DAP) for 2011/12 season.

As 2010 comes to a close, there are limited supply of DAP and price in the US has ended the year on a firm footing at $590-600/ton FOB. India represents 50% of the DAP market trade with a tremendous buying power. As a result, how the country settles its contracts will be crucial in determining the phosphate trade in the first quarter of 2010/011. Another unusual situation is expected for market DAP as the US which is normally the largest exporter of DAP has recently become a major importer of the fertilizer due to strong domestic pricing and low inventories. For example, during the fourth and first quarters of the year, US imported at least 700,000 tons of DAP.

Figure 4.4: Trend in some World Fertilizer Prices 2005 - 2010



	2005	2006	2007	2008	2009	2010
DAP US Gulf	220	230	250	760	260	562
Urea Arab Gulf	220	180	280	420	263	350

Source: International Fertilizer Association

5.0 SUB-SECTOR PERFORMANCES

5.1 Food Crops

The sections cover the achievement for the Crops sub-sector, ranging from food crops, industrial crops and horticultural crops for a series of five years. The indicators include area under the crop, achieved production and value of different commodities. Provincial and district production for the main commodities has also been annexed.

Table 5.1: Provincial Crop Production, 2010

Commodity	Indicator	Central	Coast	Eastern	Rift Valley	Nyanza	Western	Nairobi	North Eastern	Country Total
Maize	Area (ha)	175,698	136,953	454,720	675,097	327,210	233,494	723	4,451	2,008,346
	Production (90 Kg Bag)	1,402,237	1,963,807	3,766,753	21,139,706	5,056,561	5,142,904	13,740	9,190	38,494,899
	Production (in Tons)	126,201	176,743	339,008	1,902,574	455,091	462,861	1,237	827	3,464,541
	Yield (bags/Ha)	8	14	8	31	15	22	19	2	19.2
Wheat	Area (ha)	8,182	.	23,967	127,825	.	69	.	.	160,043
	Production (90 Kg Bag)	322,226	.	772,166	4,592,690	.	1,735	.	.	5,688,817
	Production (in Tons)	29,000	.	69,495	413,342	.	156	.	.	511,994
	Yield (bags/Ha)	39	.	32	36	.	25	.	.	36
Barley	Area (ha)	142	.	3,350	21,631	.	.	.	.	25,123
	Production (90 Kg Bag)	3,635	.	82,200	627,705	.	.	.	.	713,540
	Production (in Tons)	327	.	7,398	56,493	.	.	.	.	64,219
	Yield (bags/Ha)	26	.	25	29	.	.	.	.	28
Rice	Area (ha)	10,301	3,090	.	9	5,428	1,329	.	24	20,181
	Production (50 Kg Bag)	544,401	32,783	.	206	296,360	15,127	.	480	889,357
	Production (in Tons)	48,996	2,950	.	19	26,672	1,361	.	43	44,468
	Yield (bags/Ha)	53	11	.	23	55	11	.	20	44
Sorghum	Area (ha)	999	3,088	119,751	13,677	61,560	24,059	13	2,635	225,782
	Production (90 Kg Bag)	4,020	17,872	726,140	146,177	674,083	251,407	66	3,185	1,822,950
	Production (in Tons)	362	1,608	65,353	13,156	60,667	22,627	6	287	164,066
	Yield (bags/Ha)	4	6	6	11	11	10	5	1	8

Commodity	Indicator	Central	Coast	Eastern	Rift Valley	Nyanza	Western	Nairobi	North Eastern	Country Total
Millet	Area (ha)	90	224	67,657	9,980	15,681	5,483	.	10	99,124
	Production (90 Kg									
	Bag)	283	1,359	381,094	83,391	84,909	47,642	.	0	598,678
	Production (in Tons)	26	122	34,298	7,505	7,642	4,288	.	0	53,881
	Yield (bags/Ha)	3	6	6	8	5	9	.	.	6
Beans	Area (ha)	105,896	2,721	26,197	281,322	154,461	118,114	621	44	689,377
	Production (90 Kg									
	Bag)	504,847	15,185	982,499	,768,732	630,136	435,424	3,158	0	4,339,980
	Production (in Tons)	45,436	1,367	88,425	159,186	56,712	39,188	284	0	390,598
	Yield (bags/Ha)	5	6	38	6	4	4	5	0	6
Green Gram	Area (ha)	316	11,961	131,768	793	2,038	.	5	471	147,352
	Production (90 Kg									
	Bag)	1,320	44,924	621,058	4,746	7,884	.	8	588	680,528
	Production (in Tons)	119	4,043	55,895	427	710	.	1	53	61,248
	Yield (bags/Ha)	4	4	5	6	4	.	2	1	5
Pegion Pea	Area (ha)	848	732	156,030	1,125	.	.	11	0	158,746
	Production (90 Kg									
	Bag)	3,599	2,882	1,133,484	7,047	.	.	29	0	1,147,040
	Production (in Tons)	324	259	102,014	634	.	.	3	0	103,234
	Yield (bags/Ha)	4	4	7	6	.	.	3	.	7
Cow Peas	Area (ha)	638	16,112	143,954	1,103	5,622	.	37	807	168,273
	Production (90 Kg									
	Bag)	4,802	67,591	707,632	6,690	15,192	.	36	1,104	803,046
	Production (in Tons)	432	6,083	63,687	602	1,367	.	3	99	72,274
	Yield (bags/Ha)	8	4	5	6	3	.	1	1	5
Cassava	Area (ha)	629	22,313	7,891	990	5,822	23,899	19	10	61,573
	Production (Tons)	5,102	83,528	78,754	20,844	44,296	90,759	37	70	323,389
	Yield (Ton/Ha)	8	4	10	21	8	6	2	7	8

Commodity	Indicator	Central	Coast	Eastern	Rift Valley	Nyanza	Western	Nairobi	North Eastern	Country Total
Sweet Potatoes	Area (ha)	3,308	1,084	6,513	5,462	10,653	15,245	37	10	42,312
	Production (Tons)	43,097	8,620	41,065	61,704	119,769	109,202	73	60	383,590
	Yield (Ton/Ha)	13	8	6	11	11	7	2	6	9
Cocoyam	Area (ha)	1,156	62	789	120	.	613	34	.	2,774
	Production (Tons)	8,837	300	5,179	1,896	.	2,784	59	.	19,054
	Yield (Ton/Ha)	8	5	7	16	.	5	2	.	7
Yams	Area (ha)	145	.	1,078	1	.	.	.	.	1,224
	Production (Tons)	978	.	7,054	3	.	.	.	.	8,035
	Yield (Ton/Ha)	7	.	7	3	.	.	.	.	7
Irish Potatoes	Area (ha)	53,822	31	17,314	53,579	1,500	4,720	81	.	131,047
	Production (Tons)	1,086,557	239	331,848	1,607,370	25,000	95,347	1,852	.	3,148,213
	Yield (Ton/Ha)	20	8	19	30	17	20	23	.	24
Ground Nuts	Area (ha)		24	582	830	13,670	4,185	.	.	19,291
	Production (Tons)		16	7,301	15,061	61,718	14,976	.	.	99,072
	Yield (Ton/Ha)		1	13	18	5	4	.	.	5
Grain Amaranth	Area (ha)	25	.	.	46	.	.	.	.	71
	Production (bags)	190	.	.	483	.	.	.	.	672
	Yield (Ton/Ha)	7			11	.	.	.	.	9
Dolichos LabLab	Area (ha)	491	.	15,404	376	.	.	.	.	16,271
	Production (bags)	1,016	.	92,502	3,270	.	.	.	.	96,788
	Yield (Bags/Ha))	2	.	6	9	.	.	.	.	6
Garden Peas	Area (ha)	1,078	.	.	220	.	.	14	.	1,312
	Production (bags)	446,383	.	.	2,121	.	.	33	.	448,537
	Yield (Bags/Ha))	414			10			2	.	.

Commodity	Indicator	Central	Coast	Eastern	Rift Valley	Nyanza	Western	Nairobi	North Eastern	Country Total
Chick Peas	Area (ha)	.	.	412	465	.	.	.	.	877
	Production (bags)	.	.	2,008	1,060	.	.	.	.	3,068
	Yield (bag/Ha)	.	.	5	.	.	.	.	.	3
Lima Beans	Area (ha)	227	.	.	.	.	.	.	.	227
	Production (bags)	1,295	.	.	.	.	.	.	.	1,295
	Yield (bag/Ha)	6	.	.	.	.	.	.	.	6
Soya Beans	Area (ha)	43	.	.	119	.	1,459	.	.	1,621
	Production (bags)	96	.	.	678	.	8,295	.	.	9,069
	Yield (bag/Ha)	2	.	.	6	.	6	.	.	6
Sun Flower	Area (ha)	53	.	.	465	.	2,606	.	.	3,123
	Production (bags)	326	.	.	1,060	.	3,951	.	.	5,336
	Yield (bag/Ha)	6	.	.	.	.	2	.	.	2
Teff	Area (ha)	.	.	179	.	.	.	.	.	179
	Production (bags)	.	.	464	.	.	.	.	.	464
	Yield (bag/Ha)	.	.	3	.	.	.	.	.	3
Bambara Nuts	Area (ha)	.	.	.	.	.	203	.	.	203
	Production (bags)	.	.	.	.	.	332	.	.	332
	Yield (bag/Ha)	.	.	.	.	.	2	.	.	2
Sim Sim	Area (ha)	.	.	.	.	.	.	.	150	150
	Production (bags)	.	.	.	.	.	.	.	54	54
	Yield (bag/Ha)	.	.	.	.	.	.	.	.	0
Oats	Area (ha)	.	.	.	210	.	.	.	.	210
	Production (bags)	.	.	.	5,400	.	.	.	.	5,400
	Yield (bag/Ha)	.	.	.	26	.	.	.	.	26

Source: Provincial Reports

5.1.1 Maize

The country heavily relies on maize as the staple food either green, milled or in dry grain form. Rift valley region, on average accounts for over 50 percent of the national maize production in the country. Nyanza and Western regions contribute on average about 14 percent each to the national maize production.

