

REPUBLIC OF KENYA

MINISTRY OF AGRICULTURE



ANNUAL REPORT FOR YEAR 2007

Compilation Coordinated by:
Policy and External Relations Directorate

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ACRONYMS AND ABBREVIATIONS

2KR	Second Kennedy Round
AA	Agricultural Assistant
AAK	Agrochemical Association of Kenya
AAO	Assistant Agricultural Officer
ABSF	African Biotechnology Stakeholders Forum
ACU	AIDs Control Unit
ADA	Assistant Director of Agriculture
ADB	African Development Bank
ADC	Agricultural Development Cooperation
ADDRA	Adventist Relief Agency
AFC	Agricultural Finance Corporation
AGMARK	Agricultural Marketing Development Grant-Kenya
AGORA	Access to Global Online Research in Agriculture
AICAD	African Institute for Capacity Development
AID	Agricultural Information Directory
AIE	Authority to incur expenditure
AIRC	Agricultural Information Resource Centre
ALDEF	Arid Lands Development Focus
AMDI	Agribusiness Market Development and Information
AO	Agricultural Officer
ASAL	Arid and Semi-arid Lands
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
ASCU	Agriculture Sector Coordination Unit
ASK	Agricultural Society of Kenya
ASPS	Agricultural Sector Programme Support
ATC	Agricultural Training Centre
ATDC	Agricultural Technology Development Centres
Atiri	Agricultural Technology and Information Response Initiative
BAT	British African Tobacco
CAB	Central Agricultural Board
CABI	Commonwealth Agricultural Bureau International
CAN	Calcium Ammonium Nitrate
CAO	Chief Agricultural Officer
CAVS	College of Agriculture and Veterinary Services
CBOs	Community Based Organizations
CBS	Central Bureau of Statistics
CDF	Constituency Development Fund
CD-ROMS	Compact Disk- Read- Only- Memory
CGIAR	Consultative Group on International Agriculture Research
CO	Clerical Officer
CO ₂	Carbon Dioxide
CRAC	Centre Research Advisory Committee

CRAC/RREAC	Centre Research Advisory Committee/Regional Research Advisory Committee
CTA	Centre for Technology Associate
DAEO	Divisional Agricultural Extension Officer
DAO	District Agricultural Officer
DAP	Diamonium Phosphate
DCO	District Crops Officer
DDA	Deputy Director of Agriculture
DDOs	District Development Officers
DFST	District Farming Systems Teams
DHEOs	District Home Economic Officers
DLCO-EA	Desert Locust Control Organization of East Africa
DLPO	District Livestock Production Officer
DSFT's	District Farming Systems Teams
DVD	Digital Versatile Device
E.C	Emulsifiable Concentrate
EPC	Export Promotion Council
EPHTFCP	Eastern Province Horticultural & Traditional Food Crop Project
ERS	Economic Recovery Strategy for Wealth and Employment Creation
ESA	Eastern and Southern Africa
EU	European Union
EUROSTAT	European Statistics (Import Data)
FAO	Food Agriculture Organization
FFS	Farmer Field School
FPEAK	Fresh Produce Exporters Association of Kenya
FSA	Financial Services Association
FSA	Financial Services Associations
FVM	Faculty of Veterinary Medicine
GDP	Gross Domestic Product
GEF	Global Environmental Fund
GIS	Global Information System
GNP	Gross National Product
GOK	Government of Kenya
GTZ	Gesellschaft Fur Technische Zusammenarbeit
Ha	Hectare
HCDA	Horticultural Crops Development Authority
HEOs	Home Economic Officers
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HQ	Head Quarter
ICM	Information and communication Managemant
ICRAF	International Centre for Research in Agro-forestry
ICT	Information and communication Technology
ID	Identification Card

IFAD	International Fund for Agricultural Development
IPAR	Institute of Policy and Agricultural Research
IPM	Integrated Pest Management
IRLCO-CSA	International Red Locust Control of Central and Southern
ISAAA	International Service for the Acquisition of Agribiotechnology
JICA	Japanese International Cooperation Agency
JKUAT	Jomo Kenyatta Institute of Agriculture and Technology
KAA	Kenya Agricultural Abstract
KACE	Kenya Agricultural Commodity Exchange
KADOC	Kenya Agricultural Documentation Centre
KAINET	Kenya Agricultural Information Network
KAPP	Kenya Agricultural Productivity Project
KARI	Kenya Agricultural Research Institute
KBC	Kenya Broadcasting Cooperation
KCB	Kenya Commercial Bank
KCC	Kenya Creameries Cooperative
KCCT	Kenya College of Communication and Technology
KEBS	Kenya Bureau of Standards
KEFRI	Kenya Forestry Research Institute
KEPHIS	Kenya Plant Health Inspectorate Services
KESREF	Kenya Sugar Research Foundation
KFC	Kenya Flower Council
Kg	Kilogramme
KHDP	Kenya Horticulture Development Programme
KICC	Kenyatta International conference Centre
KIMC	Kenya Institute of Mass Communication
Km ²	Square Kilometer
KPA	Kenya Ports Authority
KRA	Kenya Revenue Authority
K-REP	Kenya Rural Enterprise Programme
KSC	Kenya Seed company
KSh	Kenya Shilling
KSTCIE	Kenya Standing Technical Committee for Imports and Exports
KTDA	Kenya Tea Development Agency
KWFT	Kenya Women Finance Trust
LCM	Land and Crops Management
LGB	Larger Grain Borer
LPO	Local Purchase Order
LSO	Local Supply Order
Ltd.	Limited
M&E	Monitoring and Evaluation Officer
M.P	Member of Parliament
MDG	Millennium Development Goals
MESPT	Micro Enterprise Support Programme Trust

MFI	Micro Finance Institution
MOA	Ministry of Agriculture
MOCO	Mumias Out-growers Company
MOLFD	Ministry of Livestock & Fisheries Development
MORPW	Ministry of Roads and Public Works
MoU	Memorandum of Understanding
MSV	Maize Streak Virus
MT	Metric Tonnes
N/A	Not Applicable
NAAIAP	National Accelerated Agricultural Input Access Programme
NAFIS	National Agricultural Information System
NALEP	National Agricultural & Livestock Extension Program
NARL	National Agricultural Research Laboratories
NBK	National Bank of Kenya
NCPB	National Cereals and Produce Board
NERICA	New Rice for Africa
NGOs	Non Governmental Organizations
NPC	National Project Coordinator.
NPK	Nitrogen Phosphorous Potassium
OARE	Online Access to Research in Environment
p.a	Per Annum
PADC	Policy and Agricultural Development coordination
PCM	Project Cycle Management
PCPB	Pest Control Products Board
PCPB	Pest control Product Board
PDA	Provincial Director of Agriculture
PHEOs	Provincial Home Economic Officers
PPO	Plant Protection Officer
PS	Permanent Secretary
PSDA	Private Sector Development Agency
RELD	Research Extension Liaison Division
RRA	Rapid Rural Appraisal
SACCO	Savings and Credit Cooperatives
SACDEP	Sustainable Community Development Programme
SADA	Senior Assistant Director of Agriculture
SAO	Senior Agricultural Officer
SAO	Senior Agricultural Officer
SCO	Senior Clerical Officer
SCT	Senior Copy Typist
SEARCH	Southern Eastern Africa Regional Committee for Harmonization
SHF	Stake Holders Forum
SHG	Self Help Group
SIDA	Swedish International Development Agency
SME's	Small and Medium Enterprises
SRA	Strategy for Revitalizing Agriculture



Ministry of Agriculture Annual Report 2007

SS	Subordinate Staff
SSS	Senior Support Staff
TOT	Training of Trainers
TSP	Triple Super Phosphate
ULV	Ultra Low Volume
ULVA	Ultra Low Volume Applicator
UN	United Nations
USAID	United States Agency for International Development
VCR	Video Cassette Recorder
VHS	Video Home Service
WEEC	Women Endemic Empowerment Consortium



FOREWARD



Dr Romano Kiome, PhD, CBS
PS Ministry of Agriculture

The end of yet another successful year in agriculture is here with us. At the outset, I want to thank all stakeholders in the sector for the impressive performance we have witnessed. This year the sector growth averaged 6.2 percent similar to that recorded in the year 2006. Reforms in the sector are ongoing with goals and objectives spelt out in the strategic plan being the driving force. The Ministry continues to be guided by the Vision of being the leading agent towards the achievement of food security for all, creation of employment, generation of income and reduction of poverty among Kenyans. We endeavor to improve the livelihood of Kenyans by promoting competitive agriculture through creation of an enabling environment for the all stakeholders, providing support service and ensuring sustainable management of natural resources.

In line with the Public Service Reform Program, the Ministry has the Strategic Plan 2006-2010 as its roadmap in creating a motivated, efficient and effective public service delivery system. In it, we outline the plans and priority actions aimed at continually improving performance in the next few years. For the Ministry, the strategic plan is a foundation on which short and medium term policies and activities are built. Further, the Ministry's performance contract and appraisal system anchored on this vital document are structured to assist us focus on the delivery of efficient services to the agricultural sector and to the people of Kenya. Extension service delivery continues to be a priority so that as many Kenyans as possible employ efficient, effective and environmentally sustainable measures to their farming business activities.

A summary of the achievements realized during the year and the means employed towards these achievements is contained in this report.

Finally, my appreciation goes to all the Directors and the entire staff of the Ministry of Agriculture for their devotion and enthusiasm demonstrated this year. I am specifically thankful to the Acting Director of Policy and Agricultural Development Coordination, Mr. John Mungai(HSC) and the staff who participated in the preparation of this report.

Romano M. Kiome (PhD, CBS)
PERMANENT SECRETARY

ACKNOWLEDGEMENT

The preparation of this report is a joint effort of the four Directorates of the Ministry namely; Policy and Agricultural Development Coordination; Extension, Research Liaison and Technical Training; Land and Crop Management; and Agri-business, Market Development and Information, as well as the Central Agricultural Board and Agricultural Information Resource Center.

We acknowledge the support received from the Agriculture Secretary, Dr. Wilson Songa (OGW), who in addition also provided useful comments that refined further this report.

The technical and logistical support given to us by the four Directors; Tom Bonyo; Humphrey Mwangi; John Mungai (HSC), and Mary Kamau enabled the team generate the data from the field, analyze and compile this report. For this, we are truly grateful.

Not to be left out are State Corporations within the Ministry of Agriculture that promptly provided information and data when requested. Their support makes certain and validates our data.

Lastly, we acknowledge the commitment of the Secretariat in working tirelessly to ensure that the report was finalized. We appreciate the contribution of Rebecca Wahome, Rose Mwangi, John Nginyangi, Nelson Gatonye, Emilly Oseno, Anastasia Kivuva, Patricia Aruwa, James Wanjohi, Tom James Oduong'o and Joseph Mwangi

Secretariat.

EXECUTIVE SUMMARY

Agriculture played a key role in the continued recovery of Kenya's economy realized during the year through effective implementation of major reforms spelt out in the current policy documents namely, the Economic Recovery Strategy for Wealth and Employment Creation (ERS; 2003 - 2007), the Strategy for Revitalizing Agriculture (SRA; 2004- 2014) and the Ministry's Strategic Plan (2006-2010).

The agricultural sector continued to perform well in year 2007 despite delayed long-rains and low volume of short-rains precipitation. The sector recorded a growth rate of 7.6% in 2007 up from 5.4% in 2006.

The Ministry of Agriculture continued to spearhead agricultural development and consequently economic development, through its vision and mission as stated below.

Vision

"To be the leading agent towards the achievement of food security for all, employment creation, income generation and poverty reduction in Kenya".

Mission

"To improve the livelihoods of Kenyans by promotion of competitive agriculture through creation of enabling environment, provision of support services and ensuring sustainable natural resources management".

The Annual Report 2007 elaborates the achievements made during the period under review; constraints encountered and provides information for planning purposes.

Chapter one of the report covers the strategic objectives of the Ministry, organizational structure and review of agriculture performance.

Chapter two covers issues of policy; programmes and projects; monitoring and evaluation, and bilateral and international cooperation.

Extension, Research Liaison & Training activities are covered in **Chapter three**. This entails sourcing, collating, adapting, packaging, and disseminating information, knowledge, skills and technology transfer to the staff and farmers to increase agricultural productivity.

Chapter four covers Land and Crop Management issues as appertains to the Ministry's mandate, Vision and Mission. Details of major crops hectarages, production, productivity and value of export crops are well

covered. This information will go a long way to providing farmers and other consumers of this report with the crucial clues that will assist them in making rational decisions in farming.

Kenya is an agricultural economy with agriculture contributing to about 26% of the GDP. 80% of Kenyans live in rural areas and derive their livelihoods from the sector through crop and livestock production, forestry and exploitation of other natural resources. The need to engage in farming as business cannot be over emphasized. **Chapter five** covers farm business, farm inputs and credits, agro-processing, marketing development and promotion of trade. This information provides the lead to the contribution of agriculture in income generation, improved equity in income distribution, poverty alleviation and ultimately the improvement of the living standards of the Kenyan people.

Chapter six covers the products, functions, achievements and finances of two statutory bodies. The Central Agricultural Board (CAB) that provides advice on agricultural policy, and the Agricultural Information Resource Center (AIRC) which is a source of agricultural related information and an institution for training in extension skills to farmers and stakeholders.

The Work plans and budgets for the Ministry of agriculture in the year under review are spelled out in **chapter seven** which gives an indication on funds allocation and utilization for recurrent and development votes. In the financial 2007/2008, KSh 9,500,921,570 was disbursed under recurrent vote and KSh 4,022,265,730 under development.

Chapter eight gives insight into the flagship projects as envisaged in the Vision 2030 and the food security programme and projects implemented in line with the Strategy for Revitalization of Agriculture.

THE TECHNICAL HEADS: AGRICULTURE SECRETARY AND DIRECTORS 2007



Dr. Wilson Songa, OGW
Agriculture Secretary



John K. Mungai
Ag. Director; Policy and
Agricultural Development
Coordination



H. M. Mwangi
Director; Agribusiness, Market
development & Information



Tom Bonyo
Ag. Director; Land &
Crop Management



Mary Kamau
Ag. Director; Extension,
Research, Liaison & Training

CHAPTER 1: BACKGROUND

1.1 INTRODUCTION

Agricultural and economic recovery continued to be realized within the year due to effective implementation of key reforms as spelt out in the main policy documents - the Economic Recovery Strategy for Wealth and Employment Creation (ERS; 2003 - 2007), the Strategy for Revitalizing Agriculture (SRA; 2004- 2014) and the Ministry's Strategic Plan (2006-2010). This unprecedented achievement, from an expected growth rate of 4.5 to the actual growth rate of 7.6% in 2007, will be augmented with the implementation of Vision 2030 beginning July 2008. The Vision hinges on three key pillars:-

- i. **Economic:** Achieving an accelerated annual economic growth rate of 10% on a sustainable basis;
- ii. **Social:** Building a just and cohesive society enjoying equitable social development in a clean and secure environment; and
- iii. **Political:** Building an issue-based, people-centered, result-oriented and accountable democratic political system.

The Strategic Plan spells out the mandate, vision and mission of the Ministry as:

Mandate

The mandate of the Ministry of Agriculture is to promote and facilitate production of food and agricultural raw materials for food security and incomes; advance agro-based industries and agricultural exports; and enhance sustainable use of land resources as a basis for agricultural enterprises.

Vision

To be the leading agent towards achievement of food security for all, employment creation, income generation and poverty reduction in Kenya.

Mission

To improve the livelihoods of Kenyans by promotion of competitive agriculture through creation of an enabling environment, provision of support services and ensuring sustainable natural resources.