In the year 2010, maize production increased by 46 percent from 27 million bags in 2009 to 38.5 million bags in 2010. The increase was attributed to favorable weather condition, increase in area under production by 8.5 percent and improved access to fertilizer especially at the beginning of the 2010 and up scaled distribution of maize seed through the inputs support programme implemented by the Ministry.

Productivity, which is measured by the amount of dry grain-maize bags per hectare, increased from 14.4 bags in 2009 to 19 bags per hectare in 2010, mainly attributed to improved access to fertilizer, maize seed, mechanization services and improved delivery of extension services to farmers. Other factor towards the increase could be attributed to the maize production from government investment in irrigated agriculture along the Tana delta, the Economics Stimulus Programme (ESP) food production component.

The production was the highest in the last five years series and above the national maize consumption requirement which is estimated at 36 million bags in 2009 as depicted in the table 5.2 below.

Table 5.2: Maize Production 2006 - 2010

Year		2006	2007	2008	2009	2010
Area (ha)		1,888,185	1,615,304	1,793,757	1,885,071	2,008,346
Production	90 kgs bags	36,086,406	32,542,143	26,302,219	27,142,475	38,494,899
	Tons	3,247,777	2,928,793	2,369,569	2,442,823	3,464,541
Unit price per bag (Kshs)		1,300.0	1,200.0	2,500.0	2,614.0	1,619.0
Average Yield (bags/ha)		19	20.1	14.7	14.4	19.2
Estimated Consumption (90 bags)		33,105,000	34,098,150	36,000,000	36,000,000	36,000,000
Import (million tons.)		0.81	1.12	2.71	16.76	2.55 *
Export		0.25	0.31	0.21	0.05	0.03*
Total Value (billion Kshs.)		46.9	52.3	65.8	71	75*

Source: Directorate of Crops

5.1.2 Wheat

Wheat production increased by 133 percent from 2.4 million bags in 2009 to 5.6 million in 2010. The year 2010 production was the highest in the last 5 years and is mainly attributed to good weather condition especially during the long rains. Farmers had also prospect of good prices as prices of most wheat products had relatively increased during the year and therefore farmers increased area under production by 21 percent.

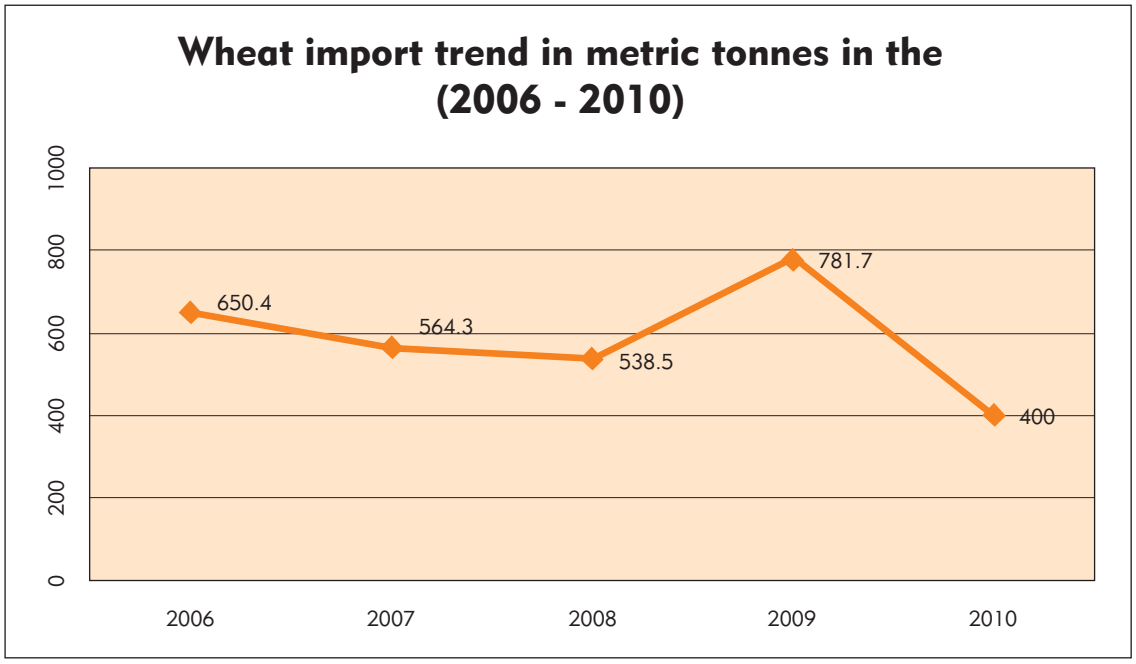
Table 5.3: Wheat Production 2006 - 2010

Year		2006	2007	2008	2009	2010
Area (ha)		150,488	104,176	130,273	131,594	160,043
Production	90 kgs bags	3,978,454	3,936,105	3,737,241	2,436,678	5,688,817
	Tons	358,061	354,249	336,688	219,301	511,994
Unit price per bag (Kshs)		1,714	3,000	2,600	3,571	2,700
Average Yield (bags/ha)		26	28	11.32	18.5	36
Consumption (90 bags)		903,120	892,000	853,000	1,072,000	1,072,000
Import (tons.)		650,400	564,300	538,500	781,700	-
Total Value (billion Kshs.)		6.82	10.03	11.20	8.70	15.3

Source: Directorate of Crops,

*Provisional

Figure 5.1: Wheat Production and Imports, (2005 - 2009)



Source ERA, 2010

5.1.3 Beans

Beans form an essential part of plants proteins in the country. Production of beans in the last five years as demonstrated by figure 5.4 below has not been stable. Overall production of beans declined by 16 percent in the year 2010 from 5.1 million bags in 2009 to 4.3 million bags in 2010. Area under production declined significantly by 28 percent from 960, 705 hectares in 2009 to 689,377 hectares in 2010. There was no significant improvement in yield. The drop in production was attributed to the short rain which were insufficient for the crop.

Table 5.4: Beans Production 2006-2010

Year		2006	2007	2008	2009	2010
Area (ha)		995,391	846,327	610,428	960,705	689,377
Production	90 kgs bags	5,908,887	3,455,512	2,901,237	5,170,696	4,339,980
	Tons	531,800	383,900	261,137	465,363	390,598
Unit price per bag (Kshs)		2,540	4,400	4,500	5,134	4343
Average Yield (bags/ha)		6	4.08	4.8	5.4	6
Consumption (bags)		460,000	524,400	260,000	390,000	390,000
Total Value (billion Kshs.)		1,802.00	16.29	13.1	26.54	18.84

Source: Directorate of Crops
*Provisional

5.1.4 Sorghum

Production of sorghum increased by 72 percent from 1,055,051 bags in 2009 to 1,822,950 bags in 2010 with some slight improvement on the yield per hectare of 2 bags from 6 to 8 bags as shown in table 5.5 below. The increase in production is attributed to promotion of sorghum as a drought resistance crop in ASAL regions of the country and further due to attractive prices from the increased consumption. Kenya Agricultural Research Institute in collaboration with a Kenyan leading brewer is promoting sorghum variety to supplement barley and therefore farmers have prospects of good returns from sorghum enterprise in the near future. The table below gives performance trend for the crop in the last five years

Table 5.5: Sorghum Production, (2006 - 2010)

Area (ha)		163,865	155,550	104,041	173,172	225,782*
Production	90 kgs bags	1,457,503	1,637,391	602,910	1,055,051	1,822,950*
	Tons	131,188	147,365	54,316	94,955	164,066
Unit price per bag (Kshs)		1,254	1,100	1,230	3,285	2576
Average Yield (bags/ha)		9	9.1	5.8	6.09	8
Consumption (bags)		1,510,000	1,551,525	366,667	900,000	900,000
Total Value (billion Kshs.)		1.8	1.6	0.7	3.5	4.6

Source: Directorate of Crops *Provisional

5.1.5 Millet

Millet, like sorghum is drought tolerant and thrives well in the marginal areas of Eastern and Nyanza provinces. Eastern province has the highest potential. The area under the crop decreased slightly by 5 percent in 2010 from 104,576 hactares in 2009 to 99,124 hactares, while there was no change in productivity, nominal production shrinked by 4 percent. This decline was attributed to poor shortrains in most of the ASAL regions. Yield per hectare has been on downward trend since the year 2008 as depicted by the Table 5.6 below.

Table 5.6: Millet Production 2006-2010

Year		2006	2007	2008	2009	2010
Area (ha)		137,711	128,114	53,155	104,576	99,124*
Production	90 kgs bags	879,995	1,328,877	426,928	626,856	598,678
	Tons	79,207	119,599	38,462	56,417	53,881
Unit price per bag (Kshs)		1,700	2,600	2,700	4,680	4689
Average Yield (bags/ha)		6.4	7.3	8	6	6
Consumption (bags)		533,333	800,000	255,556	444,444	444,444
Total Value (billion Kshs.)		1.5	2.5	1.2	2.93	2.80

Source: Directorate of Crops *Provisional

5.1.6 Rice

The production of rice slightly increased by 5 percent during the year from 844,036 bags in 2009 to 889,357 bags in 2010, despite of the fact that the area planted with rice decreased by 7 percent as depicted in table 5.7 below.

Table 5.7: Rice Production 2006-2010

Year		2006	2007	2008	2009	2010
Area (ha)		23,106	16,457	16,734	21,829	20,181
Production	50 kgs bags	1,296,811	945,118	437,628	844,036	889,357
	Tons	64,840	47,256	21,881	42,202	80,042
Unit price per bag (Kshs)		3,500	2,650	2,745		3750
Average Yield (bags/ha)		56.12	53	26.2	38.7	44
Consumption		286,000	293,722	210,000	410,000	410,000
Import (tons.)		196,000	203,000	202,000	398,000	398,000
Total Value (billion Kshs.)		4.5	2.5	1.2	..	3.33

Source: Directorate of Crops *Provisional
.. = Data not available

5.1.7 Cowpeas

The area under the crop increased by 35.4% from 124,302 Ha in 2009 to 168,273 Ha in 2010. Subsequently, production rose by 20.2% from 668,361 bags in 2009 to 803,046 bags in 2010. Table 5.1 shows that yield per ha also declined to 4.77 bags from 5.38 bags recorded in the previous year.

Table 5.8: Cowpeas Production 2005-2009

Year		2006	2007	2008	2009	2010*
Area (ha)		161,971	130,163	148,157	124,302	168,273
Production	90 kgs bags	975,551	925,015	532,810	668,361	803,046
	Tons	87,808	83,251	47,958	60,152	72,274
Unit price per bag (Kshs)		2,550	2,900	3,100	5,503	..
Average Yield (bags/ha)		6.00	6.60	3.60	5.38	4.77
Total Value (billion Kshs.)		2.5	2.30	1.65	3.68	..

Source: Directorate of Crops *Provisional
.. = Data not available

5.1.8 Green Gram

The area allocated to green grams increased by 30.4% from 112,997 Ha in 2009 to 147,352 Ha in 2010 as highlighted in Table 5.9. The crop also recorded considerable increase in production which rose by 44.7% from 470,372 bags in 2009 to 680,528 in 2010. Average yield per ha increased marginally from 4.16 in 2009 to 4.6 witnessed in 2010.

Table 5.9: Green Grams Production 2006-2010

Year		2006	2007	2008	2009	2010*
Area (ha)		102,882	82,784	91,452	112,997	147,352
Production	90 kgs bags	482,212	688,363	296,808	470,372	680,528
	Tons	43,399	61,953	26,715	42,333	61,248
Unit price per bag (Kshs)		3,266	5,000	5,000	6,149	..
Average Yield (bags/ha)		5.00	5.50	3.20	4.16	4.6
Total Value (billion Kshs.)		1.57	3.41	1.48	2.89	..

Source: Directorate of Crops, *Provisional
.. = Data not available

5.1.9 Pigeon Peas

Pigeon peas recovered from the poor performance registered in 2009. Table 5.10 shows that area under production increased by 34.3% to 158,746 ha in 2010 compared with 118,167 ha in 2009. Production more than doubled to 1,147,040 bags in 2010 from 516,377 bags recorded in 2009. Despite increment in production and the area under production, the performance of the crop was still far below levels recorded before 2009.

Table 5.10: Pigeon Peas Production 2006-2010

Year		2006	2007	2008	2009	2010*
Area (ha)		995,391	846,327	610,428	118,167	158,746
Production	90 kgs bags	5,908,887	3,455,512	2,901,237	516,377	1,147,040
	Tons	531,800	383,900	261,137	46,474	103,324
Unit price per bag (Kshs)		2,540	4,400	4,500	..	..
Average Yield (bags/ha)		6.00	4.80	2.00	4.37	7.2
Consumption (bags)		460,000	524,400	..	..	..
Total Value (billion Kshs.)		1,802.00	16.29	13.10	..	..

Source: Directorate of Crops *Provisional

.. Data not available

5.10 Sweet Potatoes

The crop recorded unimpressive performance in 2010 where the area under production, productivity and production declined substantially as shown in table 5.11. In the year under review, production fell to 323,383 tons from 1,034,204 registered in 2009. Area under production decreased from 77,821 ha in 2009 to 42,312 in 2010.

Table 5.11: Sweet Potatoes Production 2006-2010

Year		2006	2007	2008	2009	2010
Area (ha)		74,937	61,111	62,786	77,821	42,312
Production	Tons	724,646	811,531	894,781	1,034,204	323,389
Average Yield (tons/ha)		9.60	10.30	14.30	13.3	9
Unit price per 100 Kg bag (Kshs)		1,460	1,750	1,650	2,356	2,054
Consumption (tons)		652,000	73,000	805,000	84,000	-
Total Value (billion Kshs.)		16.6	14.2	14.7	24.4	66.4

Source: Directorate of Crops *Provisional

5.11 Cassava

The performance of the crop declined in all aspects over the review period. Area under the crop declined by 12.6 percent from 70,426 ha in 2009 to 61,573 ha in 2010. Production also declined significantly by 64.5% from 911,074 tons in 2009 to 323,389 tons in 2010 as shown in Table 5.12

Table 5 12: Cassava Production 2006-2010

Year		2006	2007	2008	2009	2010*
Area (ha)		68,502	53,610	54,673	70,426	61,573
Production	Tons	656,633	397,705	750,964	911,074	323,389
Average Yield (tons/ha)		9.6	8.7	13.7	12.9	9
Unit price per ton (Kshs)		6,500	10,000	9,000	-	-
Total Value (billion Kshs.)		4.30	5.60	5.30	-	-

Source: Directorate of Crops *Provisional

5.12 Cocoyam

There was a marginal rise in area under the crop during the review period. Table 5.13 shows that production area increased by 7.2% from 2,588 ha in 2009 to 2,774 ha in 2010. There was however a decline in production which dropped by 23.5% from 24,901 tons in 2009 to 19,054 tons in 2010. This was due to reduction in average yield per hectare which fell to 7 from 9.62 recorded in the previous year.

Table 5.13: Cocoyam Production 2006-2010

Year		2006	2007	2008	2009	2010*
Area (ha)		3,144	1,896	2,254	2,588	2,774
Production	Tons	22,846	6,050	16,872	24,901	19,054
Unit price per bag (Kshs per 100 Kg bag)		1,020	3,342	3,400	-	
Average Yield (tons/ha)		7.3	3.2	7.49	9.62	7
Total Value (billion Kshs.)		0.23	0.26	0.28	-	

Source: Directorate of Crops *Provisional

3.2

5.14 Yams

Production of Yams in Kenya is mainly in Central and Eastern provinces, where production has been limited mainly to valley bottoms. Area under the crop increased from 882 hectares in 2009 to 1,224 hectares in 2010. The crop also registered increased production which was 8,035 tons in the year under review compared with 4,427 tons registered in the previous year as shown in Table 5.14

Table 5.14: Yam Production 2006-2010

Year		2006	2007	2008	2009	2010*
Area (ha)		842	925	808	882	1,224
Production	Tons	8,001	6,905	6,123	4,427	8,035
Average Yield (tons/ha)		9.50	7.50	7.60	5	6.56

Source: Directorate of Crops *Provisional

5.2 INDUSTRIAL CROPS

5.2.1 Coffee

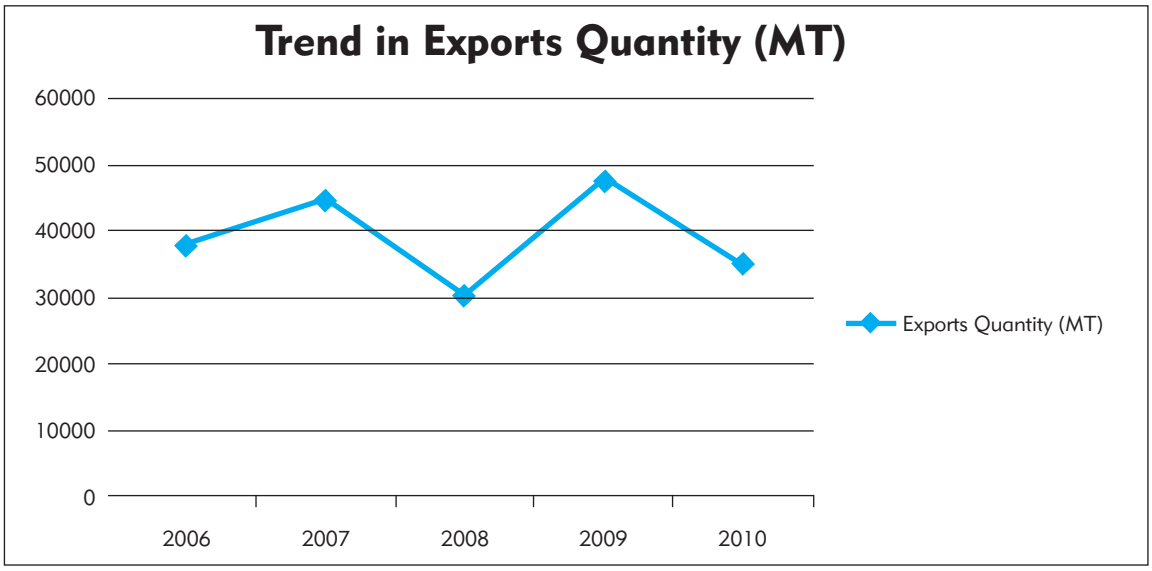
Coffee production declined to 42,000 metric tons in 2010 from 54020 metric tons in 2009. This is attributed to adverse cold weather condition in early part of 2009 which resulted in poor flowering in major coffee growing districts. This production of 42,000 metric tons is comparable to 2008 production. About 53% of production was attributed to small holders where the yield per ha (0.2) was less than half of the Estates (0.5).There was a decline of 12877 metric tons in 2010 export to 35108 metric tons.

Table 5.15: Coffee Production

YEAR		2006	2007	2008	2009	2010
Production -Estates	Area (Ha)	42,000	42,000	40,680	53,344	40,000
	Tons	21,257	21,257	19,740	24,650	19,720
Production -Small Holders	Area (Ha)	128,000	128,000	122,040	106,656	120,000
	Tons	27,046	27,046	22,260	29,370	22,280
Yield (tons/ha) Total crop area (Ha)	Estate	0.5	0.5	0.5	0.5	0.5
	Small Scale	0.2	0.2	0.2	0.3	0.2
Total Crop area (Ha)		170,000	170,000	162,720	160,000	160,000
Total Production (Tons)		48,303	53,368	42,000	54,020	42,000
Price of Processed Coffee(US$/ 50kg)		135.06	133.98	177.23	154.64	237.50
Local Consumption (tons)		1,932	1,932	1,680	1,341	
Exports (MT)		37,867	44,901	30,296	47,985	35,108
Total Value (Billion Kshs.)		9.7	8.7	9.0	10.7	16.1

Source: Coffee Board of Kenya

Figure 5.2: Trends in Coffee Export



Source: CBK

5.2.2 Tea

In Kenya, tea is one of the leading foreign exchange earner. Area under tea increased from 158,394 ha in 2009 to 171,916 ha in 2010.Tea production recorded by 27% increase from 314million Kgs in 2009 to 399 million Kgs in 2010.This was attributed to favourable weather conditions experienced throughout the year.