1.2 STRATEGIC OBJECTIVES OF THE MINISTRY

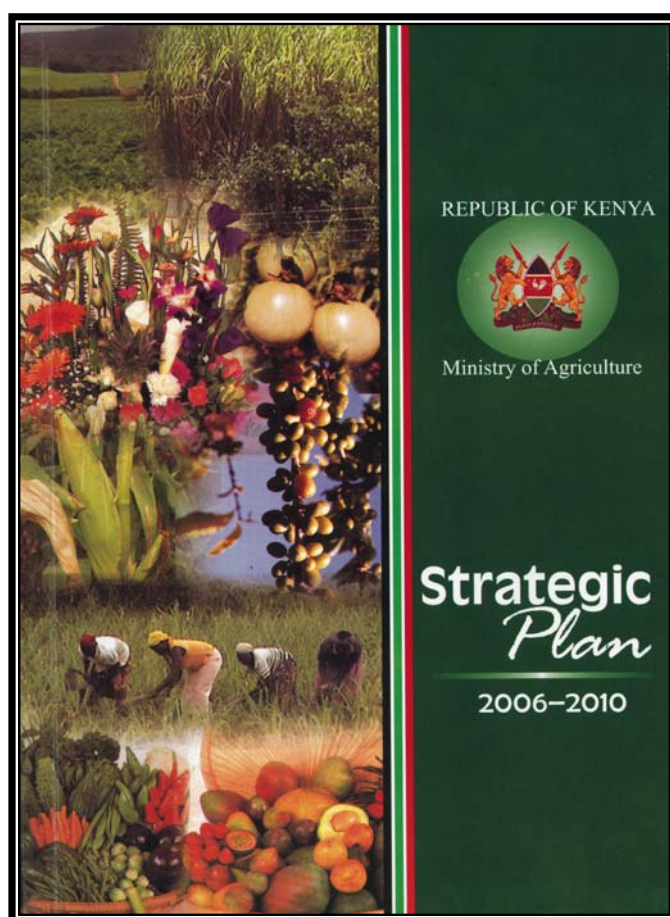
The strategic objectives of the Ministry of agriculture as exemplified in the Strategic plan are:

- i. Create an enabling environment for agricultural development through review of the current legal and policy framework;
- ii. Promote market and product development by adopting a value chain approach;

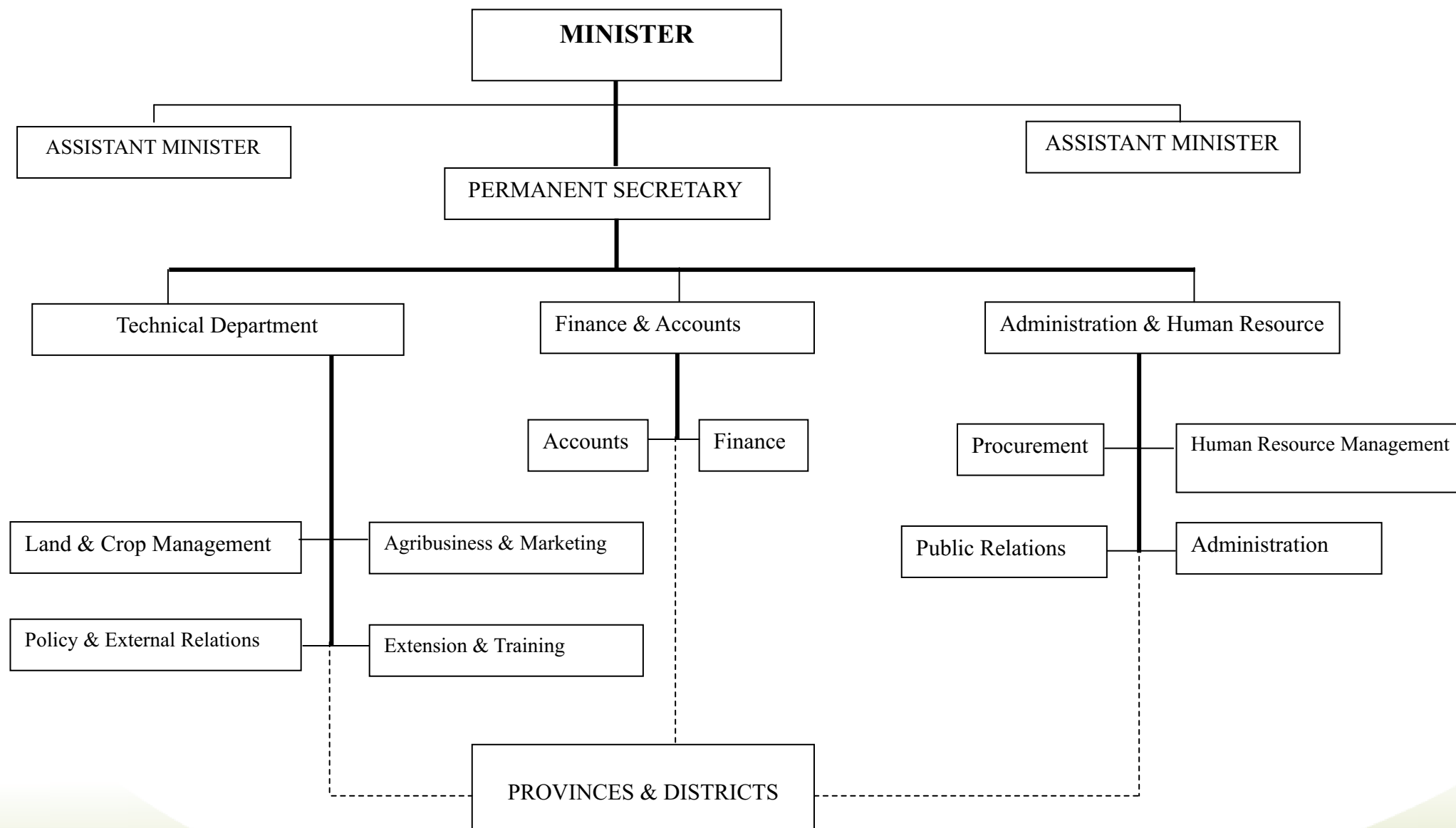
- iii. Facilitate increased productivity and agricultural output through improved extension, advisory support services and technology application;
- iv. Promote conservation of the environment and natural resources through sustainable land use practices;
- v. Restructure and privatize non-core functions of the ministry and its institutions and strengthen private–public partnerships;
- vi. Improve access to agricultural information through an ICT-based information management;
- vii. Facilitate accessibility of affordable credit and quality inputs to farmers; and
- viii. Strengthen human resources development, including monitoring and evaluation (M&E) and coordination of staff functions within the ministry.

Below is a photo showing the front phase of the strategic plan.

Plate 1: Ministry of Agriculture's Strategic Plan 2006- 2010



1.3 ORGANIZATIONAL STRUCTURE



1.4 DEPARTMENTAL ROLES AND FUNCTIONS

Table 1. 1: Roles and functions of MOA Departments and other institutions

Department/ Institution	Vision	Mission	Mandate/Core functions
Policy & External Relations	To be a key player in the development of agricultural policies and programmes that transform Kenyan agriculture into a commercially viable and competitive sector.	To provide leadership and coordination in the development of policies, legal and institutional environments and programmes, that promotes agricultural productivity, food security and sustainable development.	<ul style="list-style-type: none"> • Interpretation and application of Agriculture Act and other related statutes in line with the ministry's goals and departmental objectives. • Review, coordinate and harmonise acts, statutes, policies rules and regulations related to agricultural sector in liaison with other relevant departments and agencies. • Formulation, monitoring, Evaluation and coordination of all projects and programmes. • Coordinate issues related to regional protocols, conventions and international trade agreements in liaison with other

			<p>ministries/stakeholders.</p> <ul style="list-style-type: none"> • Coordinate functions of agricultural attaches and other international agriculture related organizations. • Backstopping of agricultural offices in the provinces and districts on policy and development issues.
Extension and Training	To be the leading agent in provision and facilitation of quality extension services to farmers/clientele, for agricultural transformation in Kenya	To increase agricultural productivity through promotion of effective research-extension-farmer linkages, delivery of quality extension services and appropriate human resources development for enhanced food security, incomes, employment and provision of raw materials to agri-based industries.	<ul style="list-style-type: none"> • Facilitate increased agricultural output and productivity, through efficient extension services delivery; • Improve efficiency in human resource management and development; and • Strengthen training institutions of the Ministry.
Land and Crops Management	To be the leading agent in promoting sustainable land development management for crop production	To promote sustainable and competitive production of crops through creation of an enabling environment and	<ul style="list-style-type: none"> • Management and control of pests and diseases in crops; • Strengthen the regulatory

		provision of support services to enhance food security, incomes and employment creation	<p>and institutional framework to support land and crops development;</p> <ul style="list-style-type: none"> • Promote food security initiatives; • Promote improved land and crop production and post harvest management technologies; • Promote public-private sector collaboration and partnerships in land and crop development; • Promote sustainable land and crop production through improvement and maintenance of land resources; • Promote increased agriculture production through efficient water harvesting and utilization; and <p>Promote food production through use of mechanized and other appropriate technologies.</p>
Agribusiness and Marketing	Transformed agriculture with	To promote sustained	<ul style="list-style-type: none"> • Build capacity on

	optimal returns to all players in the sector	growth through efficient use of resources, integrated production, processing/value adding and marketing to enhance investment in agriculture.	agribusiness management; <ul style="list-style-type: none"> • Promote efficient use of farm inputs; • Promote of agribusiness development; and • Support the development of efficient marketing systems.
Central Agricultural Board	To be an institution of choice in the provision of credible and reliable advise on agricultural policy in Kenya.	To provide dependable and effective policy advice in order to enhance food security and increased farm incomes.	<ul style="list-style-type: none"> • Advise the Minister on all matters of national agricultural policy. • Coordinate agricultural policies on matters affecting more than one province/region or stakeholder. • Advise the minister in determining scheduled crops and/or fixing prices.
Agriculture Resource and Information Center	To be the choice source of Agricultural related information and training in extension skills to farmers and stakeholders in Kenya and Eastern Africa.	To provide quality agricultural information through the mass media to the farming community and conduct training on extension skills to extension	<ul style="list-style-type: none"> • Enhance Kenyan farmers ability to increase agricultural output through more effective information and training

		providers in order to enhance agricultural productivity and development.	<ul style="list-style-type: none"> • Improve extension and management skills of extension workers in the ministry departments and other organizations through training and provision of training materials • Improve the overall quality of agricultural information and training through close collaboration with other development agencies • Generate financial resources to support its operation and programmes for sustainability
Cotton Development Authority	To be the leading agent in the creation of a vibrant and sustainable cotton industry	To promote development of competitive cotton industry for improved livelihoods and industrialization through creation of an enabling environment while ensuring sustainable natural resource management.	<ul style="list-style-type: none"> • To formulate, implement and monitor cotton Policies, Legislation and Regulations • To promote research, development and dissemination of cotton production and processing technologies • To ensure production, supply and distribution of certified cotton planting

			<p>seed.</p> <ul style="list-style-type: none"> • Collect, analyze and disseminate local and global information and statistics on cotton • Promote value addition in the industry • Promote local, regional and international collaboration and networking • Advise on pricing and marketing of cotton and cotton products • Promote the establishment and strengthening of stakeholder institutions.
Agricultural training Centers	To be centers of excellence for training farmers and other stakeholders	To train farmers & other stakeholders on relevant agricultural technologies and skills through teaching, demonstrations and provision of training facilities	<ul style="list-style-type: none"> • To improve access to agricultural technology and information; • Provide quality training facilities for agricultural development; • Promotion of sustainable land use and conservation of natural resources; • Promote household food and nutrition security; • Promote value addition and utilization of agricultural produce; and • Promote commercialization of agricultural enterprises.

1.5 REVIEW OF AGRICULTURE PERFORMANCE

The agricultural sector continued to perform well in year 2007 despite delayed long-rains and low volume of short-rains precipitation. The sector recorded a growth rate of 7.6% in 2007 up from 5.4% in 2006.

For maize, the indicative food crop, productivity on average recorded improvement from 19.0 bags per hectare in 2006 to 20.1 bags per hectare in 2007. However, the total maize production declined from 36.1 million bags in 2006 to 32.5 million bags in 2007. This was barely enough to meet the local demand.

Wheat production declined from 3.98 million bags in 2006 to 3.94 million bags in 2007, which is equivalent to about 1.1% down turn. Within the same period, the area under wheat decreased from 150,488 ha to 104,176 ha. This domestic decline coupled with constrained global supply triggered a domestic price increase of 75% on average for wheat and related products. The average productivity however registered an upward trend by increasing from 26 bags per hectare to 28 bags per hectare.

Horticulture continued to lead in foreign exchange earning. Within the review period, the quantity of horticulture exports increased by 17.8% from 163,200 Metric tons in 2006 to 192,200 Metric tons in 2007. Equally, the value of horticultural exports registered an upward trend by increasing from KSh 43.1 billion in 2006 to 65.2 billion in 2007, being an increase of 51.3%.

The total area under coffee decreased from 170,000 ha in 2006 to 162,720 ha in 2007. This drop was attributed to a reduction in area under coffee by smallholders from 128,000 ha in 2006 to 120,720 ha in 2007. Production however increased by 10.5% from 48,303 tons in 2006 to 53,368 tons in 2007. The processed coffee prices increased by 78% from Kshs. 10,952 per 100 kg bag in 2006 to Kshs. 19,561 in 2007.

The area under tea increased from 147,080 hectares in 2006 to 149,190 hectares in 2007 depicting a 1.43% increase. Moreover, tea production increased by 19% from 310,570 tons in 2006 to 369,600 tons in 2007. The increase was attributed to 20.11% increase in the smallholder production and 17% increase in the estate production from 2006 to 2007. The average yield increased from 2.2 mt /ha in 2006 to 2.7 mt /ha in 2007 for the smallholder sub-sector and from 2.7 mt/ha to 3.1 mt /ha for the estate sub-sector.

The good performance of the agricultural sector was partly due to effective and efficient delivery of extension services. This was through group approaches and methods especially field days, barazas, exhibitions, shows, farmer field schools, enterprise based common interest groups (CIGs). The District agricultural stakeholder's forums continued to play a crucial role in promoting and improving agricultural services through organizing field days and exhibitions. In all the extension activities, there was a lot of support from the Provincial administration and local leaders and especially in community mobilization.

To enhance delivery of extension services further, the Ministry continued to revitalize Agricultural Training Centres (ATCs) in order to make them centres of excellence for

training farmers and stakeholders on relevant agricultural technologies and skills. This is concomitant with the overall objective of ATCs which is to impact skills and technology in agriculture, provide quality-training facilities, promote value addition and commercialization of agricultural enterprises. The ATCs held very successful field days in addition to their other key activities.

Some of the challenges experienced in extension service delivery were as stated below;

- Shortage of support staff especially drivers, clerks, store men and subordinate staff
- Rural poverty was a notable hindrance to adoption of technologies. However, there were signs of improvements as the prices of major cash crops continued to rise.
- Inadequate office accommodation, transport facilities, ICT equipments and other infrastructure especially at the Divisional level. This was further complicated by the increased number of administrative units.

Plate 2: Dissemination of Drip Irrigation Technology to farmers



CHAPTER 2: POLICY AND EXTERNAL RELATIONS

The Ministry creates an enabling environment for agricultural development by collaborating with other sector ministries and stakeholders in the review of the current institutional, legal and policy framework of agriculture. This entails executing functions of policy reviews and formulation; programmes/projects development, monitoring and evaluation, formulation and implementation on protocols; and promotion of external trade in agriculture.

In 2007, various activities were carried out towards providing the enabling environment and support as exemplified in table 2.1 showing a summary of reviewed bills and policies and table 2.2 on achievements of programmes and projects activities during the year.

One of the key policies that was being implemented within the year is the Potato Policy that standardized the bag size to 110kg down from 130kg – 280kg as can be seen in the plate below



Plate 3: Photo showing the standard size of potato bag.