Table 5.16: Tea Production

YEAR		2006	2007	2008	2009	2010
Production -Estates	Area (Ha)	51,300	51,011	50,605	51,126	56,893
	Tons	119,401	139,992	134,963	141,593	174,025
	Yield(tons/ha)	2.3	3.1	2.8	2.9	3.4
Production -Small Holders	Area (Ha)	95,780	98,185	107,115	107,268	115,023
	Tons	191,177	229,614	210,854	172,605	224,981
	Yield(tons/ha)	2.0	2.6	2.4	1.9	2.2
Total Crop area (Ha)		147,080	149,196	157,720	158,394	171,916
Total Production (Tons)		310,578	369,606	345,817	314,198	399,006
Price of Black Tea(USD/ 100kg)		203	176	233	272	275
Local Consumption (tons)		16,549	17,643	17,387	18,102	18,704
Exports (Tons)		313,720	345,877	383,444	342,482	441,024
Exports (million Kshs.)		47,294.4	43,146.4	62,199.6	69,603.2	97,740,139

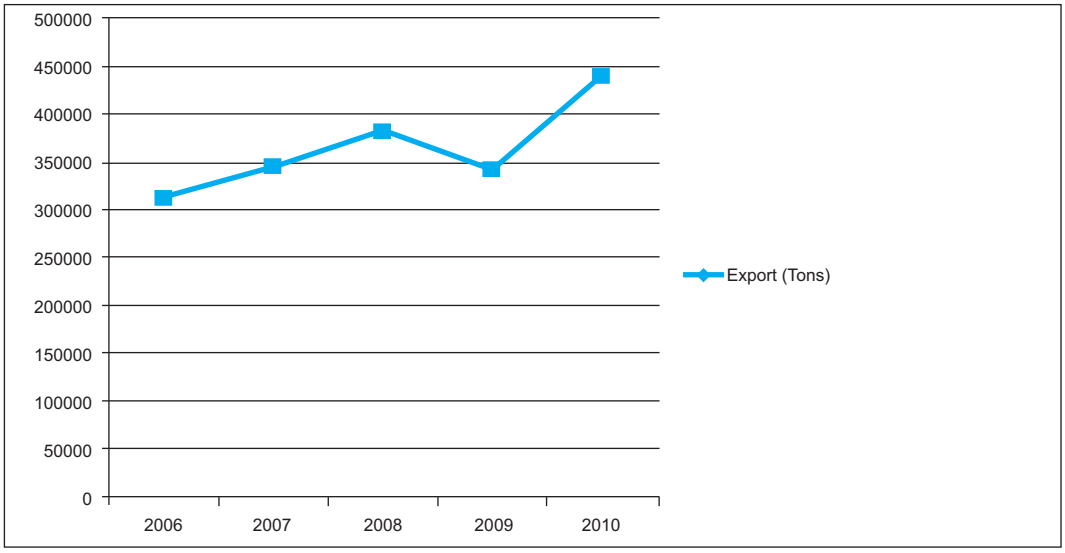
Source: Tea Board of Kenya

The average price increased by 3USD per 100 kgs from 272 USD in 2009 to 275 USD, this was largely attributed to increased demand in the world market

Local tea consumption for 2010 was 18704 tons which was 3% higher compared to 18102 tons in 2009.This was due to local generic promotion campaign aimed at sensitizing consumers on health benefits associated with tea consumption and sustained brand promotion by the tea packers.

Tea exports volume was higher by 29% from 343 thousand tons in 2009 to 441 thousand tons this, coupled with improved prices and depreciation of the Kenya shilling to the dollar was beneficial to the farmers. The total tea earnings rose by 40% from Kshs.69 Billion in 2009 to Kshs.97 Billion.

Figure 5.3: Trends in Tea Exports (2006-2010)



Source: Tea Board of Kenya

Tea Export Destinations

Egypt maintained its position as the leading market destination for Kenyan tea for the third year running by absorbing 93.2 thousand tons thus accounting for 21% of total tea export volume. Other key export destinations included Pakistan (76.2 thousand tons), UK (73.0 thousand tons), Afghanistan (49.3 thousand tons) and Sudan (31.2 thousand tons) . These five key export destinations accounted for 73% of the tea export volume.

Figure 5.4: Tea Destination by Country

Source: Tea Board of Kenya

Table 5.17: Tea Destinations

DESTINATION	QUANTITY KGS	VALUE KSHS	UNIT VALUE KSHS
EGYPT	93,218,452	20,197,895,276.43	216.67
PAKISTAN	76,210,654	17,135,867,659.77	224.85
UK	73,035,089	15,071,323,421.66	206.36
AFGHANISTAN	49,335,916	12,031,381,181.98	243.87
SUDAN	31,238,302	5,752,744,807.27	184.16
U.A.E	22,157,877	4,811,939,607.44	217.17
YEMEN	16,345,851	4,013,314,628.84	245.52
RUSSIA	15,694,042	3,540,903,015.71	225.62
KAZAKHSTAN	10,082,803	2,824,098,447.72	280.09
POLAND	5,552,954	1,245,923,327.87	224.37
INDIA	5,392,859	1,084,209,808.27	201.05
IRELAND	4,298,846	1,213,443,865.11	282.27
U.S.A.	3,618,142	1,202,231,732.04	332.28

DESTINATION	QUANTITY KGS	VALUE KSHS	UNIT VALUE KSHS
SRI LANKA	3,475,181	730,845,105.39	210.30
NIGERIA	3,360,865	747,682,771.46	222.47
IRAN	3,195,768	785,152,625.11	245.69
DJIBOUTI	3,059,737	314,802,135.86	102.89
SOMALIA	2,943,893	271,707,374.82	92.30
JAPAN	2,538,238	948,744,039.31	373.78
INDONESIA	2,328,433	477,118,276.81	204.91
SAUDI ARABIA	1,999,713	490,100,784.71	245.09
TURKEY	1,753,352	458,578,148.73	261.54
CANADA	1,562,303	318,242,199.46	203.70
CHINA	1,510,866	421,634,955.16	279.07
UKRAINE	899,121	205,820,344.70	228.91
MALAYSIA	836,360	242,420,727.54	289.85
NETHERLANDS	817,319	177,535,345.12	217.22
GERMANY	817,176	219,928,569.62	269.13
OMAN	811,425	88,967,884.67	109.64
SOUTH AFRICA	706,076	158,331,881.26	224.24
CHILE	623,721	149,646,886.68	239.93
ERITREA	384,084	72,578,296.31	188.96
PUERTO RICO	266,496	61,557,490.33	230.99
ITALY	219,070	90,582,835.83	413.49
SINGAPORE	190,720	89,934,740.15	471.55
BELGIUM	177,520	25,744,623.66	145.02
BANGLADESH	99,840	13,464,634.31	134.86
SYRIA	65,400	15,295,508.76	233.88
KRYGYSTAN	35,856	8,798,259.23	245.38
GREECE	34,220	5,424,039.64	158.50
JORDAN	27,915	3,893,491.74	139.48
NEW ZEALAND	23,080	5,175,885.95	224.26
MAURITIUS	22,000	3,505,193.13	159.33
EPZ (MOMBASA)	15,780	3,481,228.67	220.61
GEORGIA	13,910	3,146,191.40	226.18
TAIWAN	13,530	2,493,473.93	184.29
SEYCHELLES	6,840	1,366,601.00	199.80
SWAZILAND	3,898	1,159,908.66	297.57
GRAND TOTAL	**441,021,493**	**97,740,139,239.22**	**221.62**

Source: Tea Board of Kenya

5.2.3: Sugar

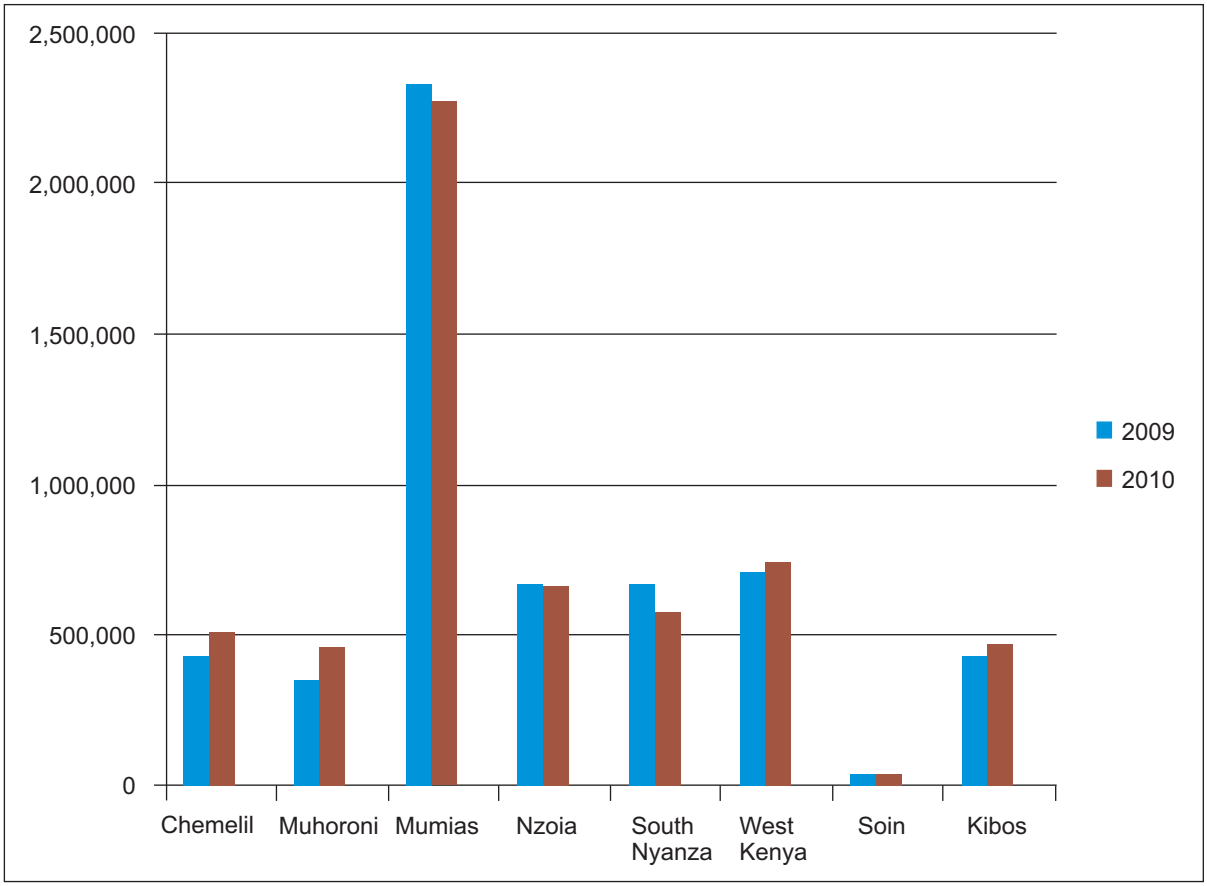
Total sugarcane production in 2010 was 523,652 tons compared to 548,207 tons in 2009, a decline of 5% as shown in the tables 5.18 Cane deliveries in 2010 declined to 5,475,180 tons from 5,610,702 in 2009 which represents a 3% decline. The domestic price of sugar rose by 2% to Kshs. 79.58 per kg in 2010 from Kshs. 78.32 per kg in 2009.