2.1 POLICIES

Table 2. 1: Summarized position of Policies and Bills as at December 2007

Agricultural and Specific Commodity Policies and Bills under consideration	Aims, Objectives and Policy Thrust	Current Status of the Policies & Bills
1. Coffee Industry (i) Amendment of the Coffee Act No. 9 of 2001	<input type="checkbox"/> Provide alternative window for Direct coffee sales and marketing <input type="checkbox"/> Provide for Coffee Development Fund (CoDF) to finance the industry <input type="checkbox"/> Restructure the key industry Institutions for efficient and effective service delivery for accelerated growth of the coffee sub-sector.	<input type="checkbox"/> The Concept paper on Coffee industry improvement was approved by Cabinet in December 2004 <input type="checkbox"/> Some sections of Coffee (Amendment) Bill, 2005 were fast tracked through Finance Act, of 2005 <input type="checkbox"/> Other sections of Coffee (Amendment) Bill, 2005 with Attorney General for legal drafting and publishing, <input type="checkbox"/> Coffee Rules for direct marketing were gazetted. <input type="checkbox"/> CDF operationalized and Board of Trustees inaugurated in May, 2006.
2. Pyrethrum Industry (i) Development of Pyrethrum Industry Sessional Paper, (ii) Amendments of the Pyrethrum Act, Cap 340	<input type="checkbox"/> Liberalize the Pyrethrum industry, <input type="checkbox"/> Commercial functions of the PBK to be transferred to a new company to be called the Pyrethrum Processing Company of Kenya (PPCK), <input type="checkbox"/> PBK to retain only regulatory functions and promotion competitiveness and productivity of the industry,	<input type="checkbox"/> A Joint Cabinet Memo signed by the Minister for Agriculture and Minister for Finance and has been forwarded to the Cabinet. <input type="checkbox"/> Final Bill already drafted by AG awaiting publication once cabinet approves the MOA request for publication and tabling of the Bill. <input type="checkbox"/> The Cabinet discussed the Memo and recommended that farmers' arrears be paid first before Cabinet memo approval. <input type="checkbox"/> Ksh. 500 Million has been paid and the balance to be paid before June 2008
3. Sugar Industry (i) Development of a Sessional	<input type="checkbox"/> Restructure the sugar industry to make it more	<input type="checkbox"/> Drafting of the Sugar Bill has been finalized by AG and

<p>Paper on Sugar Industry</p> <p>(ii) Amendment of the Sugar Act No. 10 of 2001</p>	<p>efficient and competitive in view of the liberalized and increased regional and global trade,</p> <ul style="list-style-type: none"> □ Review the Sugar Act No 10 of 2001 to provide for a restructured sugar industry. 	<p>awaiting cabinet approval of the cabinet Memo before publication and tabling in parliament</p> <ul style="list-style-type: none"> □ The joint sugar industry Sessional paper and the Cabinet Memo forwarded to Minister for Finance for signing. □ Queries raised by Ministry of Finance on Ministry of Energy electricity Co-generation Policy and Consent by shareholders of Sugar Companies on proposed debt conversion to equity □ Draft Sugar Arbitration Rules 2006 finalized and forwarded to AG's office for drafting.
<p>4. Cereals and Produce subsector</p> <p>(i) Development of a Sessional Paper on Cereals and Produce</p> <p>(ii) Bill to amend the National Cereals and Produce Board Act, Cap 338</p>	<ul style="list-style-type: none"> □ Develop a comprehensive policy and legal framework that outlines the role of government in ensuring food security □ Partial privatization and commercialization of the National Cereals and Produce Board (NCPB) □ Provision of a legal framework for NCPB to handle both commercial activities and regulatory functions with regard to industry sustainability, health, safety, quality control and quality standards □ The NCPB Act Cap 338 be repealed and replaced with a suitable legal framework for a commercialized Grain Corporation of Kenya □ The Corporation to be the principal Government agent for managing the Strategic Grain Reserves (SGR) and Famine Relief (FR) supplies 	<ul style="list-style-type: none"> □ A cereal Sector Policy approved by Cabinet in 1998 □ A new National Cereals and Produce Bill, 2006 that repeals and replaces Cap 338 with a suitable legal framework for a commercialized grain industry has been completed □ Minister approved and signed Cereals (2006) draft Bill that was forwarded to AG for legal drafting in September 2006 □ AG still working on the bill.
<p>5. Fertilizers and Soil Fertility</p> <p>(i) Development of a Sessional Paper On Soil fertility</p> <p>(ii) Draft Bill on Fertilizers and Soil Conditioners</p>	<ul style="list-style-type: none"> □ Regulation of the importation, exportation, manufacture and sale of fertilizers and soil conditioners and to provide for matters incidental to and connected with the foregoing 	<ul style="list-style-type: none"> □ Policy on Soil Fertility and Bill on Fertilizers and Soil Conditioners 2006 are ready □ The Bill touches on the Cap 345, the Fertilizers and Animals Feedstuffs Act, which is currently in force and administered by the Director of Veterinary Services. The Ministry of Livestock is finalizing the Policy on feeds.

6. Food and Nutrition (i) National Food and Nutrition Policy (NFNP) and (ii) The Food Security and Safety Bill	<input type="checkbox"/> Review of the Sessional Paper No. 2 of 1994 on National Food Policy, <input type="checkbox"/> Set up a National Food Safety Agency incorporating the food traceability element and international SPS standards.	<input type="checkbox"/> Draft NFNP and Cabinet memo are ready and being signed by the respective Ministers. <input type="checkbox"/> The Food Security and Safety Bill has been drafted awaiting presentation to sector stakeholders.
7. Seed Industry (i) National Seed Industry Policy (ii) Amendments to the Seeds and Plant Varieties Act Cap 326 (iii) Draft the Seed and Plant Breeders' (Rights) Regulations (iv) Draft Seed Industry Arbitration Tribunal rules	<input type="checkbox"/> To give clear direction for the sustainable development of seed industry in order to avail adequate high quality seed and planting materials, <input type="checkbox"/> Harmonize all seed related activities, legislation and actors, <input type="checkbox"/> Provide for greater involvement of the private sector in developing the seed industry.	<input type="checkbox"/> National Seed policy, Bill and Cabinet Memo finalized awaiting signature and forwarding to Cabinet <input type="checkbox"/> Draft Seed and Plant Varieties Cap 326, Amendment Bill (2006) has been forwarded to the Minister <input type="checkbox"/> Seed and Plant Breeders' Rights regulations have been forwarded to AG for legal drafting <input type="checkbox"/> Seed Industry Arbitration Tribunal has been operationalized. <input type="checkbox"/> Seed Industry Arbitration Tribunal rules have been forwarded to the members of the tribunal for comments.
8. Extension (i) National Agricultural Sector Extension Policy (NASEP)	<input type="checkbox"/> To revise the existing National Agricultural Extension Policy (NAEP) to give it a sector wide dimension and representation, <input type="checkbox"/> Guide and regulate the provision of agricultural extension service in the country.	<input type="checkbox"/> The Draft Policy and Cabinet Memo have been signed by the Ministers for Agriculture, Cooperative and Livestock and forwarded to Cabinet.

9. Horticulture Industry (i) National Horticultural Development Policy	<input type="checkbox"/> To provide for a legal and regulatory framework for the industry in a liberalized regime with HCDA becoming only a regulator <input type="checkbox"/> Ministry to form company: "Horticultural Development Company of Kenya" to undertake commercial functions	<input type="checkbox"/> A draft Policy is ready and discussed at a stakeholder forum held in March 2007 and forwarded to the Director Land and Crop Management for further consultation.
10. The Oilseeds Industry (i) OilSeed Industry Development Policy (ii) The National Oilseed Industry Bill	<input type="checkbox"/> To provide for a legal and regulatory framework for the development of the oil crops industry in a liberalized regime, and <input type="checkbox"/> To incorporate the Oil Crops Development Authority (OCDA) as a parastatal.	<input type="checkbox"/> A draft Policy and Bill on Oil Crops Development is ready and forwarded to the Minister
11. Nut Crops Industry (i) Nut Crops Development Policy (ii) Nut Crops industry Bill	<input type="checkbox"/> To provide for a legal and regulatory framework for the Nut Crops industry in a liberalized regime,	<input type="checkbox"/> A draft Policy and Bill is has been subjected to the stake holders and forwarded to the Minister
12. Agricultural Regulatory Services (i) Enactment of the Kenya Plant Health Inspectorate Services Bill	<input type="checkbox"/> To incorporate KEPHIS under an Act of Parliament and provide for legal administration of Seed and Plant varieties, Plant Protection and Agricultural Produce (Export) Acts.	<input type="checkbox"/> Draft Bill has been sent to stakeholders for final comments before forwarding to AG for cleaning and publication.
13. Cassava industry (i) Development of the National Cassava Industry Policy	<input type="checkbox"/> Promotion and Development of the cassava as a food and industrial crop	<input type="checkbox"/> Policy development being led by ASARECA
14. Emerging Crops (i) Emerging Crops Policy	<input type="checkbox"/> To address the emerging crops such as Aloe, "Miraa," and other medicinal crops	<input type="checkbox"/> To be done in the 3rd quarter of the 2007/08 financial year
15. Peri-Urban Farming (i) Urban and Peri-urban farming	<input type="checkbox"/> To address the issues of urban and Peri-urban farming affecting the Cities and Towns.	<input type="checkbox"/> This shall be done in the 4th quarter of the 2007/08 financial year

16. Legal Notices	<input type="checkbox"/> The Sugar Tribunal Rules	<input type="checkbox"/> They are being finalized at AG Chambers
	<input type="checkbox"/> The Seeds and Plants Tribunal Rules, 2007	<input type="checkbox"/> They have been drafted by the Ministry and forwarded to the members of the Tribunal for their comments before being forwarded to the Ag.
	<input type="checkbox"/> The Kenya Coconut Development Authority gazette notice	<input type="checkbox"/> The Legal Notice was signed by His Excellence the President. <input type="checkbox"/> The Board has been Gazetted.
	<input type="checkbox"/> Pest Control Products Act (Cap, 346) Rules	<input type="checkbox"/> 6 Legal notices (123, 124, 125, 126, 127 and 128 of 6 th October 2006) containing amended regulations were gazetted
17. Cabinet Memoranda Cabinet Memorandum on the Restructuring of the Agro-Chemicals & Food Company of Kenya	<input type="checkbox"/> Restructuring of the Agro-Chemicals & Food Company of Kenya	<input type="checkbox"/> Cabinet Memorandum drawn, signed by the Minister and forwarded to the Ministry of Finance
18. Other Issues (i) Public- Private Sector Partnership investments in the Kulalu/Galana ADC Ranches	<input type="checkbox"/> Exploit joint investment opportunities in the areas of Agriculture, tourism and alternative energy Production in line with Vision 2030	<input type="checkbox"/> ADC to draw up proposed investment terms and competitively bid for prospective investors

Source: Policy and Agricultural Development Coordination Department Annual Report 2007

2.2 PROGRAMS AND PROJECTS

Table 2. 2: Achievements on activities of programmes and projects during the year

	NAME	GOAL PURPOSE	PROJECT COMPONENTS/ MAIN OBJECTIVE(S)	TIME FRAME BUDGETS	SPONSOR OFFICE	AREA OF OPERATION	MAJOR ACHIEVEMENTS FOR THE YEAR
1	Promotion Of Private Sector Development in Agriculture (PSDA).	<p>Sustainable improvement in living conditions in target areas through dismantling market barriers for small and medium size enterprises in agriculture and strengthening partner ownership</p> <p>To support small and medium scale enterprises in selected agricultural value adding chains to increasingly use market potential under improved frame work condition</p>	<p><input type="checkbox"/> To improve the legal and policy framework.</p> <p><input type="checkbox"/> To improve service deliveries in selected value adding chains.</p> <p><input type="checkbox"/> To Strengthen private sector organizations.</p> <p><input type="checkbox"/> To Promote resource-friendly technologies.</p>	12 years: July 2003 up to year 2015	<p>PSDA is a bilateral programme between the Federal Republic of Germany (FRG) and the Government of Kenya (GoK).</p> <p>Maendeleo house, 5th Floor</p>	<p>16 districts: Rift Valley-- Nakuru, Bomet, Trans Mara Western - Vihiga, Kakamega, Bungoma Nyanza - Siaya, Kisii Eastern - Meru Central, Meru South, Embu Central - Nyeri, Nyandarua, Kiambu, Thika, Kirinyaga</p>	<p><input type="checkbox"/> 1191 farmers trained on Farming as a Business (FaaB) and Organizational Development out of a target of 619.</p> <p><input type="checkbox"/> 94 stakeholders' forums on specific value chains held out a target of 33.</p> <p><input type="checkbox"/> 20 training manual/materials development out of a target of 16</p> <p><input type="checkbox"/> 15 Business Plans prepared out of the targeted 23.</p> <p><input type="checkbox"/> 854 market linkages for various value chains developed out the targeted 945.</p> <p><input type="checkbox"/> Mainstreaming HIV/AIDS in value chains is documented</p>

	NAME	GOAL PURPOSE	PROJECT COMPONENTS/ MAIN OBJECTIVE(S)	TIME FRAME BUDGETS	SPONSOR OFFICE	AREA OF OPERATION	MAJOR ACHIEVEMENTS FOR THE YEAR
							<input type="checkbox"/> 14 activities on mainstreaming HIV/AIDS in value chains is documented out of a target of 23. 13 exchange tours for farmer groups/associations conducted out a target of 21.
2	Community Agricultural Development Project in Semi Arid Lands (CADSAL).	To increase Agricultural production in the semi arid lands of Kenya To increase agricultural production of the target group in a sustainable manner	<input type="checkbox"/> Participatory Project Planning and Implementation are strengthened <input type="checkbox"/> Promotion of a pluralistic extension service delivery system. <input type="checkbox"/> Development of appropriate technologies to increase crop and livestock production. <input type="checkbox"/> Development of Guidelines for community agricultural development.	5 year: October 2005 – October 2010	Sponsored JICA in collaboration with the Government of Kenya. Head office is situated in Iten, Keiyo district.	• Keiyo (Metkei, Soy and Tambach Divisions) • Marakwet (Tunyo and Tot Divisions)	<input type="checkbox"/> 5 internal M&E activities planned and executed. <input type="checkbox"/> 15 PCM and PRA trainings planned and executed. <input type="checkbox"/> 15 on-farm crops trials conduct. <input type="checkbox"/> 5 livestock improvement trials conducted. <input type="checkbox"/> 7 Demonstrations/ field days conducted.
3	Njaa Marufuku Kenya(NMK)	To contribute to reduction of Poverty, Hunger, and food insecurity among poor communities in Kenya	• Support to Community-Driven Food Security	2005- 15(16?)	Government of Kenya in collaboration with FAO	National-wide project	<input type="checkbox"/> 1450 community groups' proposals submitted by DCUs were appraised by

	NAME	GOAL PURPOSE	PROJECT COMPONENTS/ MAIN OBJECTIVE(S)	TIME FRAME BUDGETS	SPONSOR OFFICE	AREA OF OPERATION	MAJOR ACHIEVEMENTS FOR THE YEAR
		To promote initiatives that improves food security, nutrition and livelihoods among the poor and vulnerable communities in Kenya.	<ul style="list-style-type: none"> Improvement Projects Support to Community Nutrition and School Meals Programmes Support to Private Sector/CBOs/ NGOs Food Security Innovations Project Management and Coordination 				<p>the Secretariat.</p> <ul style="list-style-type: none"> Grants amounting to Kshs. 97.7 million were disbursed to 810 groups in all Districts. Grants amounting to Kshs. 15.4 million were disbursed to 36 schools in 9 Districts. Disbursement of grants of Kshs. 39.6 million to 25 Private Sector Organizations to up-scale innovative food security projects targeting the poor and vulnerable. Development of 2,407 operation and implementation guidelines; training curriculum and production manuals; banners and posters.

	NAME	GOAL PURPOSE	PROJECT COMPONENTS/ MAIN OBJECTIVE(S)	TIME FRAME BUDGETS	SPONSOR OFFICE	AREA OF OPERATION	MAJOR ACHIEVEMENTS FOR THE YEAR
4	NALEP - SIDA	<p>The contribution of agriculture and livestock to social and economic development and poverty alleviation enhanced</p> <ul style="list-style-type: none"> • To institutionalize demand driven and farmer-led extension services. • To increase the effectiveness of pluralistic provision of extension services. • To increase the participation of private sector in providing extension services 	<ul style="list-style-type: none"> <input type="checkbox"/> Institutional Setting <input type="checkbox"/> Extension and Training <input type="checkbox"/> Collaboration and Networking <input type="checkbox"/> Gender and Social-economics (Cross cutting issues) <input type="checkbox"/> Monitoring and evaluation 	2005- 09	Swedish Government through SIDA	National-wide	<ul style="list-style-type: none"> • Extension Services provided to 766,407 farmers, pastoralists and fisher folk against a target of 560 000 persons. • 348 Broad Based Surveys (BBS) carry out. • 22,376 CIGS promoted against a target of 80,000. • 206,198 farmers trained through field days against a target of 170,000 farmers. • 443 Stakeholders Forums the formed against a target of 418.

	NAME	GOAL PURPOSE	PROJECT COMPONENTS/ MAIN OBJECTIVE(S)	TIME FRAME BUDGETS	SPONSOR OFFICE	AREA OF OPERATION	MAJOR ACHIEVEMENTS FOR THE YEAR
5	Kenya Agricultural Productivity Programme (KAPP)	To contribute to sustainable increase of agricultural productivity and improved livelihood of Kenyans through improved performance of the agricultural technology supply and demand system.	Improvement of the overall agricultural system by supporting generation, dissemination and adoption of agricultural technology	Phase 1 : 2005 -ended in2007. Extended up 2008 (2005-2009?)	World Bank project	Coast Province: Tana River, Taita Taveta, Kwale and Kilifi Districts. Eastern Province: Meru Central, Embu and Makueni Districts. Rift Valley: West Pokot, Nakuru and Transzoia Western Busia, Butere and Kakamega Nyanza Siaya, Homa Bay and Gucha	
6	Small Holder Horticulture Empowerment Programme SHEP	To develop capacity of smallholder horticulture farmer groups to develop their community by themselves		2007- 10 KSh 114 million	JICA/GOK Headquarters located in Eldoret.	6 districts: Trans-Nzoia East, TN West Bungoma, Kisii, Nyandarua, and Uasin Gishu	<input type="checkbox"/> Three hundred and sixty seven (367) technical staff were sensitized. <input type="checkbox"/> One hundred and forty eight (148) Frontline Extension Staff were trained <input type="checkbox"/> Baseline surveys were conducted, where 150 horticultural

	NAME	GOAL PURPOSE	PROJECT COMPONENTS/ MAIN OBJECTIVE(S)	TIME FRAME BUDGETS	SPONSOR OFFICE	AREA OF OPERATION	MAJOR ACHIEVEMENTS FOR THE YEAR
							farmers' groups (1,500 individual farmers) were involved.
7	National Accelerated Agricultural Input Access Project (NAAIAP)	To improve agricultural productivity, food security, rural household incomes and general welfare of the rural community.		2005- 10	Kshs 245 million(GoK) Maendeleo house	30 districts:	35, 0000 farmers reached 380 stockists accredited by AGMARK
8	Agricultural Sector Support Programme (ASPS)	To revitalize growth of the Agricultural sector by providing a conducive policy and institutional environment to increase Agricultural productivity, promoting investment and encouraging private sector involvement in Agricultural Enterprises and Agribusiness.	<ul style="list-style-type: none"> • Agricultural Policy Support Facility (APSF) • Decentralized Agricultural Support Structures (DASS) • Agribusiness Development Support (ABD) 	2005 - 10	Danida/GOK project	7 Districts Makueni Mwingi, Kitui, Kwale, Kilifi,Taita Taveta, and Malindi	<ul style="list-style-type: none"> • 372 farmer groups trained out of a target of 453 • 2 radio programs were done in 2007 • 136.7 Km of road improved
9	Small Holder Horticulture Marketing Programme SHOMAP	To reduce poverty, Capacity building, Market development and Rural access infrastructure.		2008 - 14	GoK/IFAD	8 districts: Kisii, Gusha, Embu, Nyandarua, Bungoma, Buret, Meru-Central, Nandi-South	The coordinator was been recruited and the process of recruiting other officers finalized.

	NAME	GOAL PURPOSE	PROJECT COMPONENTS/ MAIN OBJECTIVE(S)	TIME FRAME BUDGETS	SPONSOR OFFICE	AREA OF OPERATION	MAJOR ACHIEVEMENTS FOR THE YEAR
10	Arid Lands Resource Management Project (ARLMP)	To enhance food security & reduce livelihood vulnerability in drought-prone & marginalized communities.	<ul style="list-style-type: none"> • Natural resource & drought Management • To facilitate Community driven development • To support local development through enhancement of policy & institutional environment as well as through augmenting sector services. 	2003 - 2009	World Bank Project	28 districts: Mandera, Marsabit, Tana River, Samburu, Turkana, Isiolo, Baringo, Garissa, Moyale, Wajir, Narok, Transmara, Kajiado, Makueni, Kitui, Mwingi, Tharaka, Mbeere West Pokot, Laikipia and Nyeri (Kieni East/West divisions) Kilifi, Kwale, Lamu, Malindi, Meru-North, Taita-Taveta.	<input type="checkbox"/> Training of farmers in Garissa, Tana River, and Mandera districts on pump management, crop production and scheme management. <input type="checkbox"/> Provision of relief food and water to various areas of Kitui, Makueni and Mwingi districts affected by aflatoxins. <input type="checkbox"/> Support to five Farmer Field Schools in Turkana district. Piloting of fodder production in Katilu and Turk well irrigation schemes. <input type="checkbox"/> River Water User Associations were initiated in Isiolo, Turkana and Garissa districts. <input type="checkbox"/> Training in organic farming was supported in Mandera and Moyale districts.

	NAME	GOAL PURPOSE	PROJECT COMPONENTS/ MAIN OBJECTIVE(S)	TIME FRAME BUDGETS	SPONSOR OFFICE	AREA OF OPERATION	MAJOR ACHIEVEMENTS FOR THE YEAR

	NAME	GOAL PURPOSE	PROJECT COMPONENTS/ MAIN OBJECTIVE(S)	TIME FRAME BUDGETS	SPONSOR OFFICE	AREA OF OPERATION	MAJOR ACHIEVEMENTS FOR THE YEAR
11	Western Kenya Integrated Ecosystem Management Project (WKIEMP)	To foster growth and reduce poverty by developing sound natural resource management practices		2005-2010	Global Environment Fund (GEF)	Western Kenya along three river basins i.e. Nzoia, Yala and Nyando	<ul style="list-style-type: none"> <input type="checkbox"/> 150 community groups were formed. <input type="checkbox"/> 70 regional institutions and 500 and community groups were mobilized and sensitized to participate in ecosystem management planning activities. <input type="checkbox"/> 55 Participatory Action Plans (PAPs) each with priority community sub projects targeting IEM planning were developed in the three river basins <input type="checkbox"/> 100 Community groups were trained in IEM strategies and planning. <input type="checkbox"/> Over 150 , 000 tree seedlings were planted.

	NAME	GOAL PURPOSE	PROJECT COMPONENTS/ MAIN OBJECTIVE(S)	TIME FRAME BUDGETS	SPONSOR OFFICE	AREA OF OPERATION	MAJOR ACHIEVEMENTS FOR THE YEAR
12	Mount Kenya East Pilot Project for Natural Resources Management (MKEPP)	To reduce poverty through improved food security and improving levels of incomes of farmers and rural women by promoting more efficient use of natural resources, improving access to water and introducing better farming and management practices	<ul style="list-style-type: none"> • Water resource use and management • Environmental conservation • Agriculture for rural livelihood • Community empowerment • Project management and coordination 	2004-2011	GOK, IFAD, GEF, Ministry of Water and Irrigation	The project covers selected sub-catchments of Tana River i.e. tributaries of Kapingazi, Ena, Mutunga, Kathita. It is on the Eastern slopes of Mt. Kenya covering the Districts; Embu, Meru central, Meru south, Mbeere, Tharaka	
13	Central Kenya Dry Areas and Small Holder Community Services (CKDAP).	To reduce mortality & morbidity in the project areas & improve the well being of the target group To improve food security, farm incomes and nutrition of the target population through increased crop and livestock production.	<ul style="list-style-type: none"> • Strengthen Partnerships among service providers • Strengthen Capacity of Beneficiaries to implement projects • Introduction and Promotion of Drought Escaping and high value Crops & Forages • Improvement of Small stock (dairy goats, rabbits, bees, sheep) • Enhancement of micro-irrigation technologies (drip kits in kitchen gardens) 	2005-2010 (2001-2008?)	IFAD/GOK	Kirinyaga, Maragua, Thika, Nyandarua and Nyeri	<ul style="list-style-type: none"> □ 5 stakeholders/ collaborators workshops held out of the 4 targeted. □ 2 inter-district Research/ Stakeholders meetings held. □ 3 fish farming demonstration pond established out of a target of 6. □ 22395 livestock vaccination campaign carried out from a target of 38500.

	NAME	GOAL PURPOSE	PROJECT COMPONENTS/ MAIN OBJECTIVE(S)	TIME FRAME BUDGETS	SPONSOR OFFICE	AREA OF OPERATION	MAJOR ACHIEVEMENTS FOR THE YEAR
			<ul style="list-style-type: none"> • Enhancement of environmental conservation • Value Addition 				
14	South Nyanza Community Development Project (SNCDP)	<ol style="list-style-type: none"> 1. Poverty reduction and improved livelihood of the communities in the project area. 2. Enhancement of gender, empowerment of rural communities through improved health & more rational use of natural resources for sustained livelihood activities. 	<ol style="list-style-type: none"> 1. Community empowerment 2. Primary health care provision 3. Safe domestic water supply 4. To assist farmers develop & implement Agricultural solutions to their household food problems & promote poor households in the market economy 5. To establish & operate a Project Management unit (PMU) 	2004-2011	IFAD/GOK Project	(West Rachuonyo division), Kuria (Masaba, division), Migori (Karungu division), Suba (central division), Nyamira (Nyamusi division), Homabay (Kabama division)	<ul style="list-style-type: none"> □ 639 persons received Environmental Conservation services □ 603 persons received agricultural services □ 80 agricultural demonstrations held on farmers' land. □ 10 livestock demonstrations held on farmers' land □ 715 persons received livestock project services. □ 62,506 Poultry vaccinated □ 1760 cattle vaccinated
15	Lake Victoria Environmental Management Project (LVEMP) (Integrated Soil and Water Component)	To ensure proper land use management of the Nyando Catchment for increased and sustainable agricultural production so as to reduce flow of nutrients and sediments into Lake Victoria.	<p>? Quantify soil erosion and nutrient loss from different land covers and uses</p> <p>? Design remedial measures and sustainable agricultural</p>	January 2006 –December 2007 (2000-2005)	World Bank (Sida & EU)	The Nyando River Catchment covering Nyando, Kericho, Kisumu and Nandi-South, Nandi-North, Vihiga and Marakwet districts.	<ul style="list-style-type: none"> □ collaborated with Nile Basin Initiative culminating in a sponsorship to Egypt for a six week course on Irrigation and Drainage. □ Participated in the formation of

	NAME	GOAL PURPOSE	PROJECT COMPONENTS/ MAIN OBJECTIVE(S)	TIME FRAME BUDGETS	SPONSOR OFFICE	AREA OF OPERATION	MAJOR ACHIEVEMENTS FOR THE YEAR
			<p>practices</p> <ul style="list-style-type: none"> <input type="checkbox"/> Develop systems to promote soil and water conservation measures <input type="checkbox"/> Establish demonstration units to disseminate successful soil and water conservation measures. 				<p>South Western Mau Forest Trust, steered by the Kenya Forest Working Group</p> <ul style="list-style-type: none"> <input type="checkbox"/> Participated in a Forest Action Network discussion forum to review the new Forest Act <input type="checkbox"/> Participated in Kericho Mazingira Development Forum's exhibiton at Kabianga ATC. <input type="checkbox"/> Sensitization quarry miners and sand harvesters on better conservation methods.
16	Kenya Arid and Semi-arid Lands Project (KASAL)	The overall goal of the programme is poverty reduction in ASAL through substantial and sustainable improvements in the rural livelihoods and the intermediate goal is increased agricultural production and productivity in ASAL.		24 th May 2006- May 2011	European Union/GOK		

	NAME	GOAL PURPOSE	PROJECT COMPONENTS/ MAIN OBJECTIVE(S)	TIME FRAME BUDGETS	SPONSOR OFFICE	AREA OF OPERATION	MAJOR ACHIEVEMENTS FOR THE YEAR
17	Kenya Agricultural Productivity and Sustainable Land Management (KAPSLM)	The development objective of the proposed project is to reduce and mitigate land degradation in targeted operational areas by accelerating uptake of locally driven sustainable land management practices, contributing to maintenance of critical ecosystem functions and structures.		2008-2013	GEF/GOK		
18	National Accelerated Agricultural Inputs Access Program (NAAIAP)	<p>The purpose is to increase agricultural productivity and outputs at farm level for 2.5 million smallholder farmers with one hectare or less of land in 38 districts, through mobilization of farmers' resources and promotion of efficiency in their utilization and investment in agriculture.</p> <p>To improve farm inputs access and affordability for smallholder farmers to enhance food security/availability at the household level and generate incomes from sales of surplus produce.</p>	<ul style="list-style-type: none"> • Capacity Building • Inputs grants • Marketing • Financing • Farming as a Business 	Three year pilot programme on subsidy	<p>GOK</p> <p>N.B: The programme was officially launched on 18th December 2007 at Embu</p>	<p>Nyanza:Gucha, Nyamira, Migori, Nyando, Kuria, Homa Bay</p> <p>Central: Murang'a South, Thika</p> <p>Rift Valley: Nakuru, Nandi North, Nandi South, Bomet, Bureti Kericho, Trans Mara, Uasin Gishu, Trans Nzoia, West Pokot, Koibatek</p> <p>Western: Teso, Bungoma, Mt. Elgon, Lugari, Vihiga, Busia, Kakamega,</p>	<ul style="list-style-type: none"> • Formation of National Steering Committee comprising of government and private sector partners. The committee is responsible for giving policy directions and guidance to program implementers. • Three National Steering Committee meetings have been held (July, September and November 2007). • The programme reached 35,000 farmers with Kilimo plus kit (50kg DAP, 50kg CAN and 10kg

	NAME	GOAL PURPOSE	PROJECT COMPONENTS/ MAIN OBJECTIVE(S)	TIME FRAME BUDGETS	SPONSOR OFFICE	AREA OF OPERATION	MAJOR ACHIEVEMENTS FOR THE YEAR
						Butere, Mumias Eastern: Imenti North, Igembe, Tharaka, Meru South, Embu, Mwingi, Machakos, Makueni Coast: Kilifi, Kwale, Taita Taveta	maize seed) • 392 stockists were trained
19	Comprehensive African Agriculture Development Project(CAADP)				COMESA/G OK		
20	Water Harvesting for crop production			Project started in 2006 on a small scale in some pilot districts. The Ministry intends to upscale the lessons learnt in all arid and semi arid districts	GOK		

	NAME	GOAL PURPOSE	PROJECT COMPONENTS/ MAIN OBJECTIVE(S)	TIME FRAME BUDGETS	SPONSOR OFFICE	AREA OF OPERATION	MAJOR ACHIEVEMENTS FOR THE YEAR
21	Orphan crops promotion			Project started in 2006 on a small scale. The Ministry intends to upscale the lessons learnt in all the districts	GoK		
22	Eastern Province Horticulture & Traditional Food Crops Project (EPHTFCP)			Started in 2001 and officially ended in December 2007	IFAD/GOK		
23	Revision of Farm Management Handbook			Project started in 2003 and ending in June 2008.	GTZ		
24	Kenya Plant Health Inspectorate Services (KEPHIS)			Project started in June, 2007 and ending in 2010. The project was still at mobilization stage by December 2007	EDF/EEC		
25	Increased Rural Household Income			Project started in April, 2003 and ending in 2008.	USAID		
26	Green Zones Development Support Project (GZDSP)			Project started in Nov, 2005 and ending in 2011.	ADB		

	NAME	GOAL PURPOSE	PROJECT COMPONENTS/ MAIN OBJECTIVE(S)	TIME FRAME BUDGETS	SPONSOR OFFICE	AREA OF OPERATION	MAJOR ACHIEVEMENTS FOR THE YEAR
27	Cotton Development Authority	To provide food security especially for Arid and semi-arid lands, with the objective of increasing farm incomes, providing employment opportunities and raw materials for Industrialization and also creation of wealth.	<input type="checkbox"/> Promotion of cotton production and value addition <input type="checkbox"/> Facilitation of marketing of cotton and cotton products <input type="checkbox"/> Enforcement of Regulations and standards as spelt out in the cotton (General) Regulations, 2007.	2005 - 2008	GOK	38 districts: 21 – Coast, Eastern, Central & N/Eastern Provinces 17 – Nyanza, Western & R/Valley provinces	<input type="checkbox"/> Cotton election rules developed and gazetted <input type="checkbox"/> Cotton Development Authority Board formed and inaugurated <input type="checkbox"/> Cotton subsidiary regulations, 2007 (Trade rules) developed and gazetted <input type="checkbox"/> 24,993 tons of seed cotton produced <input type="checkbox"/> 81 tons of certified cotton produced <input type="checkbox"/> 500 copies of cotton curriculum developed <input type="checkbox"/> 5 radio packages aired

Source: Annual reports 2007 from programmes/projects and PADC Department

Table 2. 3: Programmes/projects funds utilization

Name of project	Funding Source	Project Cost (Kshs-M)	Commencement and completion dates	% Completed	Estimated cost to completion (Kshs. M)	Expenditure (Kshs millions)				
						2003/04	2004/05	2005/06	2006/07	2007/08
1. National Agriculture and Livestock Extension Programme (NALEP)	SIDA/GOK	2,150.8	Started in January 2007 and ending in December 2011	4%	1,650.80	144	206	389	483	741.776
2. Agriculture Sector Programme Support (ASPS)	DANIDA/GOK	2,240.00	Started in July 2005 and ending in June 2010	50%	1778.2	435	200	165	207	310.866
3. Eastern Province Horticulture & Traditional Food Crops Project (EPHTFCP)	IFAD/GOK	961.00	Started in 2001 and officially ending in December 2007	99%	47	70	183	126	134	51.446
4. Central Kenya Dry Areas Smallholder and Community Services development Project (CKDAP)	IFAD/GOK	209	Started in 2001 and ending in 2010/11	40%	135	11		0		
5. Njaa Marufuku Kenya (NMK)	GOK	8000	Started 2005 and ends in 2015	15%	7583	33	27	15	89	127.878
6. Promotion of Private Sector Dev. In Agric. (PSDA)	GTZ/GOK	300.00	Started in 2003/04 and ending in June, 2015, phase 1 to end in 2007	25%	250.00		130	169	200.19	
7. Revision of Farm Management Handbook	GTZ	10.00	Project started in 2003 and ending in June 2008.	50%	15.0 (1.5m from GTZ & 13.5m from GoK)		0			
8. Community	JICA	120	Started in 2005/6	30%	90	-	-	-		48

Agricultural Development in Semi-Arid Lands (CADSAL)			and ends in 2008/9.							
9. Kenya Agricultural Productivity Project (KAPP)	IDA	2800.00	Project started in October 2004 and the first phase is ending in 2007 – 3 years phase.	55%	2,500.00	-				1,185.3
10. Southern Nyanza Community Development Project (SNCDP)	IFAD/GOK	USD 3 million	Project started in 2004 and ending in May 2012.	13	USD 2,608 million					
11. Smallholder Horticulture Empowerment Project (SHEP)	JICA	114.00	Project started in Nov, 2006 and ending in 2009.	40%	100	-	-	-	-	34
12. Smallholder Horticulture Marketing Project (SHoMaP)	IFAD	1,544.4	Project started in July, 2007 and ending in 2015. The project is still at mobilization stage.	3%	1,390	-	-	-	-	153
13. Kenya Plant Health Inspectorate Services (KEPHIS)	EDF/EEC	222.33	Project started in June, 2007 and ending in 2010. The project is still at mobilization stage.	3%	151.33	-	-	-	-	-
14. Western Kenya Integrated Ecosystems Management Project (WKIEMP)	GEF	USD 5.00	Project started in January, 2005 and ending in 2010.	40%	192.961			85		
15. Kari-Arid and Semi- Arid lands Project (KASAL)	EU	EC: Euro 7.893 (750)	Project started in May, 2006 and ending in 2011.	5%	700			160.8		
16. Increased Rural Household Income	USAID	US\$2.5 (175)	Project started in April, 2003 and ending in 2008.	55%	78.32			40		
17. Green Zones	ADB	UA 25.04	Project started in							367

Development Support Project (GZDSP)			Nov, 2005 and ending in 2011.							
18. National Accelerated Agricultural Input Access Project (NAAIAP)	GOK	245	Project started in July, 2007 and ending in June, 2008.	0.5%	234	-	-	-	-	245
19. Lake Victoria Environmental Management Project (LVEMP II)	WB(SIDA/EU)	9.492076	Project started in January, 2006 and ending in Dec, 2007.	5%	8.8	-	-	-		7.441
20. Comprehensive African Agriculture Development Project(CAADP)	COMESA/GOK	10				-	-	-	-	2
21. Water Harvesting for crop production	GOK	250	Project started in 2006 on a small scale in some pilot districts. The Ministry intends to upscale the lessons learnt in all arid and semi arid districts	10%	150	---	---	---	54	54
22. Orphan crops promotion	GoK	400	Project started in 2006 on a small scale. The Ministry intends to upscale the lessons learnt in all the districts	30%	200	--	---	---	300	120

Source: Annual reports 2007 from programmes/projects and PADC Department

2.2.1 MONITORING AND EVALUATION

Monitoring and Evaluation activities carried out during the year included:

Internal evaluation report for EPHTFCP

The activity was carried out between 18th July - 8th August 2007 by three officers, two from PADC and one from Agribusiness department. The mission covered eight districts of Eastern Province of Kenya namely: Machakos, Makueni, Embu, Mbeere, Tharaka, Meru South, Meru Central and Meru North.