Table 5 18: Sugar Production

YEAR		2006	2007	2008	2009	2010
Area (Ha)	Under cane	147,730	158,568	169,421	154,298	157,583
	Harvested	54,621	59,201	54,465	65,774	68,738
Crop Production (tons)		4,932,839	5,204,214	5,176,670	5,610,702	5,475,180
Yield (cane)-(Tons/Ha)		90.3	87.9	95.0	85.3	79.7
Price of Cane (kshs/ton)		2,027	2,249	2,400	2,761	3,094
Sugar Production (tons)		475,670	520,404	517,667	548,208	523,652
National Consumption (tons)		718,396	741,190	751,523	605,358	772,731
Domestic Price of Sugar (Kshs/ton)		52,547	57,063	52,240	78,320.	79,580
Exports (Tons)		13,533	20,842	27,900	1,952	47
Import (Tons)		166,280	230,011	218,607	184,530	258,578
Value of Imports (million Kshs.)		4,801	7,299	6,885	-	-

Source: Kenya Sugar Board

Figure 5. 5: Cane Production by company 2009-2010



Source: Kenya Sugar Board

Table 5.19: Production of Sugar by Company

	CHEMELIL	MUHORONI	MUMIAS	NZOIA	SOUTH NYANZA	WEST KENYA	SOIN	KIBOS
2009	428,020	345,800	2,332,266	664,491	666,450	709,945	35,426	428,304
2010	506,943	460,762	2,272,305	661,656	574,679	737,270	30,663	465,308

Source: Kenya Sugar Board

Mumias maintained its production lead in the industry with Soin holding tail-end as demonstrated in Figure 5.19 above.

5.2.4 Cotton

The area under cotton production decreased by 39 percent from 39,963 Ha in 2009 to 24,553 Ha in 2010. Consequently, production of seed cotton decreased by 21 percent to11,822 metric tons from 14,886 metric tons realized in 2009 as shown in Table 5.20. The productivity however rose to 580kg/ha up from 370kg/ha in 2009. The high productivity was associated to favorable weather conditions.

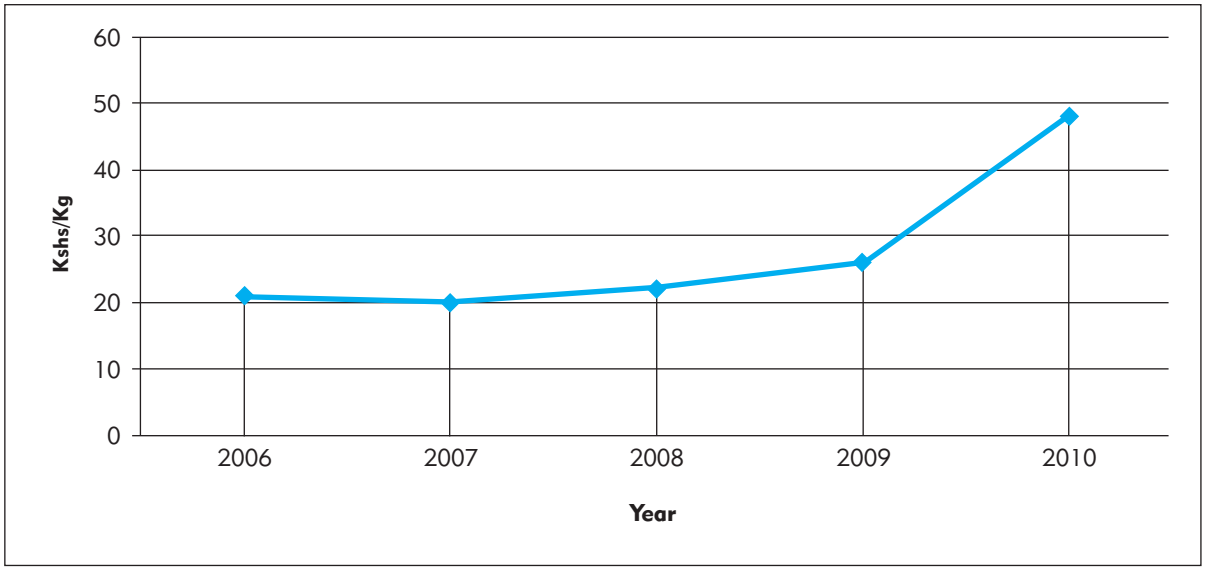
Producer prices have been increasing steadily as shown in Figure 5.6. 2010 recorded an 85 percent increase from Kshs. 26 in 2009 to 48 in 2010.

Table 5.20: Cotton Production

Year	2006	2007	2008	2009	2010
Area (Ha)	36,277	35,929	43,035	39,963	24,553
Production of seed cotton (tons)	22,492	24,993	15,093	14,886	11,822
Price of seed Cotton (Kshs/kg)	21	20	22	26	48
Yield (tons/ha)	0.6	0.69	0.35	0.37	0.58
Total value of seed cotton (Million Ksh)	472	1,250	332	387	567

Source: Cotton Development Authority

Figure 5. 6: Trends in Cotton Prices, 2006 - 2010



Source: Cotton Development Authority

5.2.5 Pyrethrum

The area under pyrethrum production increased by 41 percent in 2010 to 6,100 Ha from 4,084 Ha in 2009. However, production of dry flowers declined further to 462 tons, a 63 percent decrease form 754 tons in 2009 as shown in table 5.18.

Table 5.21: Pyrethrum Production

Year	2006	2007	2008	2009	2010
Area (Ha)	6,325	5,120	3,916	4,084	6,100
Production of dry flower (tons)	763	846	776	754	462
Price of dry flowers (Kshs/kg)	73	108.8	73.7	101.2	73.73*
Yield (tons/ha)	0.2	0.3	0.2	0.2	0.1
Exports (tons of pyrethrum extract)	130	142	5.8	8.5	7
Local value (Million Ksh)	158.1	230	69.2	102	130

Source: Pyrethrum Board of Kenya *Up to April 2010

5.2.6 Sisal

Large sisal estates produce bulk of the produce in Kenya. The estate farms produced 23,492 tons in 2010, an increase of 26 percent over the 2009 production of 18,646 tons as shown in Table 5.22. On the other hand, smallholder farm production increased by 7.5 percent from 402 tons in 2009 to 432 tons in 2010. Total production was 23,924 tons, a 26 percent increase from 19,048 tons in 2009. During the 2010 production period, total area under mature sisal remained at 29,353 Ha.

Table 5 22: Sisal Production, 2006 - 2010

Year	2006	2007	2008	2009	2010
Total Area (Ha)	24,962	32,126	44,462	29,353	29,353
Estate	24,962	32,126	40,176	25,068	25,068
Small Holder	_	_	4,286	4,285	4,285
Total Production (tons)	26,375	24,602	24,494	19,048	23,924
Estate	26,375	24,602	22,064	18,646	23,492
Small Holder	_	_	2,430	402	432
Yield (tons/ha)	1.1	0.8	1	0.6	0.8
Local Consumption (tons)	5,378	2,793	4,336	2,790	2,840
Export	19,771	21,809	20,157	18,706	19986
Value of Exports (Million Ksh)	**1,072**	**1,335**	**1,370**	**1,118**	**1,379**

Source: Kenya Sisal Board

6.0 Horticulture Sub-Sector

6.1 Horticulture Production

Table 6.1: National Horticultural Crops Production

YEAR	Hectarage (Ha)							Production (MT)				
				2009		2010						
	2006	2007	2008	Mature	Cum.	Mature	Cum.	2006	2007	2008	2009	2010
FRUITS	160,209	155,248	150,723	134,457	141,838	0	0	2,544,155	2,622,803	2,959,731	2,369,623	2,910,079
NUTS	53,485	55,322	101,989	312,654	106,479	0	0	116,991	119,870	125,037	152,276	125,124
TOT FRUITS & NUTS	213,694	210,570	252,712	447,112	248,317	0	0	2,661,146	2,742,673	3,084,768	2,521,899	3,035,202
TOT. VEGES	232,968	241,879	201,668	-	222,873		0	4,536,997	4,755,935	3,925,233	4,599,392	5,487,021
TOT HERBS & SPICES	10,498	11,796	11,249	-	11,211		0	140,723	159,765	179,682	131,372	141,994
BIXA	-	-	-	3,962	5,496	4,872	5,649	-	-	-	1,871	1,949
FLOWERS	-	-	-	-	-			-	108,306	131,163	126,732	120,221
GRAND TOTAL	457,160	464,245	465,629	447,112	482,401	4,872	5,649	7,338,866	7,766,679	7,320,846	7,379,395	8,786,387

Source: Crops Directorate; Horticultural Division

Table 6.2: Provincial Horticultural Crop Production

PROVINCE	CATEGORY	Area (HA)			Production (MT)		
		2008	2009	2010	2008	2009	2010
CENTRAL	FRUITS & NUTS	23517	6905	17477	505526	104536	364841.7
	VEGETABLES,SPICES & HERBS	63603	63361.17	99053.55	1421033	1351809	1776256
	Sub-total	87120	70266.17	116530.6	1926559	1456345	2141098
COAST	FRUITS & NUTS	103883	124202	123279.7	541774	727487	820017.4
	BIXA		5496	5649		1871	1949
	VEGETABLES,SPICES & HERBS	3153	7881.91	7507.85	66558	106904	151506.5
	Sub-total	107036	132083.9	136436.6	608332	834391	973472.9
EASTERN	FRUITS & NUTS	22218	20483	37341.6	278489	194513	479070.5
	VEGETABLES,SPICES & HERBS	29997	39006	39383.6	473240	575486	543996.8
	Sub-total	52215	59489	76725.2	751729	769999	1023067
WESTERN	FRUITS & NUTS	20687	18198	19700.3	319438	272517	285871
	VEGETABLES,SPICES & HERBS	14034	18453.5	19271.9	281629	290051	295117.1
	Sub-total	34721	36651.5	38972.2	601067	562568	580988.1
R/ VALLEY	FRUITS & NUTS	11704	11842	10814	215082	209715	162570
	VEGETABLES,SPICES & HERBS	18137	24644.8	89735.44	215299	422101	2235615
	Sub-total	29841	36486.8	100549.4	430381	631816	2398185
NYANZA	FRUITS & NUTS	48562	54206	58379	794155	734042	838540
	VEGETABLES,SPICES & HERBS	65424	77587.47	28414.7	1470456	1941356	400641.5
	Sub-total	113986	131793.5	86793.7	2264611	2675398	1239182
NAIROBI	FRUITS & NUTS	67	492.1	95.05	1004	6119.1	462.5
	VEGETABLES,SPICES & HERBS	678	515.9	556.72	14577	7204	6379.1
	Sub-total	745	1008	651.77	15581	13323.1	6841.6
N/EASTERN	FRUITS & NUTS	1461	939.2	1263	21815	12981	39541
	VEGETABLES,SPICES & HERBS	671	587	191.7	20390	15922	16349
	Sub-total	1499	1526.2	1454.7	42205	28903	55890
NAT. TOTAL	FRUITS & NUTS	232099	237267.3	268349.7	2677283	2261910	2990914
NAT. TOTAL	VEGETABLES,SPICES & HERBS	195697	232037.8	284115.5	3963182	4710833	5425861
	BIXA		5496	5649		1871	1949
	FLOWERS						
NAT. TOTAL	**GRAND TOTAL**	**427796**	**469305.1**	**558114.1**	**6640465**	**6974692**	**8418724**

Source: Horticultural Division

6.2 Overview of the 2010 Horticulture Exports

Kenya overcame the ash cloud and winter weather setback with higher prices for fruits and vegetables which stimulated horticultural earnings by 15.2% in quantity and 6.4% in value in the year 2010.

Overall horticultural exports brought in 77.7 billion shillings ($944.6M) in 2010 compared to 71 billion shillings ($888.2M) in 2009. Earnings were boosted by rising prices for food stuffs; with the United Nations' food agency (FAO) stating that world food prices hit a record high in December 2010. Further the sector had an opportunity to perform better than 2009 due to the enhanced rainfall in 2010 that significantly improved farm production, but was hit by several disruptions (Fresh Produce Journal January, 2011 and Business Daily, January 2011)

Table 6.3: January-December Horticultural Exports

Quantity in '000' Tonnes and Value in Million US $						
	2009		2010		% Change	
Product	Qty	Value	Qty	Value		
Flowers	117.7	459	120.2	432..2	2.1	-5.8
Vegetables	77.2	217.1	123.8	260.3	60.4	19.9
Nuts	23.4	14.7	11.8	24.3	-49.5	65.5
Fruits	32.2	29.5	32.5	33.9	0.9	15
Processed						
Vegetables	26	103	35.6	111.7	36.9	8.4
Processed						
Fruits	73.2	64.9	79	82.2	7.9	26.6
Total	349.7	888.2	403	944.6	15.2	6.4

Source: KRA Customs and Compiled by KHCP

6.3 Floriculture

Kenya's flower exporters are cautiously optimistic that prospects for their industry will improve during 2011 as a result of new markets in Japan and Russia. Currently the industry is keenly looking at the Japan market after the tragedy of the massive earthquake and tsunami that hit the country on 11th March 2011. Quantity increased by 2.1% but value declined by 5.8%. This was as a result of drop in prices in 2010 by 5.1%, due to effects of global economic crisis and rising inflation in the EU that reduced demand for luxury goods such as flowers since 2008. (Source: Business Daily, January & February 2011). In the last quarter of 2010, quantity increased by 6.5% whereas value dropped by 5.8%.

7.0 LIVESTOCK SUB-SECTOR

7.1 Milk and Milk Products

Strong import demand from Asian countries and the Russian Federation has driven dairy product trade to historically high levels in 2010, with the demand largely met by higher exports from New Zealand and the United States. Dairy product prices in international trade have remained firm, in particular butter, which in October reached an all-time high. FAO's latest forecast of world dairy production for 2010 stands at 710.7 million tonnes, 1.7 percent more than last year. Production in developed countries is forecast to grow by around 1 percent, while that of developing countries may increase by 2.4 percent. On a per capita basis, consumption of milk and milk products in developing countries may increase by 1 kg per capita in 2010, from 66.4 to 67.5 kg, fueled by strong economic growth in Asia.

In Kenya mixed situation was realized in milk production where low output of milk occurred for 2/3 of the year but the situation changed in the last quarter where the country experienced milk glut due to elnino phenomenon with farm gate and retail prices of milk and milk products fetching very low prices.

Table 7.1: Exports of Dairy Produce, KGS

	Butter & Ghee	Cheese	Cultured milk	Pasteurized milk	UHT Whole milk	Flavored milk	Ice cream	Infant formulations	Milk powder	Whey	Total
2004	14,145	47,591	258,508	-	1,907,266	639,976	35,902	450,545	240,910	1,504	3,596,347
2005	33,049	25,004	640,512	-	3,779,874	1,659,514	78,120	369,999	42,390	48,645	6,677,107
2006	31,192	27,806	543,506	-	2,996,738	775,394	109,984	2,055,805	503,447	50,829	7,094,701
2007	106,017	19,065	436,327	-	7,260,281	1,254,817	177,885	654,066	1,820,635	257,251	11,986,344
2008	330,654	16,614	372,111	-	7,717,877	1,002,900	237,491	69,236	1,162,928	2,822	10,912,633
2009	50,002	4,327	91,954	-	4,782,214	736,000	-	-	-	-	5,664,497
2010	198,186	19,046	135,891	890,000	6,309,819	145,969	88,525	-	160,262	-	7,947,698
Total	**763,245**	**159,453**	**2,478,809**		**34,754,069**	**6,214,570**	**727,907**	**3,599,651**	**3,930,572**	**361,051**	**52,989,327**

Source: KDB

7.2 Beef industry

The world is facing a developing crisis in beef production as global human population increases, which would soon outstrip the numbers, those current or future supplies from livestock farming. Meat producers and exporters at the 18th World Meat Congress said global trends indicated the markets would continue to be buoyant while supplies remained limited not only for beef but also for lamb and other white meat. This is because farmers already faced costs that made beef production uneconomical which is becoming a disincentive for investors. To address this problem, the industry needed to enhance its application of new technologies, including further research into improved genetics and use of less land and resources for greater livestock production.

In Kenya, beef production slightly regained after 2009 drought but the supply could not match the demand resulting in increase in beef prices.

Meat and Meat Products (Poultry, Pig and Ovine)

Meat and meat product world trade for poultry and pig was expected to grow by 2.8% to 26.1 Million tons in 2010. However, in case of poultry which is the most traded meat, expansion was expected to be constrained by imposition of sanitary restriction by major importer such as Russia. However increased purchase by Asia was expected to fuel much of export meat trade.

Table 7.2: World Balance for Meat and Meat Products

World Balance for Meat and Meat Products	**In million tons(2010}**
Production	286.2
Bovine	65
Poultry	95.7
Pig	107
Ovine	13
Trade	**26.1**
Bovine	7.6
Poultry	11.3
Pig	6.1
Ovine	0.8

In Kenya an increase of export for animal and animal products was realized in the review year. In export a decrease of exported leather was observed. While potential for export of livestock and livestock products is high, sanitary issues in world trade curtail the development of export .However; this will be addressed once Disease Free Zone establishment which is ongoing is finalized.

8.0 FARM INPUTS

8.1 Annual Fertilizer Off-take 2001-2011

Table 8.1 provides data on quantities of fertilizers (in tonnes) used for planting, top-dressing and other specialized use for the period 2001/02 to 2010/2011. The table also provides data on quantities of fertilizers used in the production of tea and coffee. Table 8.2 gives the summary of the same data.