Some of the project impacts by the end of year 2007 were:

- There was increase in productivity for all horticultural crops in the schemes.
- The project introduced new crops such as butternut, TC Bananas, improved varieties of French Beans and Sweet potatoes. The new crop varieties increased horticultural productivity by about 20%.
- Organizational development processes in the irrigation schemes led to formation of SACCOs and WUA (water user associations) which have a long-term impact in the management of development activities in the project districts.
- The project improved all the rural access roads thereby opening up the schemes to potential buyers of farm produce.
- The project also had the sub-component for construction or rehabilitation of grading sheds. The structures enhanced group marketing and reduction of losses for the horticultural crops.
- EPHTFCP brought on board horticultural crops exporters some of who entered into formal contractual arrangements with farmers. The major exporters were; Makindu, Meru Green, East African Growers, Homegrown, Kenya Horticulture, Frigoken, Simlaw seeds, Solid Veg. Exporters, Mboga Tuu, Multilmpex and Value pack.
- The project in collaboration with the Ministry of agriculture and KARI developed Manual Guide to Integrated Pest Management, Production Guidelines of TFCs and Seed Bulking Guildlines for TFCs.

2.3 BILATERAL AND INTERNATIONAL COOPERATION

The following are the functions of External Relations:

- Promotion of regional, bilateral and multilateral agricultural cooperation;
- Co-ordination of regional, bilateral and multilateral issues and activities within the ministry;
- Monitoring and reporting on foreign agricultural policies and developments and their implications on Kenyan agriculture;
- Promoting compliance with regional, bilateral and multilateral Agreements and protocols on agriculture and related areas;
- Capacity building of extension officers on international relations and negotiation skills;
- Preparation of periodic reports, briefs and country papers

Bilateral and International Cooperation activities carried out during the year are as indicated in the table below:

2.3.1: BILATERAL AND INTERNATIONAL COOPERATION ACTIVITIES

Table 2. 4: Summary of activities on Bilateral and International Cooperation

Planned Activities	Achievements	Remarks
Meeting of the East African community (EAC) Sanitary and Phytosanitary (SPS) protocol team	First draft of EAC SPS protocol developed in December	Other meetings to be planned by EAC for the final draft.
Meeting of experts on Agricultural Instruments (1 st – 3 rd August 2007)	Review of the National Agricultural Workshop on EAC Agricultural Instruments to bring on board recommendations from participants.	Key additional recommendations were accepted. EAC secretariat to print and distribute the document widely
Second sectoral council meeting (9 th May 2008)	The coordinating committee met and reviewed the issues under implementation in the Agricultural sector.	Two meetings planned for 2008/2009 calendar year.
COMESA meeting on sensitive products	Progress made on sensitive products in preparation of COMESA customs union launching in December 2008.	Meetings continuing to finalize the documents on Common External Tariff (CET)
Customs committee meetings (COMESA)	Review of wheat safeguard position and Extension of Sugar safeguard.	Safeguard to end by December 2008
Compressive African	<input type="checkbox"/> Launch of CAADP Kenya	<input type="checkbox"/> Recommendations on the

Agriculture Development Programme (CAADP)	<p>roundtable process undertaken</p> <ul style="list-style-type: none"> □ Preparation for the constitution of the CAADP Kenya Technical working committee 	<p>way forward for the Kenya CAADP implementation drawn</p> <ul style="list-style-type: none"> □ Key sector Ministries and institutions to nominate the Technical working committee identified
Bilateral cooperation meetings	<ul style="list-style-type: none"> □ Bilateral meetings were attended between Kenya - Zambia, Malaysia, China, South Africa, Venezuela, Namibia, Pakistan, Japan, Chile, Egypt, Libya, Rwanda, Cuba and Burundi. 	<ul style="list-style-type: none"> □ This resulted to enhanced cooperation in agriculture between Kenya and the respective countries.
Formulation of bilateral agreements (Joint Commission of Cooperation - JCC) between Kenya and other countries	<ul style="list-style-type: none"> □ JCC meeting with Zambia and Malaysia □ Memorandum of understanding (MOU) signed with Namibia, Cuba, and South Africa □ Draft MOUs between Kenya - Zambia and Rwanda were prepared. 	<ul style="list-style-type: none"> □ This resulted to enhanced cooperation in agriculture between Kenya and the respective countries.
Management and implementation of issues agreed between Kenya and other countries	<ul style="list-style-type: none"> □ Training of 56 extension officers from South Africa at Embu - EAST college □ Cooperation with KARI and KEPHIS in research and SPS matters □ Organized visits by delegation from South Africa, China, Malaysia, Pakistan and Ethiopia. 	<ul style="list-style-type: none"> □ This resulted to enhanced cooperation in agriculture between Kenya and the respective countries.
Liaison with relevant organizations e.g. KBS, KARI, KEPHIS and HCDA on agricultural cooperation issues	<ul style="list-style-type: none"> □ The organization participated effectively in all JCC meetings 	<ul style="list-style-type: none"> □ Resulted in enhanced cooperation in the agricultural sector
Articulate Kenya's position on agricultural issues outside Kenya	<ul style="list-style-type: none"> □ Attended 2 COMESA meetings in Lusaka and Bujumbura □ Attended meeting on cooperation with South Africa on Science and Technology 	<ul style="list-style-type: none"> □ Extension and Research activities enhanced between Kenya and South Africa

Source: Annual Report 2007 for PADC Department

2.3.2 AGRICULTURAL ATTACHE OFFICES

Kenya maintained three Agricultural Attaché offices in:

- Pretoria.
- Rome and
- London

The three offices were active in carrying out their mandate of coordinating agricultural activities between Kenya and their countries and organizations of accreditation. During the year, arrangements progressed in conjunction with the Ministry of Foreign Affairs, to open attaché offices in Brussels, Geneva, and New Delhi in India.

1. Agricultural Attaché, Pretoria

Table 2. 5: Achievements for Pretoria Attaché's office

	Planned Activity	Target	Achievements	Remarks
1	Promotion of Kenya Agricultural Market in South Africa <input type="checkbox"/> Expos <input type="checkbox"/> Technical visits <input type="checkbox"/> Conferences and shows <input type="checkbox"/> Meetings	5 8 5 10	6 10 8 12	Exhibition of Kenya Agricultural products Three unplanned visits were undertaken mainly for technology update
2	Promotion of Technology Transfer and other Agricultural conference <input type="checkbox"/> Conferences <input type="checkbox"/> Meetings <input type="checkbox"/> Visits	10 14 8	9 14 6	Areas of major technologies in Essential Oils, Potato Tissue Culture, Banana Leaf and Agro-processing
3	Bilateral Exchange Programmes <input type="checkbox"/> Visits <input type="checkbox"/> Meetings on Bilateral	12 12	12 12	Meetings were on MOUs; Exchange visits and Programmes and technical issues e.g. Limpopo Veterinarian Training
4	Reports and Briefs	86	89	Reports or briefs were written for every activity
5	Administrative Work <input type="checkbox"/> Senior staff meetings and others	56	53	Administrative work takes sizeable time

Source: Report from Pretoria, Attaché's office

CHAPTER 3: EXTENSION AND TRAINING

Extension Involves sourcing, collating, adapting, packaging, and disseminating information, knowledge, skills and technology transfer to the staff and farmers to increase agricultural productivity. The Ministry ensures skills and technology transfer by embracing research liaison, technical training and extension services.

A number of activities were carried out to improve and strengthen linkages between Research, Extension and Farmers. Farmers need are assessed and relevant technologies disseminated through field visits and trips, planning meetings, research extension workshops, on farm trials, demonstration, field days, printing and distribution of pamphlets. The staff training needs are assessed, analyzed and prioritized to translate them into training projections and strategic plans.

During the year under review, the Ministry in its effort to improve extension service delivery achieved the following:

3.1 RESEARCH LIAISON

The main focus in research liaison was to source information from research stations and then package, print, publish and disseminate it to extension providers and the farmers. The Ministry facilitates feedback from farmers to the researchers and makes smooth the collaboration between all stakeholders. Linkages within the Ministry were strengthened and with external institutions such as KARI, KEFRI, ICRAF, ABS F, ISAAA and ATC.

N.B: Research - Extension Liaison activities are detailed in Annex I



Plate 4: Photo of farmers in a learning process

Table 3. 1: Major commodities/services.

Commodity/ service	Objective	Activities		Remarks
		Planned	Achieved	
Collation of agricultural technologies	To source and collate, appropriate technologies from research institutions.	8 Visits	5 Visits	Technologies collated during Nairobi and Kitale shows and during backstopping field trips
Preparation of information packages on new technologies	To adapt package and disseminate appropriate technologies	4 Drafts	4 manuals prepared	<input type="checkbox"/> Aloe Vera, Artemisia, rodent control and sweet worm wood prepared <input type="checkbox"/> Mushroom, fertilizer being prepared
Printing of pamphlets/packages of new technologies	To print and publish pamphlets, brochures. Manuals and booklets on new technologies for dissemination purposes	4,000 Packages	4000 printed & distributed	<input type="checkbox"/> Aloe Vera, Artemisia, rodent control and sweet worm wood printed Mushroom, fertilizer being prepared
Carrying out National Performance Trials (NPT) Evaluation Missions	To collaborate with other players in the agricultural production process, participate and facilitate in the generation, testing and dissemination of relevant technologies to the farmers for adoption.	2 Tours	1 Tour	Held in August 2007
Holding NVRC & declaration of released Varieties.	To have an efficient and effective center for dissemination of new technologies	2 meeting	2 meeting	Varieties released by Minister on 28/08/07
Conducting evaluation of maize varieties performance tour	<ul style="list-style-type: none"> Facilitate maize breeders assess the performance of their seed maize varieties Give an opportunity to commercial seed companies to compare the performance of their seed maize with that of their competitors 	2 missions	1 mission	1 held in September 2007 in Western Region
Organizing workshops on Farming Systems Approach	To strengthen the DSFT's to enable them coordinate the planning and implementation of collaborative activities between research, extension, farmers and other stakeholders	4 Workshops	4 workshops held	<input type="checkbox"/> Held in Embu East College (two), Kilifi Institute and Egerton University.
Organizing workshops on Rural sociology for technology development and transfer	Equip field staff with the skills to conduct diagnostic surveys to assess farmers production constraints	4 Workshops	1 Workshop	Held in EAST college for DAEOs in Central Province

Organizing Biotechnology awareness meetings	To collaborate with other players in the agricultural production process, participate and facilitate in the generation, testing and dissemination of relevant technologies to the farmers for adoption	2 Meetings	1 meeting	One held in September 2007
Organizing National biotechnology stakeholder for a	<ul style="list-style-type: none"> To interpret and apply agricultural policies and related statutes in line with the ministries goals and objectives 	2 Fora	2 fora	One held in Jacaranda Hotel and one held in Kilimo Hq.
Organizing Consultative meetings and Follow-up field visits on DFSTs and linkage activities	To enhance effective flow and exchange of technological information between research scientists, extensionists and farmers.	11 Field Visits and consultative meetings	2 Field Visits and 3 consultative meetings	Visited KARI Kitale and Kakamega research mandate districts in October 2007, held 3 meetings with KARI HQ Kitale and Kakamega
Mandatory participation in CRAC/RREAC research priority setting meetings	<ul style="list-style-type: none"> To enhance and improve the interactive links between research, extension agents and farmers and to facilitate in the generation, testing and dissemination of relevant technologies to the farmers for adoption. 	10 Meetings	5 meetngs	Participated in KARI Kisii, Katumani Perkerra, Muguga and Mtwapa CRAC meetings
Organizing National Research- Extension Committee	<ul style="list-style-type: none"> To spearhead the formation and implementation of policy frame work on research extension liaison and To enhance a two way flow of information between research, extension and farmers 	2 Fora	1 meeting	A meeting was held with KARI in October 07 to discuss ways of reviving the committee
Backstopping missions	The objective was to enhance Extension to Farmer Service delivery with an overall aim to assessing farmer's problems through participatory approach To assess technology dissemination and adoption	10	9	Interpreted and applied agricultural policies and related statutes in line with the ministries goals and objectives and spearhead the formation and implementation of policy frame work on research extension liaison

Source: Annual Report 2007 for Extension Department

New Seed / Crop Varieties Released In 2007

The Ministry through the NVRC organized and coordinated the release of new crop varieties. The following crop varieties were recommended to the Minister to release in 2007.

Table 3. 2: Seed Varieties Released

Crop	Variety	Company	Special attributes
MAIZE	1. DH06	KSC	Resistant to foliar diseases, has excellent hask cover, drought tolerant and prolific with good stand ability. Suitable for altitude range 900-1500 m asl – Kirinyaga, W/Pokot, Mwea, Homa Bay and Kerio Valley. Matures in 3-4 months and can yield 4-6.5t/ha
	2.EV0421	KARI	OPV, Semi flint , 130-150 days to maturity, Resistant to Rust has good stand ability, yields up to 50 bags per acre Suitable for T/Nzoia, U/Gishu, Bungoma, Parts of W/ Pokot
	3.WS303	Western Seed Co,	Tolerant to MSV, GLS , rust , drought and low nitrogen. Resistant to striga
WHEAT	1. 00B31 KS Simba	KSC	Plant height 81cm, hard red, yield 17-32 bags /acre, suitable for both marginal and high potential areas, matures in 116 days and has good baking qualities. Suitable for T/Nzoia, U/Gishu, Nakuru, Narok, Laikipia, Kericho, Bomet T/Mara and Timau
	2. 92B9 KS Farasi	KSC	Intermediate plant height 87cm, hard red with awned ears, yield range 16-30 bags/acre, suited for both high and marginal areas, matures in 119 days, tolerant to most foliar diseases and has good baking qualities. Suitable for Trans Nzoia, U/Gishu, Nakuru, Narok, Laikipia, Kericho, Bomet, Trans Mara and Timau .
SUGARCANE	1. KEN 82-472	KESREF	Greenish yellow erect medium stalk, yield 74-125mt/ha, intermediate resistance to smut and rust, adaptable to a wide range of Zones, good ratooner and matures in 17-19 months. Suitable for Western, SONY & Nyando
	2. EAK 73-335	KESREF	Purple-pinkish erect medium thick stalk, yield range 89.1-176.3t/ha intermediate resistance to smut. Matures in 18-20 months. Suitable for Mumias, SONY and Kibos
	3. KEN 82-62	KESREF	Purplish erect medium thick stalk, yield range 65.7-134.9 t/ha, intermediate resistance to smut, susceptible to mosaic, adaptable to Kibos and matures in 17-20 months.
	4. D8484	KESREF	Greenish yellow erect thick stalk, yield range 108.6- 145.3 t/ha resistant to smut and susceptible to mosaic virus Suitable to Mumias and SONY Early maturity 14-16 months.