Table 8.1: Fertilizer Off-take Trends 2001-2011 (Tonnes)

TYPE OF FERTILIZER	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/2009	2009/2010	2010/2011*
PLANTING										
DAP	98,285	116,295	105,724	150,569	136,254	164,964	155,212	158,973	178,520	183,876
MAP	10,476	31,674	1,144	3,420	2,157	2,712	3,932	5,013	7,720	8,106
TSP	-	3,948	4,622	201	599	3,198	9,157	9,299	9,764	10,267
SSP	470	1,970	3,999	2,010	6,000	4,980	20,221	18,307	17,405	18,197
NPK20:20:0	2,416	16,952	13,761	2,945	9,036	7,982	9,658	14,283	15,997	17,437
NPK23:23:0	10,868	21,987	8,567	10,300	18,713	16,175	21,831	20,118	23,500	24,445
Sub Total	**122,516**	**192,825**	**137,817**	**169,445**	**172,760**	**200,011**	**220,012**	**225,993**	**252,906**	**262,328**
TOP-DRESSING										
CAN	44,560	59,801	30,700	51,456	59,739	69,714	78,080	84,939	92,712	94,566
ASN	850	630	-	-	-	500	543	2,100	3,520	3,914
UREA	37,557	24,288	45,084	25,017	41,071	28,554	29,982	30,128	32,237	35,316
SA	5,325	425	4,005	-	1,029	1,340	1,514	2,943	3,031	3,259
Sub Total	**88,292**	**85,144**	**70,617**	**76,473**	**101,839**	**100,107**	**110,119**	**120,110**	**131,500**	**137,055**
TEA										
NPK25:5:5:5s	78,531	52,000	64,764	76,375	58,276	69,550	16,056	58,948	59,537	62,894
NPK25:5:5:3.95s+2.6MgO	-	-	348	-		-			-	
NPK22:21:17	-	-	20	-	21	7	3	-	-	10
NPK22:6:12+5S	220	12,083	185	-	2,327	768	800	-	-	575
Sub Total	**78,751**	**64,083**	**47,168**	**76,375**	**60,624**	**70,325**	**16,859**	**58,948**	**59,537**	**63,479**
COFFEE										
NPK18:4:12	3,658	7,514	2,150	-	-	-	1,500	1,685	1,769	1,890
NPK20:10:10	6,157	2,765	888	-	10,053	3,317	3,616	3,827	3,904	4,074
NPK17:17:17:	12,227	2,377	5,209	2,948	16,717	15,517	15,601	18,769	21,209	23,578
NPK16:16:16	-	-	-	-	210	-			-	
Sub Total	**22,042**	**12,656**	**16,985**	**2,948**	**26,980**	**18,834**	**20,717**	**24,281**	**26,882**	**29,542**
TOBACCO										
SPECIALISED										
MgNo3	929	1,595	799	208	420	738	836	1,012	2,593	3,092
MgSo4	4,160	2,071	3,221	1,026	3,150	3,040	3,070	3,715	3,938	5,611
CN	2,769	2,913	6,916	3,997	900	597	615	744	1,826	2,032
MOP/SOP	1,125	1,593	6,121	12,510	10,396	6,411	7,115	8,609	9,642	11,310
AN	312	219	623	749	2,746	1,006	1,207	1,460	1,606	1,814
Iron chelate	2,285	5	57	10		2,020	2,427	2,937	3,113	3,483
Potassium Nitrate	201	813	2,298	644		2,083	2,187	2,646	2,831	3,141
NPK28:28:0	174	2,736	-	-		-		605	659	1,158
NPK19:19:19	234	2,314	11	42	118	539	550	666	686	917
NPK19:19:19+M.E+1%MgO	1,915	20	-	-		4	25	30	81	225
Ferrous sulphate	172	563	1,780	-	1,475	1,987	2,100	2,541	2,592	2,873
Organic fertilizer	816	8,320	9,865	-		1,000	1,250	1,513	1,558	1,730
Others	2,756	2,367	-	6,808	1,877	1,514	1,650	1,816	1,834	2,190
Sub Total	**17,848**	**25,528**	**31,691**	**25,994**	**21,082**	**20,938**	**23,033**	**26,176**	**32,959**	**39,801**
GRAND-TOTAL	**329,449**	**335,009**	**312,440**	**351,776**	**383,285**	**410,214**	**390,740**	**455,508**	**503,784**	**532,205**

Source: Department of Agribusiness, Market Development and Agricultural Information *Projections

Table 8.2: Summary of Off-take Trends

Type of Fertilizer	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11*
Planting	122,516	192,825	137,817	169,445	172,760	200,011	220,012	225,993	252,906	262,328
Top-Dressing	88,292	85,144	70,617	76,473	101,839	100,107	110,119	120,110	131,500	137,055
Tea	78,751	64,083	47,168	76,375	60,624	70,325	16,859	58,948	59,537	63,479
Coffee	22,042	12,652	16,985	2,948	26,980	18,344	20,717	24,281	26,882	29,542
Organic	816	8,320	9,865	-	-	1,000	1,250	1,513	1,558	1,730
Others	2,756	2,367	-	6,808	1,877	1,514	1,650	1,816	1,834	2,190
Specialized	17,848	25,528	31,691	25,994	21,082	20,938	23,033	26,176	32,959	39,801
Grand-Total	**329,449**	**335,009**	**312,440**	**351,776**	**383,285**	**410,214**	**390,740**	**455,508**	**503,784**	**532,205**

Source: Department of Agribusiness, Market Development and Agricultural Information

8.2 Fertilizer Imports and Consumption

There has been a steady and consistent increase in fertilizer consumption over the past 10 years. The annual fertilizer demand increased from 264,251 tonnes in 1998/99 to 503,784 tonnes in 2009/10 representing 90.6 percent. Fertilizer imports over the same period showed a similar trend with over 100 percent increase. Fertilizer consumption was particularly high for 2008/9 and 2009/10 due to interventions by the Ministry through Fertilizer Flagship Project and NAAIAP. Table 8.3 provides data on fertilizer imports and consumption for the period 1988/89 to 2009/10.

Table 8.3: Fertilizer Imports and Consumptions

Year	Imports (metric tonnes)	Consumption (metric tonnes)
1988/89	270,531	271,531
1989/90	237,362	233,022
1990/91	228,215	227,715
1991/92	254,087	253,087
1992/93	232,895	232,895
1993/94	286,519	286,620
1994/95	281,211	281,771
1995/96	299,934	295,625
1996/97	262,701	254,022
1997/98	255,044	255,032
1998/99	210,869	264,251
1999/00	345,903	335,644
2000/01	350,989	317,409
2001/02	325,812	329,449
2002/03	312,281	380,236
2003/04	333,866	323,112
2004/05	473,810	351,776
2005/06	470,081	383,284
2006/07	497,000	410,217
2007/08	383,439	390,740
2008/09	481,689	470,508
2009/10	464,674	503,784

Source: Department of Agribusiness, Market Development and Agricultural Information

8.3 Retail Fertilizer Prices

Tables 8.4, 8.5, 8.6, 8.7 and 8.8 provide monthly retail prices for the years 2007, 2008, 2009, 2010 and January 2011 respectively for the eight commonly used fertilizers in the country. The fertilizers are sold in 50 KG bags. As can be noted from the tables, the average retail prices of all types of fertilizers have been

on a downward trend recorded in 2009 and 2010 compared to the peak prices recorded in 2008. This consistent reduction in retail prices is as a result of interventions implemented by the Ministry under the Fertilizer Flagship Project.

Table 8.4: Fertilizer prices for 2007

Fertilizer Type	2007												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
DAP	1,700	1,900	2,000	2,000	2,000	2,000	2,200	2,300	2,300	2,800	2,800	2,800	2,233
MAP	1,800	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,300	2,800	2,800	2,800	2,208
SSP	1,100	1,200	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,200	1,200	1,200	1,133
20:20:00	1,700	1,800	1,800	1,800	1,800	1,900	1,900	1,900	1,900	1,900	2,000	2,000	1,867
23:23:00	1,700	1,800	1,800	1,800	1,800	1,800	1,900	1,900	1,900	1,900	2,000	2,000	1,858
17:17:17	1,700	1,800	1,800	1,800	1,800	1,800	1,800	1,900	1,900	2,000	2,100	2,000	1,867
CAN	800	900	2,000	1,500	1,500	1,500	1,500	1,500	1,500	1,600	1,600	1,500	1,450
UREA	900	1,000	1,800	1,700	1,700	1,700	1,800	1,800	1,800	2,000	2,000	2,000	1,683

Source: Department of Agribusiness, Market Development and Agricultural Information

Table 8.5: Fertilizer prices for 2008

Fertilizer Type	2008												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
DAP	2,500	3,600	4,000	4,000	4,250	4,250	4,500	4,700	5,200	6,500	6,000	4,500	4,500
MAP	2,500	3,600	3,800	4,000	4,250	4,250	4,500	4,700	5,200	6,500	6,000	4,500	4,483
SSP	1,200	1,500	1,650	2,000	2,500	2,500	2,500	2,500	2,650	2,650	2,650	2,650	2,246
20:20:00	2,200	2,500	3,400	3,600	3,800	3,800	3,800	4,000	4,200	4,500	4,500	3,800	3,675
23:23:00	2,200	2,500	3,400	3,600	3,800	3,800	3,800	4,000	4,200	4,500	4,500	3,800	3,675
17:17:17	2,000	2,500	3,000	3,400	3,400	3,400	3,400	3,800	4,000	4,300	4,300	3,600	3,425
CAN	1,400	1,500	2,000	2,500	2,500	2,500	2,500	2,500	2,500	2,800	3,000	2,500	2,350
UREA	1,800	2,000	3,100	2,500	2,500	2,500	2,500	2,500	2,600	3,000	3,000	2,600	2,550

Source: Department of Agribusiness, Market Development and Agricultural Information