Source: Annual Report 2007 for Extension Department

(D) Announcement of New Seed / Crop Varieties

The Minister announced the release of the following crop varieties in 2007.

Table 3. 3: Varieties Released

CROP	Variety	Company
MAIZE	1. DH06	Kenya Seed Company
	2.EV04271	Kenya Agricultural Research Institution (KARI)
	3.WS303	Western Seed Co,
	4.PH 5	Kenya Seed Company
	5.DH11	Kenya Seed Company
	6.DH12	Kenya Seed Company
	7.Ua kayongo 2	KARI / CYMMIT
	8.Ua kayongo 3	KARI / CYMMIT
WHEAT	1. 00B31 KS Simba	Kenya Seed Company
	2. 92B9 KS Farasi	Kenya Seed Company
SUGARCANE	1. KEN 82-472	KESREF
	2. EAK 73-335	KESREF
	3. KEN 82-62	KESREF
	4. D8484	KESREF

Source: Annual Report 2007 for Extension Department

Table 3. 4: Dissemination of other technologies and their adoption rates

Province	Technology	Demonstrations		
		Target	Achieved	Remarks
Nairobi	Fireless cookers	110	65	60%
	Multi-story gardens	140	110	78.5%
	Food preservation	70	34	48.5%
	Composting	170	77	45.3%
	Food processing	210	106	16%
	Soap making	20	5	25%
	Baking	15	22	140%
	Bucket irrigation	15	18	120%
	Energy saving devices	25	6	24%
Rift valley	Composting	860	650	80%
	Water harvesting	25	5	25%
	Soya beans	180	40	20%
Nyanza	Striga control initiative	80	65	80%
	T. C. Bananas	245	190	77%
	Soil fertility trials	710	350	49%
	Cereal crop variety trials: maize, sorghum, millet	550	250	45%
	Integrated pest mgt	55	40	72%
	Agro forestry trials	235	92	39%
	Cassava	500	210	42%
North Eastern	Early planting	125	40	32%
	Weeding	76	40	525
	Nursery preparation and management	54	30	55%
	Transplanting	50	30	60%
	Certified seeds	100	50	50%
	Water management	100	32	32%
	Grading & sorting	65	28	43%

Source: Annual Report 2007 for Extension Department



Plate 5: DASS supported farmer group in Bahari Division Kilifi district.

The plate shows adoption of the green house technology in commercial tomato (Ana variety) growing. They copied this technology from a visit to Mtwapa ATC. It is estimated this enterprise can earn the group about Ksh 350,000.

3.2 EXTENSION SERVICES

It comprises of three sub-division as presented below:

- Extension Management
- Gender and Home management
- Agricultural training Centers (ATCs)

3.2.1 EXTENSION MANAGEMENT

Kenya's agriculture is dominated by small scale farmers who account for 75% of the total production and 70% of the marketed output. However, there are wide variations among the small farmers in management practices and husbandry skills. This means that provision of high quality extension services is very critical for improvement of smallholder productivity, farm incomes and hence poverty reduction benefits.



Plate 6: Sister Veronica Thiga on extension follow up

The follow up was in Gatanga Division, Thika District. 2007 - Songa Mbele Farmers' Group for commercial vegetable farming.

Table 3. 5: Farmers Services (Numbers reached):

Extension Method	Province / Station - (No of activities/Groups)								Total farmers reached
	Nairobi	Nyanza	Coast	Rift Valley	North Eastern	Central	Western	Eastern	
Barazas	40	689	667	317	297	1099	284	1,472	269,794
Demonstrations	67	974	884	246	498	5303	465	2,065	111,546
Field days	10	326	88	452	648	409	55	501	175,625
Farmers tours	3	12	28	20	1	138	21	207	4,642
Individual farm visits	911	6427	18372	1457	1406	26398	6532	31,045	79,242
Group visits	155	1316	2210	610	883	2919	656	2,430	112,160
Information desks	44	98	243	836	89	1970	178	7378	71,046
Shows	2	206	13	4	35	93	9	13	82,295
Farmers seminars, w/shops	21	762	276	525	27	243	97	425	38,925
CIGs	181	3447	737	-	83	1165	694	898	175,122
FFSs	6	1266	1015	-	11	265	183	273	19,588
Extension groups	47	776	959	-	271	1896	177	910	57,087

Source: Annual Report 2007 for Extension Department

Table 3. 6: Technical staff and other Stakeholders Collaboration Activities :

Activity	Nairobi	Nyanza	Coast	R.Valley	N.Eastern	Central	Western	Eastern	TOTAL	National totals (persons)
Staff seminars/workshops	13	190	48	-	84	297	88	299	469	3580
Staff meetings	3	163	128	-	94	563	196	629	853	6165
Staff tours	nil	5	6	-	1	117	8	64	126	554
Followups/backstopping	94	241	368	28	157	629	302	1,423	1819	3533
Stakeholders forums	3	47	168	20	70	1072	48	342	1428	11,222
NALEP Broad based surveys	1	73	18	20	9	915	5	118	1041	13,055

Source: Annual Report 2007 for Extension Department

3.2.2 GENDER AND HOME MANAGEMENT

Gender and Home Management the ministry addresses Gender and Youth, Nutrition and Home Economics; and the Aids Control Unit (ACU). The activities in the field are carried out by the Gender and Home Management officers. Group approach is emphasized mainly through Women and Youth groups.

Table 3. 7: Planned Activities:

ACTIVITIES	No. planned (annual)	No Achieved	Remarks
Seminars and workshops	24	26	Workshops, conferences and meetings for staff.
Field supervision and backstopping.	4	3	Stations – Garrissa, Tana River, Mwingi, Embu, Meru Central, Meru North, Turkana, West Pokot. Total 11 officers participated.
Participation in field activities		10	Diverse activities involving 39 officers.
Extension and training materials development.			Drug and substance abuse; 2 Basic counseling skill guidelines; 1000 Nutritive value – health benefits; 2,000 Cooking with mushrooms; 1,000 Multi-storey garden; Nutrition and HIV; 830 Gender mainstreaming and 4 k cookbook.
Booklets	4	3	
Fliers	3	3	
Books	2	1	

Source: Annual Report 2007 for Extension Department

Table 3. 8: 4 –k club statistics by province.

	Previous Period		Reporting Period						
			Members				Patrons		
Province	No. of Clubs	M/Ship	No. of Clubs	Boys	Girls	Total	Women	Men	Total
Nairobi	46	11,170	48	770	501	1,271	21	36	57
Rift Valley	1,369	36,813	1,333	26,454	22,200	48,654	640	764	1,404
Central	770	10,656	383	6,960	5,764	12,724	153	199	352
Western	734	4,060	706	16,160	15,430	31,590	1,423	168	1,591
N Eastern	42	-	1,433	917	419	1,336	18	29	47
Coast	379	10,352	429	6,209	5,972	12,181	119	171	290
Nyanza	621	12,986	564	10,726	8,505	19,231	193	320	513
Eastern	-	-	617	11,061	10,913	21,902	-	-	-
Total	3,915	86,037	4896	68,196	58,791	126,987	2,567	1,687	4,254

Source: Annual Report 2007 for Extension Department

Remarks: Most of the clubs do not have local leaders. The Districts plan to sensitize Head teachers on the importance of 4K CLUBS so that they can assist in their formation. This is because schools are not enthusiastic in starting and supporting 4K clubs because agriculture was scrapped from the list of examinable subjects.

Table 3. 9: Young farmers club statistics by province.

	Previous Period		Reporting Period						
	No. of Clubs	M/Ship	Membership				Patrons		
Province			No. of Clubs	Boys	Girls	Total M/Ship	Women	Men	Total
Nairobi	14	450	17	436	210	9	14	23	23
Rift Valley	278	7726	320	7485	6331	13916	100	132	232
Central	156	5430	152	3573	2667	6260	61	71	142
Western	145	4796	212	4827	3674	8401	62	70	132
North Eastern	12	231	16	295	138	433	3	3	6
Coast	70	1570	98	1305	1133	1476	32	34	61
Eastern	317	10,008	340	5382	6467	10978	126	202	
Nyanza	424	13128	367	7086	5770	1204	134	230	366
TOTAL	1,099	33,331	1,182	25,007	19,923	31,699	406	563	962

Source: Annual Report 2007 for Extension Department

Table 3. 10: Out of school youth statistics by province

Province	Previous Period		Reporting period			
	No. of Clubs	M/ship	No. of Clubs	Female	Male	Total M/ship
Nairobi	20	365	27	181	537	530
Rift Valley	732	10740	1074	10087	11561	23109
Central	209	4217	209	2472	3241	5713
Western	568	11126	656	6027	8879	14906
North Eastern	22	17	71	215	196	411
Eastern	794	18340	742	8991	11765	21024
Coast	188	4044	203	1105	2097	3947

Nyanza	621	12986	564	10726	8505	19531
Total	2,360	45,855	2,804	30,813	35,016	68,147

Source: Annual Report 2007 for Extension Department

3.2.3 AIDS CONTROL:

During the year 2007 messages were passed through a variety of methodologies such as field days, trainings, workshops, demonstrations, shows and exchange visits. The technical areas covered were population education, kitchen gardening, food utilization, food preservation, appropriate technologies, income generating activities and nutrition in HIV/AIDS



Plate 7: Peer educators in a video session

The video show was on sexual behavioral change at Garissa ATC in October 2007

HIV/AIDS awareness creation



Plate 8: HIV/AIDS awareness creation in market place

Table 3. 11: Home Economics Extension Groups by province.

Station	No. of Groups		Membership			Remarks
	Target	Achieved	No. of Female	No. of male	Total	
Central	1920	1583	24050	10406	34,456	Includes concentrated in slums???
Nairobi	74	70	867	602	1469	
Coast	962	754	10307	9938	20245	
R.Valley	-	-	-	-	-	
Western	1367	1149	20369	9568	29937	
Eastern	1306	608	-	-	72295	
N.Eastern	452	172	5450	1053	6635	
Nyanza	3688	827	13259	9909	23168	
Total	9769	5163	74302	41476	188205	

Source: Annual Report 2007 for Extension Department

Plate 9: A women group displaying food cooked by fireless cooker



Table 3. 12: Home Management Groups Trained

Province	Home Garden						Rearing of Small Livestock					
	No. of groups		No. of Trainings	No. Trained			No. of groups		No. of Trainings	No. Trained		
	Tar	Ach		Female	Males	Total	Tar	Ach		Females	Males	Total
Central	1515	1092	927	9736	4224	13960	762	427	368	4878	2608	7486
Nairobi	72	45	41	574	280	854	46	34	30	284	284	568
Coast	849	572	469	2854	966	3820	352	212	134	811	330	1141
R. Valley	5559	2062	1574	12520	7741	20261	4579	977	611	7865	3833	11698
Western	1222	916	820	726	5563	6289	483	263	180	2165	2804	4969
Eastern	-	-	-	-	-	-	-	-	-	-	-	-
N.Eastern	299	159	76	699	190	889	56	36	20	576	304	880
Nyanza	992	585	427	7989	4086	12075	582	324	278	4335	3300	7635
Total	10508	5431	4334	35098	23050	58148	6860	2273	1621	20914	13463	34377

Source: Annual Report 2007 for Extension Department

Food and Nutrition Activities:

Food and nutrition activities were aimed at promoting diet diversification and better eating habits. The activities promoted during the report period included home gardening, rearing of small livestock, food preparation, food preservation, nutrition education and nutrition management of HIV/AIDS.

The main crops grown in the home gardens were local vegetables such as black nightshade, spider plant, crotalaria, cowpeas, and amaranths, other vegetables like kales, spinach, onions and carrots, root crops like sweet potato and cassava. Home Economics extension groups were also trained on preservation of foods such as vegetables, fruits, grains, and root crops. Key extension messages disseminated included establishment and maintenance of home gardens and their contribution to nutrition and household food security; and food hygiene and safety.

The main small livestock promoted were local poultry and rabbits, aimed at improving household access to animal protein. Production and utilization aspects were taught. Demonstrations and training on preparation of food, particularly traditional and under-utilized ones were conducted.

Nutritional management of HIV/AIDS

About 32000 people have been trained on nutritional management of HIV/AIDS with majority (36%) being from Nyanza province as indicated in the table below. The trainings were carried out during field days, focal area development committee (FADC) meeting, common interest group (CIG) meetings.

Table 3. 13: Training on HIV/AIDS by Province

Province	Nutritional management of HIV/AIDS						
	No. of groups		No. of training		No of Participants		
	Target	Achieved	Target	Achieved	Women	Men	Total
Central	287	197	261	193	2264	1790	4044
Coast	123	71	137	92	492	388	880
Rift Valley	545	516	400	244	5256	3816	9920
Nairobi	29	21	26	21	325	223	548
Western	374	205	221	158	2643	1426	4069
North Eastern	108	57	67	80	760	166	926
Eastern	-	-	-	-	-	-	-
Nyanza	309	168	386	305	6542	5166	11608
Total	1775	1235	1498	1093	18282	12975	31995

Source: Annual Report 2007 for Extension Department

3.3 AGRICULTURAL TRAINING CENTERS (ATCS)

Objectives

The overall objective of ATCs is to provide quality training services and facilities for enhancing agriculture and development.

ATCs DFF PERFORMANCE

Table 3. 14: Demonstration Farm Fund (DFF) Achievements

station	DFF-FD			DFF-TRAC		
	allocation	generated	submitted	allocated	generated	submitted
Baringo	600,000.00	863,500.30	779,611.00	650,000.00	551,555.00	602,015.00
Bukura	552,000.00	925,049.30	677,348.70	400,000.00	672,420.00	970,565.20
Bungoma	885,000.00	729,372.30	1,407,336.30	1,245,000.00	6,394,536.00	2,925,337.35
Busia	311,000.00	284,080.00	365,120.00	890,000.00	683,449.50	934,186.00
Chebororwa	6,420,000.00	4,839,027.60	7,940,880.60	1,350,000.00	1,553,319.00	1,332,127.00
Embu	300,000.00	182,585.00	329,613.00	715,000.00	1,099,270.00	1,004,550.00
Garissa	-	-	-	600,000.00	1,044,706.00	969,356.00
Homabay	No report	-	-	-	-	-

Isiolo	-	-	-	950,000.00	1,193,235.00	914,230.00
Kabianga	490,000.00	375,773.15	743,169.25	120,000.00	-	225,410.30
Kaguru	301,000.00	490,144.50	278,846.50	3,250,000.00	3,531,467.00	3,637,590.00
Kaimosi	485,000.00	454,011.00	702,510.00	300,000.00	365,100.00	548,653.00
Kamweti	1,040,000.00	1,473,311.40	915,555.40	300,000.00	241,700.00	241,400.00
Kenyatta	264,080.00	613,499.10	431,172.60	100,000.00	136,220.00	37,500.00
Kisii	400,000.00	588,298.50	655,719.00	406,355.00	198,578.00	1,481,557.00
Kitui	-	331,166.00	143,380.00	-	-	-
L. Kenyatta	-	91,839.50	-	250,000.00	208,535.00	-
Machakos	485,000.00	506,407.00	607,126.00	2,784,800.00	3,227,449.40	3,415,126.40
Maseno	323,000.00	292,061.00	160,422.00	400,800.00	779,412.00	930,415.00
Mtwapa	430,000.00	596,281.25	850,090.75	300,000.00	614,320.00	1,246,814.30
Ngong	234,000.00	257,701.00	271,452.00	116,000.00	426,810.00	343,933.00
Njabini	305,000.00	115,515.65	548,743.35	-	-	8,200.00

Source: Annual Report 2007 for Extension Department

Table 3. 15: ATCs Main Enterprises / Activities

Activity/Enterprise	Station																							
	Baringo	Bukura	Bungoma	Busia	Chebororwa	Embu	Garissa	Homabay	Isiolo	Kabianga	Kaguru	Kaimosi	Kamweri	Kenya	Kisii	Kitui	L. Kenya	Machakos	Maseno	Mtwapa	Ngong	Niabini	Ol Joro Rok	Siaya
Field days (No.)	1	1	1	1	1	1	1	1	1	-	2	1	2	1	1	1	1	1	1	2	1	1	1	1
ATC hosted trainings (No.)	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	3	2	-	-	-
Stakeholders hosted trainings(No.)	-	-	-	-	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Dairy cattle(No.)	36	266	8	12	76	14		12			20	37	13	8		2		9	15	12	10	13	18	11
Poultry (No.)					500			260								800					300			
Piggery (No.)																								78
Beef herd(No.)					104																			
Dairy goats/goats(No.)					340																			
Sheep(No.)					150							12										34		
Tree nursery (seedlings sold)		40K	30K		20K	11.4K																		
Coffee(Ha)	5		3	5							7	3	4		3									13
Maize(Ha)		15	12		50			5				10			4	6			1	5				
Cabbages (Ha)			0.2																					
Seed Maize(Ha)					40																			
Seed Wheat(Ha)					30																			
Finger Millet(Ha)					4																			
Tea(Ha)											4	4	10	8	4									
Sunflower (Ha)					18																			

Source: Annual Report 2007 for Extension Department

The report covers the major enterprises for the ATCs. It does not include demonstration plots

CHAPTER 4: LAND AND CROP MANAGEMENT

4.1 LAND DEVELOPMENT AND MANAGEMENT

The Land Development contributes immensely to Agriculture and Economic development of the nation and to the reduction of poverty in rural areas. In agriculture the most important resources are the soil and water. The Ministry is promotes Agro-forestry as a land use system to reduce and check degradation, improve soil fertility and overall land productivity. Strategies have been put in place to fast track rehabilitation and establishment of tree nurseries, tree planting and care starting with the worst hit areas. Demonstrations on Agroforestry and soil fertility management including efficient water use were also undertaken.

The Government continues to offer machinery hire services to the farming community through the AMS stations. These stations raised Ksh 51,284,431.00 in the year under review. The Agricultural Technology development centres work very closely with farmers and play a crucial role in identifying, validating and testing relevant technologies.

4.1.1 AGRICULTURAL MECHANISATION SERVICES

The Agricultural Machinery Service Stations continued to offer services through the 23 stations that are distributed in the country. Their services complimented what was being offered by the private sector focusing on having more land on crop for better food security. During the year, the Ministry acquired twenty-three extra farm tractors that boosted the services offered on ploughing. 10 crawlers were purchased to assist in activities related to dam construction, dam de-silting, land levelling de-stamping and road construction.

Table 4. 1: Plant and Equipment position in the stations during the year 2007

PROVINCE	Name of AMS / ATDC	Regional or District Based	Plant and equipment	New tractors (No)	New Crawlers
CENTRAL	AMS Ruiru	Regional	17	-	1
	AMS Nyahururu	District	7	-	-
	AMS Naromoru	District	5	-	-
	ATDC Ruiru	Regional	10	-	-

EASTERN	AMS Machanga	Regional	12	-	1
	AMS Mitunguu	District	18	1	-
	AMS Kitui	District	10	1	-
	AMS Makueni	District	4	-	1
	ATDC Katumani	Regional	10	-	-
	ATDC Siakago	Regional	5	-	-
COAST	AMS Mariakani	Regional	4	2	1
	AMS Garsen	District	10	2	-
	ATDC Mtwapa	Regional	4	-	-
NORTH EASTERN	AMS Garissa	Regional	5	1	1
	AMS Mandera	District	1	1	-
RIFT VALLEY	AMS Nakuru	Regional	11	-	-
	AMS Narok	District	4	-	-
	AMS Kajiado	District	7	1	1
	AMS Samburu	District	4	2	-
	AMS Eldoret	Regional	7	-	-
	AMS Kipkelion	District	11	-	-
	AMS Marigat	District	11	-	1
	AMS Kitale	District	19	-	1
	ATDC Nakuru	Regional	10	-	-
WESTERN	AMS Bumala	Regional	9	3	1
	ATDC Bukura	Regional	3	-	-
	ATDC Bungoma	Regional	2	-	-
NYANZA	AMS Migori	Regional	10	2	1
	AMS Siaya	District	23	4	-
	AMS kisumu	District	7	3	-
	ATDC Siaya	Regional	29	-	-
	ATDC Homabay	Regional	2	-	-

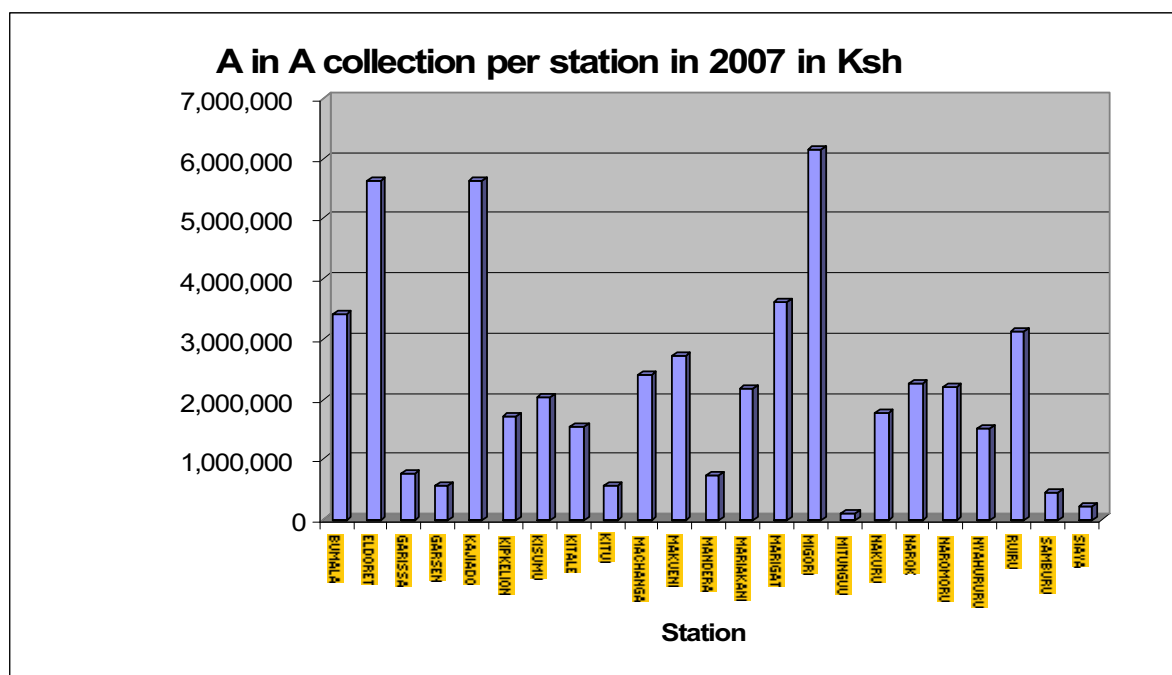
Source: Department of Land and Crops Development and Management

Revenue Collection

A total of Ksh 51,284,431.00 was realized from the stations during the year against a target of 46,821,336.00. This was approximately 9.5% above the target mainly because of the new equipments that were delivered within the year. As per the chart, Migori, Eldoret and Kajiado stations were able to generate the highest revenues among the 23 stations. These stations received additional

crawlers and have committed staff. Some of the stations generated less revenue due to the poor condition of the available equipment and plants. Most of the stations surpassed their targets with the exception of Garissa, Garsen, Kitale, Kipkelion, Mitunguu, Nakuru, Narok, Nyahururu, Ruiru, Samburu and Siaya. This can be attributed to little involvement of stations in setting targets of revenue to be collected.

Chart 1: Revenue collected per station



Source: Department of Land and Crops Development and Management

4.1.2 AGRICULTURAL TECHNOLOGY DEVELOPMENT

The ten Agricultural Technology Development Centers continued to develop and promote relevant agricultural technologies. They also enhanced collaboration with stakeholders in research development, manufacturing and distribution of technology. The centres are distributed regionally at Nakuru, Ruiru, Iamu, Siaya, Mtwapa, Siakago, Katumani, Homa bay, Bukura and Bungoma thus catering for all the agro ecological zones.

During the year, the following technologies, among others, were promoted through forums such as ASK shows, district stakeholder exhibitions/field days and arranged station visits.

- Fabrication of Nakuru Harch II
- Fabrication of Donkey Harness
- Fabrication of the Jab Planters
- Fabrication of Fad mixers

- Fabrication of multipurpose tool bar.

4.1.3 PROMOTION OF AGRO-FORESTRY PRACTICES

Agro forestry as a land use system is practiced all over the country through diverse practices. A wide variety of multipurpose trees are used. The most common agro forestry trees and shrubs are grevillea Croton, Calliandra, Mangoes, eucalyptus, Cypress, Acacia and wattle tree.

Common agro-forestry practices in the country include, border tree planting, trees interspersed in cropland, trees in soilconservation structure, woodlots, live fences, fruit orchards and medicinal trees.

The main source of planting materials were through purchase, own raised, wilding or other sources including Green belt movement, Forest department, NGOs, ICRAF and Energy department

Agro-forestry Nurseries

Most of the commercial tree nurseries are located along the major highways. A big percentage of farmers purchase seedlings from established commercial nurseries. This offers an opportunity for establishment of more nurseries because of the ready market. There has been a lot of training on nursery establishment and maintenance and the number of farmers raising there own seedlings is set to rise as farmers establish there own nurseries.

See details of agro-forestry nurseries i.e. ownership, number of seedlings and tree species planted in Annex II

There has been an increase in the number of tree nurseries and a significant number is owned by groups of farmers. This is partly due to promotion of commercial tree seedling production through CIGs by NALEP-SIDA. The percentage is even higher for the ASAL districts. Erratic rains, poor timing of planting and less monitoring after planting by farmers reduced survival rate.

Tree Seedlings Marketing

Trees and tree seedlings in high demand were eucalyptus, grevellea, Cyprus, mangoes and paw paws. They were mainly for domestic carpentry and industrial uses. Kenya Tea Development Agency factories and Kenya Power Lighting Company were the main buyers for wood fuel and electric posts respectively. High demand by KTDA factories caused increase in wood fuel prices and destruction of some fruit trees like mangoes.

Trainings on Agro-forestry

Sensitization on agro forestry was going on and farmers, out of school youths, 4k clubs and institutions were trained in different subjects at different forums and

using diverse methods. A total of 76,135 -43,043 males and 33,042 females were trained with Central Eastern and Western provinces training the largest numbers

Stakeholders' Participation in Agro-forestry Development

Details of other collaborators in agro forestry in the country are as in the table below.

Table 4. 2: Collaborators in Agro-forestry activities.

Province	Organization	Activity
Central	Green belt movement	Tree nursery establishment, promotion indigenous species
	Forest and prison department	Tree nursery establishment & planting, Extension work
	NGOs	Distribution of seedlings, nursery establishment
	KEFRI, SACDEP	Energy saving devices, Supply of Biotechnology seedlings, Research and Extension
	TARDA,	Capacity building on environ conservation
Eastern	Forest department	Tree nursery establishment & planting, Extension work
	NEMA	Training on agro-forestry & environmental protection
	Green zone movement, KTDA	Tree nursery establishment and management
Western	Forest department	Tree nursery establishment, promotion indigenous species
	NGOs	providing seedling & training on mgt, training agro-forestry
	ICRAF	Tree nursery establishment, promotion indigenous species
N. Eastern	World food programme	Raising acacia seedlings
	UNHCR	Raising acacia seedlings
	Forest department	Raising acacia seedlings
	Womankind,	Raising acacia seedlings
Nairobi	NEMA	Tree nursery establishment & tree planting
	ICRAF	Training on agro-forestry
	Forest department	Training on agro-forestry
Coast	Forest and prison department	Tree nursery establishment & planting, Extension work
	Green belt movement	Tree nursery establishment, promotion indigenous species
	ICIPE	Tree nursery establishment, promotion native

		forest
Nyanza	Forest department	Tree nursery establishment, promotion indigenous species
	NGOs	providing seedling & training in mgt, agro-forestry
	ICRAF, KTDA	Tree nursery establishment, promotion indigenous species
R. Valley	Forest department	Tree nursery establishment and planting
	KVDA	Nursery establishment and seedling production
	ICRAF	Nursery establishment, tree planting, seed provision

Source: Department of Land and Crops Development and Management

Challenges in Agro-forestry Development

These include:

- Rampant harvesting of timber.
- Limiting land sizes.
- Institutions promoting agro-forestry opportunities not fully exploited.
- Termite infestation and persistent moisture deficit
- Livestock damage.
- Gender issues; tree planting is a male domain hence little involvement of women
- Low survival rate in dry areas of the country

4.1.4 SOIL FERTILITY MANAGEMENT

Soil Fertility Ratings

Soil fertility management practices were encouraged to replenish depleted soil nutrients. Most of the provinces had a “fairly good” soil fertility rating as in the table below.

Table 4. 3: Soil fertility ratings by provinces

scale to rate fertility, 1: Very good, 2: Good, 3: Fairly good, 4: Poor, 5: Very poor		
Province	Soil fertility rating	INDICATORS
Central	3	Weed growth, vegetation cover, average yield
Eastern	3	Fairly good crop harvest without input, exposed roots, rill/gully erosion
Western	3	Average yields, High soil erosion, high deforestation rate, very low pH
N Eastern	3	Relatively low yields, low WHC, mainly sandy

Nairobi	3	Cracking soils, shallow soils, murram underneath
Coast	3	Vegetation cover, crop performance, soil physical characteristics
Nyanza	3	Average yields, High soil erosion, high deforestation rate, very low pH
R Valley	3	Crop performance, vegetation cover, soil test results

Source: Department of Land and Crops Development and Management

Fertilizers Management Practices

Most of the fertilizers were used in the high rainfall areas while most farmers used manure together with fertilizer. Farmers in the marginal areas did not employ soil fertility improvement methods due to poverty.

Table 4. 4: Major soil fertility management practices undertaken by farmers

Province	Practice	Percentage of farmers practicing	Reason why method is used
Central	1 Fertilizer	60.2	Easy to apply and readily available
	2 Manure	32	Available (Zero grazing), skills to compost
	3 Other	3	Mulching, awareness
	4 None	4.8	Poverty level
Eastern	1 Fertilizer	26	Easy to apply, have learnt benefits (demos)
	2 Manure	28	Readily available, taboo in some areas,
	3 Other	14	Maize stalks available, combining
	4 None	38	Too poor to access, Weird belief about fert
Western	1 Fertilizer	35	Low yields without fert, credit by sugar co.
	2 Manure	20	No confinement of animals, few zero grazers
	3 Other	0	
	4 None	45	Poverty level, good uptake strategy by plants
N. Eastern	1 Fertilizer	0	
	2 Manure	20	
	3 Other	0	
	4 None	80	No land pressure
Nairobi	1 Fertilizer	20	
	2 Manure	40	Easily available and cheap
	3 Other	30	Mulching- conserve moisture, solid waste available
	4 None	10	
Coast	1 Fertilizer	21	Easy to apply and readily available
	2 Manure	19	Few animals but cheaper than fertilizer
	3 Other		
	4 None	60	High poverty levels
Nyanza	1 Fertilizer	30	Low yields without fert, credit by sugar co.
	2 Manure	19	No confinement of animals, few zero grazers
	4 None	51	Poverty level, good uptake strategy by plants

R. Valley	1 Fertilizer	65	Easy to apply and readily available
	2 Manure	15	Availability
	3 Other	10	fallow, mulching to conserve water
	4 None	10	Poverty levels

Source: Department of Land and Crops Development and Management

Soil Fertility Technologies promoted by Stakeholder

Besides the Ministry of Agriculture, organizations that promote soil fertility management include research institutions, universities and NGOs. However, no organization, including the Ministry of Agriculture, is promoting this activity in North Eastern Province.

Table 4. 5: Institutions/ Organizations promoting soil fertility management.

Province	Organization/Institution	Technology Promoted
Central	KIOF	Organic farming
	KARI, Universities	Soil testing, N-fixation, conservation agriculture
	MOA	compost making
Eastern	KARI	Use of manure , fodder tree
	World Vision	Use of FYM,
	Catholic Diocese	Composting
Western	MOA	Composting
	SACRED Africa	Organic farming
	FAO	Conservation agriculture
N. Eastern	None	N/A
	None N/A	
	None	N/A
Nairobi	KARI	Soil testing, biofix
	NEMA	Composting
	MOA	Composting
Coast	MOA	Composting
	KARI	Organic farming
Nyanza	MOA	Composting
	KARI	Composting, soil mgt
	ICRAF	Soil management
R. Valley	MOA	Composting
	KARI	Composting, soil mgt
	ICRAF	Soil management

Source: Department of Land and Crops Development and Management

Table 4. 6: Training in Soil Fertility Management

province	Type of soil fertility testing services requested	No. of farmers and reason for requesting for services	Institutions offering services
Central	pH and soil nutrient status	318 (declining yields)	KARI, UoN, JKUAT, CRF
Eastern	pH and soil nutrient status	86 (Poor crop performance), to know rate	KARI, CRF, NARL
Western	pH and soil nutrient status	1100 farmers) poor crop performance	KARI, KESREF
N Eastern	None	None	
Nairobi	Soil nutrients testing, pH	20 KARI-NARL	
Coast	None	None	
Nyanza	Soil nutrients testing, pH	130	KARI, Maseno, KESREF
R Valley	pH and soil nutrient analysis	2013 - Declining crop yield, to know rate	KARI, NARL, MEA

Source: Department of Land and Crops Development and Management

A total of 49,885 farmers were trained on various types of soil fertility management practices which included composting, fertilizer types and application, agro-forestry, integrated soil fertility management techniques, use of animal manure and conservation agriculture.