Table 8.6: Fertilizer prices for 2009

Fertilizer Type	2009												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
DAP	3,500	3,500	3,500	3,100	3,100	3,000	3,000	3,000	3,000	2,900	2,800	2,700	3,092
MAP	3,500	3,500	3,500	3,100	3,100	3,000	3,000	3,000	3,000	2,900	2,800	2,700	3,092
SSP	2,600	2,600	2,600	2,100	2,000	1,900	1,900	1,900	1,900	1,800	1,800	1,800	2,075
20:20:00	3,200	3,200	3,200	2,800	2,800	2,800	2,800	2,800	2,800	2,700	2,600	2,400	2,842
23:23:00	3,200	3,200	3,200	2,800	2,800	2,800	2,800	2,800	2,800	2,700	2,600	2,400	2,842
17:17:17	3,000	3,000	3,000	2,600	2,600	2,600	2,800	2,800	2,800	2,600	2,600	2,400	2,733
CAN	2,000	2,000	2,000	2,000	2,100	2,200	2,200	2,200	2,100	2,000	2,000	2,000	2,067
UREA	2,100	2,100	2,100	2,100	2,200	2,300	2,300	2,300	2,200	2,100	2,100	2,100	2,167

Source: Department of Agribusiness, Market Development and Agricultural Information

Table 8.7: Fertilizer prices for 2010

Fertilizer Type	2010											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
DAP	2,800	2,800	2,800	2,600	2,700	2,650	2,900	2,900	2,900	3,000	3,200	3,300
MAP	2,800	2,800	2,800	2,600	2,700	2,700	3,000	3,000	3,000	3,000	3,200	3,300
SSP	1,800	1,800	1,900	1,900	1,800	1,800	1,900	1,900	1,900	2,000	2,200	2,200
20:20:00	2,600	2,500	2,400	2,500	2,100	2,100	2,200	2,500	2,500	2,500	2,800	2,900
23:23:00	2,600	2,500	2,400	2,500	2,100	2,200	2,500	2,500	2,500	2,500	2,800	2,900
17:17:17	2,600	2,500	2,400	2,600	2,450	2,500	2,650	2,500	2,500	2,500	2,800	3,100
CAN	1,900	1,900	1,900	1,850	1,850	1,950	2,000	1,900	1,900	1,900	2,200	2,200
UREA	2,000	2,000	2,000	2,100	2,400	2,100	2,200	2,000	2,000	2,000	2,200	2,200

Source: Department of Agribusiness, Market Development and Agricultural Information

8.4 Seeds

Table 8.8: Certified Seed Product

Crop	Description	Quantities produced and imported					
		2005	2006	2007	2008	2009	2010
Barley	Local production (KG)	1,650,650	1,626,900	1,946,260	1,086,050	1,621,100	2,627,900
	Imports (KG)	0	0	0	0	0	0
	Total (KG)	1,650,650	1,626,900	1,946,260	1,086,050	1,621,100	2,627,900
	Imports (as % of Total)	0	0	0	0	0	0
Beans	Local production (KG)	607,958	172,960	375,247	440,123	411,694	700,499
	Imports (KG)	567,851	0	1,288,149	0	2,600	
	Total (KG)	1,175,809	172,960	1,663,396	440,123	414,294	700,499
	Imports (as % of Total)	48	0	77	0	1	
Oats	Local production (KG)	12,090	2,820	31,250	0	39,033	38,266
	Imports (KG)	0	0	0	0	0	0
	Total (KG)	12,090	2,820	31,250	0	39,033	38,266
	Imports (as % of Total)	0	0	0	0	0	
Maize	Local production (KG)	24,215,835	28,978,043	28,827,950	22,974,031	30,236,773	31,507,931
	Imports (KG)	2,345,544	3,022,287	2,937,700	2,504,207	3,015,309	4,186,371
	Total (KG)	26,561,379	32,000,330	31,765,650	25,478,238	33,252,082	35,694,302
	Imports (as % of Total)	9	9	9	10	9	12

Crop	Description	Quantities produced and imported					
		2005	2006	2007	2008	2009	2010
Pearl Millet	Local production (KG)	45,147	32,576	58,817	0	27,072	20,250
	Imports (KG)	0	0	500	0	0	0
	Total (KG)	45,147	32,576	59,317	0	27,072	20,250
	Imports (as % of Total)	0	0	1	0	0	0
Peas	Local production (KG)	473,508	0	0	34,100	0	4,500
	Imports (KG)	444,398	0	0	483,162	0	548,599
	Total (KG)	917,906	0	0	517,262	0	553,099
	Imports (as % of Total)	48	0	0	93	0	99
Pigeon peas	Local production (KG)	19,240	7,300	0	3,573	8,416	..
	Imports (KG)	0	0	0	0	0	..
	Total (KG)	19,240	7,300	0	3,573	8,416	..
	Imports (as % of Total)	0	0	0	0	0	..
Finger Millet	Local production (KG)	0	3,242	0	67,075	105,136	434,332
	Imports (KG)	0	0	0	0	0	..
	Total (KG)	0	3 242	0	67 075	105 136	434 332
	Imports (as % of Total)	0	0	0	0	0	..
Cow peas	Local production (KG)	0	102,180	0	145,336	167,213	..
	Imports (KG)	0	0	0	0	0	..
	Total (KG)	0	102,180	0	145,336	167,213	..
	Imports (as % of Total)	0	0	0	0	0	
Green Grams	Local production (KG)	0	24,622	37,924	133,631	203,213	..
	Imports (KG)	0	0	0	0	..	..
	Total (KG)	0	24,622	37,924	133,631	203,213	..
	Imports (as % of Total)	0	0	0	0	0	..
Ground Nuts	Local production (KG)	0	369	1,279	0	3,678	..
	Imports (KG)	0	0	0	0	0	..
	Total (KG)	0	369	1,279	0	3,678	..
	Imports (as % of Total)	0	0	0	0	0	..
Soya Beans	Local production (KG)	0	488	1,850	0	0	0
	Imports (KG)	0	0	0	139	2,000	1,490
	Total (KG)	0	488	1,850	139	2,000	1,490
	Imports (as % of Total)	0	0	0	100	100	100
Cotton	Local production (KG)	400	4,853	34,600	0	4,500	..
	Imports (KG)	0	0	0	0	0	..
	Total (KG)	400	4,853	34,600	0	4,500	..
	Imports (as % of Total)	0	0	0	0	0	..
Sorghum	Local production (KG)	230,662	492,410	551,170	606,239	3,275,210	1,603,279
	Imports (KG)	18,000	10,000	3,000	8,000	5,000	8,475
	Total (KG)	248,662	502,410	554,170	614,239		1,611,754
	Imports (as % of Total)	7	2	1	1		
Sunflower	Local production (KG)	145,246	148,718	551,170	204,850	103,037	9,050
	Imports (KG)	13 200	28 200	3 000	927	200	50
	Total (KG)	158,446	176,918	554,170	205,777	103,237	9,100
	Imports (as % of Total)	8	16	1	0	0	..
Tobacco	Local production (KG)	0	0	0	0	0	..
	Imports (KG)	0	0	0	0	0	..
	Total (KG)	0	0	0	0	0	..
	Imports (as % of Total)	0	0	0	0	0	..
Wheat	Local production (KG)	1,842,592	1,369,281	1,194,350	3,127,710	4,629,926	4,037,344
	Imports (KG)	0	0	0	0	0	0
	Total (KG)	1,842,592	1,369,281	1,194,350	3,127,710	4,629,926	4,037,344
	Imports (as % of Total)	0	0	0	0	0	0

Source: KEPHIS

8.5 Agricultural Mechanization Services

Agricultural mechanization embraces the use of all types of hand, animal, and engine or motor powered tools, implements, machines and equipment for agricultural land development, crop and livestock production, harvesting and on-farm primary processing and transport.

- In smallholder farms in Kenya, 50 percent of agricultural work is done entirely using human labour.
- About 50 percent of cultivated land is prepared using hand tools, 20 percent by animal drawn implements and 30 percent by powered equipment.
- Most farmers are often unaware of the available and appropriate mechanization technologies that would enhance their labour productivity and reduce drudgery associated with agricultural production.
- Farmers are not adequately informed and trained on the selection, utilization, adjustment and maintenance of agricultural machinery. This situation has resulted in low utilization of mechanization technologies in the country.
- Even when a choice of technology is finally made, the cost of such equipment is very high. This includes the motorized equipment: such as tractors and combines; engine powered equipment such as pumps, processing machinery and hand-tools.

Further analysis of the existing situation regarding low mechanization in Kenya reveals three main causes namely:

- Inadequate mechanization extension services,
- Inadequate access to mechanization technologies, and
- Lack of finance (to farmers and private contractors). Kenya has an estimated fleet of 10,000 units of farm tractors ranging from70 HP and above that are considered to be within economic life. There could be up to 30,000 more units that have outlived their economic life span or are grounded for various reasons. However, of the 10,000 tractors within the economic life span, 50 percent of them are grounded at any one time due to:
- Mechanical failure resulting from handling or complicated component designs.
- Inadequate operating and serving capital.
- Inadequate service back-up.

The present level of agricultural mechanization in Kenya is on the basis of motorized power ranges from 95 percent in large farms to 4 percent in smallholder farming system. The degree of mechanization in Kenya is 3 tractors per 1,000 hectares of cultivated land.

In ASAL regions of Kenya, a total of about 460,000 ha of old land and 180,000 ha of new land is mechanisable but with little option of using animal power.

To expand the area under cultivation by 26.3 percent would require an additional 7,000 tractors (This assumes an average of 127 ha per tractor under high level management) over a six month ploughing period. Table 8.9 shows the trend of tractor imports between 2004 and 2010. The number of tractors imported into the country fell sharply from 1193 in 2008 to 508 in 2009. There was a minimal improvement of 113 more tractors in 2010 compared to 2009 imports.

Table 8.9: Trend of tractor imports between 2004 and 2010

Tractor type	2004	2005	2006	2007	2008	2009	2010
MF	39	66	119	367	678	211	67
Ford/New Holland	115	112	146	434	439	213	460
Same	0	0	0	35	8	2	54
John Deere	3	2	4	53	1	28	0
Fiat	0	0	0	10	0	4	0
Case	0	0	0	0	12	48	0
Others	2	3	3	22	55	0	40
Total	**120**	**117**	**272**	**921**	**1193**	**508**	**621**

Source: Agriculture Engineering Services

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