Soil Fertility Research Activities

There are various institutions involved in research in soil fertility though there is little collaboration between them and the Ministry of Agriculture except in Central and Eastern Provinces.

Soil fertility research: Past and ongoing

Soil fertility research is mostly done by KARI and ICRAF

Research done by KARI – effects of organic manure on maize yields, use of cover crops, fertilizer use recommendations, use of Biofix, PH, and green manure.

Soil Fertility Testing Services

During the period under review 3,667 Farmers requested soil-testing services and made inquiries on availability and costs of the services. Research-extension workshops highlighted researchable issues.

Table 4. 7: Summary of Soil and Water conservation measures

Activity	Annual targets	Achievements		Interventions									
		No of farms laid out (Intervened)	No of farms Implemented (By Farmer)	Fanya juu (Km)	Bench Terraces (Km)	Grass Strips (Km)	Un – ploughed strips (km)	Retention ditches (Km)	Trash lines (Km)	Stone lines (Km)	Gully control (No)	Art water ways (Km)	CoD (km)
Soil conservation works													
Total	71,007 farms	50,933 farms	34,697 farms	45,435.41 km	5,553.32	7,937.39	10,082.58	4,170.89	5,419.821	5,232.82	1,835.11	564.65	715.33
River bank protection		No of km pegged	Km protected	Sugar cane	Fodder grass	Bananas	Natural grass	Agro-forestry trees	Natural bush	Others			
Total	8,124.6	3,694.94	2,434.0	569.81	771.6	363.9	777.74	531.08	663.57	67.7			
Water harvesting		Farms laid out (No)	Farms implemented (No)	Contour bunds (No)	Semi-circular bunds (ha)	Water spreading bunds (ha)	Basins (ha)	Negarims (ha)	Trapezoidal bunds (ha)	Roof harvesting (No.)	Road runoff harvesting (No)	Farmers	Staff
Total	42717	16278	9557	2848.81	1750.26	2848.05	1907.5	360.33	4803.83	21132.3	6759	9687	147

Source: Department of Land and Crops Development and Management

4.2 CROPS DEVELOPMENT

4.2.1 FOOD CROPS

Generally food crops comprises of cereals, pulses, roots and tubers. Whereas cereals comprise of maize, wheat, sorghum, rice and millet, pulses include among others beans, pigeon peas, cow peas, chick peas, and green grams. Roots and tubers comprise of sweet potatoes, cassava, arrow roots and yams. The table below provides highlights on domestic food production in 2007.

Food crops are produced nationally in various agro-ecological zones. Generally maize, beans, sorghum, cowpeas and green grams are grown in all provinces. Rice is predominantly grown in Nyanza and Central provinces, though it also occurs to some extent in Coast, North Eastern and Western provinces. Wheat and barley are largely grown in Rift Valley, Eastern and Central provinces with little acreage in Western province. Root crops such as sweet potatoes, cassava and arrowroots are grown in all provinces apart from North Eastern.

Details of food crops production of by province in 2007 are as shown in Annex III

Cereals:

1. Maize

Maize productivity has recorded consistent improvement in the last three years from 18.0 bags per hectare in 2005 rising to 19.0 bags per hectare in 2006 and peaked at 20.1 bags per hectare in 2007. The upward trend in yield per hectare is attributed to a combination of both climatic and agronomic factors namely: suitable weather, and use of improved certified seeds, application of fertilizers and adoption of modern farming technologies. The prevailing high cost of farm inputs including fertilizers and diesel is however likely to undermine the upward trend in maize production. The area under maize declined from 1.89 million hectares in 2006 to 1.6 million hectares in 2007. The total production fell from 36 million bags, valued at 47 billion shillings, in 2006 to 32 million bags, valued at 39 billion shillings, in 2007. The price per bag fell from 1,300 shillings in 2006 to 1,200 shillings in 2007. Maize consumption stood at 33 million bags and 34 million bags in 2006 and 2007 respectively.

2. Wheat

Wheat production registered a 1.1% decline from 3.98 million bags, valued at 6.8 billion shillings, in 2006 to 3.94 million bags, valued at 11.8 billion shillings, in 2007. Area under the crop also decreased from 150,488 ha to 104,176 ha in the same period. This domestic decline coupled with global supply constraints triggered an average of 75% domestic price increase of wheat and related products in the country. Wheat consumption in the same period increased 903,120 tonnes to 927,956 tonnes.

3. Rice

Rice recorded a 27% decline in production from 1.297 million bags in 2006, valued at 4.5 billion shillings, to 0.945 million bags, valued at 2.5 billion shillings, in 2007. This was mainly as a result of the area under rice cultivation decreasing by an almost similar 29% over the same period; peak hectarage of 23,106 was last recorded in 2006 when unit prices were also most favourable. The trend represents reversal from a consistent increase in production recorded since 2003. In the same period, the anticipated increase in rice production in Nyanza was not realized. However, rice consumption increased from 286,000 tonnes in 2006 to 293,722 tonnes in 2007.

4. Sorghum

Sorghum is mainly grown in the low potential districts of the country where its role as a key food security item has been recognized. However, the area under production decreased by 5% from 163,865 ha in 2006 to 155,550 ha in 2007. Total production increased from 1.45 million bags, valued at Shs 1.83 billion shillings, in 2006 to 1.64 million bags, valued at 1.80 billion shillings, in 2007. This is attributed to unfavourable weather conditions and consistent decline in market prices from Shs 2,200 in 2004 to Shs 1,100 per 90 Kg bag in 2007. However, a slight increase in productivity was recorded but immense potential exists as indicated through a productivity level of 14 bags per ha in 2005. Total consumption of sorghum increased from 1,510,000 bags in 2006 to 1,551,525 bags in 2007.

5. Millets

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 declined by about 7% from 137,711 ha, in 2006 to 128,114 ha in 2007. However, productivity recorded an impressive increase of 12% over the same period. This was attributed to good rains especially in Western province which recorded the highest increase from about 47,000 bags in 2006 to over 175,000 bags in 2007. Total production increased from 879,995 bags, valued at 1.50 billion shillings, in 2006 to 1,328,877 bags, valued at 3.40 billion shillings, in 2007.

Pulses:

1. Beans

Bean crop mainly grown in Rift Valley and Eastern provinces. It is one of the most popular sources of protein for many Kenyans. The area under the crop declined by 15% from 995,391 ha in 2006 to 846,327 ha in 2007. Consequently, production also declined by 19.5% from 5,908,887 bags, valued at 15 billion shillings, to 4,755,512 bags, valued at 20.9 billion shillings, over the same period. The decline in yield from 6 bags per ha in 2006 to 5.8 bags per ha in 2007 can be attributed to unfavorable weather conditions in the producing areas. This resulted in reduced supplies with consequent sharp rise in the market price from Ksh 2,540 to Ksh 4,400 per bag over the same period.

2. Pigeon Peas

Pigeon peas recorded the best performance in all aspects.. The area under the crop increased by 62.5% from 196,630 ha in 2006 to 319,568 ha in 2007. Production also increased from 1,231,442 bags, valued at 3.30 billion shillings, to 7,754,629 bags, valued at 23.30 billion shillings, over the same period. Moreover, the highest yield of 7 bags per ha since 2003 was realized. The good performance can be attributed to favourable weather conditions and adoption of improved technologies.

3. Cowpeas

The area under the crop decreased by 20.3% from 162,971 ha in 2006 to 130,163 ha in 2007. Production also declined by 5.2% from 975,551 bags, valued at 2.50 billion shillings, to 925,015 bags, valued at 2.70 billion shillings, over the same period. The decline could be attributed to a shift to other more profitable enterprises. The reduced production caused an increase in market prices.

4. Green grams

The area allocated to green grams declined by 19.5% from 102,882 Ha in 2006 to 82,784 Ha in 2007. However, production increased by 42.8% from 482,212 bags, valued at 1.60 billion shillings, to 688,363 bags valued at 3.40 billion shillings, over the same period. This can be attributed to favourable weather conditions in the growing regions and good husbandry practices.

Root Crops:

1. Arrow Roots

There was a sharp decline in area under arrow roots during the review period. The hectareage declined by 40% from 3,144 ha in 2006 to 1,896 ha in 2007. Production also declined by 29.6% from 22,846 tons, valued at 233 million shillings, to 16,049 tons valued at 536 million shillings, over the same period. This can be attributed to poor crop husbandry and increased competition from irrigated vegetables in the growing areas.

2. Cassava

Cassava performance was poor in all aspects over the review period. The area under the crop dropped by 21.7 percent from 68,502 ha in 2006 to 53,610 ha in 2007. Production also declined by 39.4% from 656,633 tons, worth shillings 4.3 billion to 397,705 tons, worth shillings 4.0 billion, over the same period. This caused an increase in market prices from shillings 6,500 to shillings 10,000 per ton. This can be attributed to poor farming practices by the farmers in the growing regions.

3. Sweet Potatoes

The crop recorded an impressive yield of 10.3 tons per hectare despite a decrease in area under the crop over the review period. Subsequently, production increased by 12% from 724,646 tons, worth shillings 1.00 billion, in 2006 to 811,531 tons, worth shillings

1.40 billion, in 2007 despite a decrease in the area under the crop of 18.5% from 74,937 hectares to 61,111 hectares over the same period.

4. 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 842 to 925 hectares; however, the production registered a drop of 1, 096 bags to 6,905 bags from 8,001 bags in 2006.

4.2.2 INDUSTRIAL CROPS

Major industrial crops grown in Kenya are tea, coffee, sugarcane, cotton, sunflower, soyabeans, pyrethrum, barley, tobacco, sisal, coconuts, and bixa. Others include simsim, linseed, rapeseed, castor, oil palm (at introductory stages), *Jatropha circus* (opportunity window for Bio-diesel fuel).

Table 4. 8: Summary of Industrial Crops Production, 2003 – 2007

CROP	UNIT OF MEASUREMENT	YEAR				
		2003	2004	2005	2006	2007
Tea	Crop area (ha)	131500	136800	141300	147080	149,190
	Tons	293700	324700	328500	310578	369,600
	Yield (Tons/Ha)					
	Value (Million Kshs.)	33394.1	43446.7	42862.9	47297.4	43.14
Coffee	Crop area (ha)	170,000	170,000	170,000	170,000	162,720
	Tons	55,443	48,431	45,245	48,303	53,368
	Aver. Yield (Tons/Ha)	0.3 (3.0*)	0.2(3.0*)	0.2(0.5*)	0.2(0.5*)	0.2(0.6*)
	Value (Million Kshs.)	5700	6700	8330	8700	8890
Sugarcane	Crop area under cane (ha)	122580	131507	144765	147730	158,568
	Tons	4204055	4660995	4800820	4932839	5204214
	Yield (Tons/Ha)	69.2	73.8	71.5	70.9	70.87
	Value (Million Kshs.)	7567.3	8389.8	9169.6	5066	
Pyrethrum	Crop area (ha)	17,520	10,950	4,522	6,325	5120
	Tons	5,796	2,207	1,003	762.7	906.3
	Yield (Tons/Ha)	0.3	0.2	0.2	0.2	0.3
	Export (Tons)	123	133	124	130	142
	Local Value (Million Kshs.)	781.9	305.7	158.1	133.1	229.84
Cotton	Crop area (ha)	24,955	30,000	32,357	36,277	35,929
	Volume (million)	17,776	18,000	19,414	22,492	24993
	Yield (Tons/Ha)	0.7	0.6	0.6	0.6	0.69

	Value (Million Kshs.)	373	342	388	472	1,250
Coconut	Crop area (ha)	42,220	43,162	37,293	37,137	37,813
	Volume (million)	56,937	69,245	61,824	61,117	61,874
	Yield (Tons/Ha)	1.3	1.6	1.7	1.6	1.6
	Value (Million Kshs.)	700.3	775.5	692.4	690.6	742.5
Sisal	Crop area (ha)	34,650	31,800	31,800	24,962	32,125
	Tons	25,009	26,604	25,600	26,375	24,602
	Yield (Tons/Ha)	0.7	0.8	0.8	1.08	1.5
	Value (Million Kshs.)	826.8	1,108.70	1,144.90	1,071.60	1,334.70
Bixa	Crop area (ha)	5,537	5,519	5,252	5,658	5,257
	Tons	3,182	6,117	6,468	6,607	6,617
	Yield (Tons/Ha)	0.6	1.1	1.2	1.17	1.26
	Value (Million Kshs.)	29	61	65	77	86

Source: Department of Land and Crops Development and Management

Tea

The area planted with tea remained fairly stable, increasing marginally by 1.43% from 147,080 hectares in 2006 to 149,190 hectares in 2007. During the same period, tea production increased by 19% from 310,570 tons to 369,600 tons. The dramatic increase was attributed to the smallholder sub-sector that recorded a 20.11% increase in production to peak at 229,610 tons in 2007 while the estate sub-sector registered production increase of 17% to 139,990 tons. The increase in production was mainly due to increase in crop yields. The average yield increased from 2,225 kg/ha in 2006 to 2,658 kg/ha in 2007 for the smallholder sub-sector and from 2,689 kg/ha to 3,105 kg/ha for the estate sub-sector. This was attributed to well distribution of rainfall in the tea growing regions particularly during the first quarter of the year.

Due to high production, Tea exports recorded an increase in volume from 313.7 million kgs to 345.0 million kgs but export value dropped to Kshs 43.14 billion from Kshs 47.29 billion recorded in 2006. The drop in earnings was largely attributed to strengthening of the Kenya shilling against the US Dollar and a drop in prices from US\$ 2.03 per kg in 2006 to US\$ 1.76 per kg in 2007.

Table 4. 9: Tea Export Volume by Destination, 2007

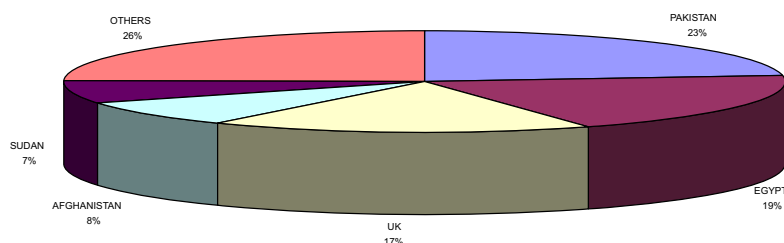
Destination	Quantity (Kgs)	Value (Kshs)	Unit, Value (Kshs.)	Value (USD)
PAKISTAN	79,818,202	10,031,932,746.08	125.68	1.87
EGYPT	67,421,295	7,906,314,817.94	117.27	1.74
UK	58,903,580	6,809,597,603.10	115.61	1.72

AFGHANISTAN	28,978,043	3,771,278,504.02	130.14	1.93
SUDAN	24,946,233	2,952,150,636.06	118.34	1.76
U.A.E	13,778,427	1,699,062,566.90	123.31	1.83
YEMEN	13,091,231	1,795,834,893.61	137.18	2.04
RUSSIA	12,157,867	1,557,670,080.41	128.12	1.9
KAZAKHSTAN	8,600,976	1,470,438,769.85	170.96	2.54
IRELAND	4,772,179	690,877,685.24	144.77	2.15
POLAND	3,983,291	493,375,844.76	123.86	1.84
NIGERIA	3,644,166	481,081,079.71	132.01	1.96
INDIA	3,126,341	363,996,284.64	116.43	1.73
SRI LANKA	2,959,172	357,729,663.77	120.89	1.8
U.S.A.	2,808,678	534,437,432.34	190.28	2.83
SOMALIA	1,998,055	124,045,709.37	62.08	0.92
JAPAN	1,839,266	411,527,506.42	223.75	3.32
INDONESIA	1,599,589	184,456,327.51	115.31	1.71
CHINA	1,258,180	146,330,587.09	116.3	1.73
IRAN	1,187,706	175,321,242.89	147.61	2.19
CANADA	1,116,998	132,281,168.38	118.43	1.76
SAUDI ARABIA	997,446	139,022,103.42	139.38	2.07
NETHERLANDS	968,756	112,145,586.97	115.76	1.72
GERMANY	876,203	136,399,825.88	155.67	2.31
DJIBOUTI	784,298	50,266,678.71	64.09	0.95
TURKEY	771,131	112,758,228.35	146.22	2.17
SOUTH AFRICA	683,831	79,035,312.82	115.58	1.72
UKRAINE	625,674	82,462,704.10	131.8	1.96
OMAN	588,149	46,327,787.30	78.77	1.17
MALAYSIA	389,771	80,572,706.13	206.72	3.07
ITALY	350,500	110,782,074.04	316.07	4.7
CHILE	235,932	29,739,907.71	126.05	1.87
CHAD	222,027	16,270,951.42	73.28	1.09
SINGAPORE	96,132	17,593,418.75	183.01	2.72
ERITREA	76,999	7,135,037.35	92.66	1.38
PUERTO RICO	41,640	6,941,438.54	166.7	2.48
FINLAND	38,980	5,037,993.62	129.25	1.92
GREECE	25,599	3,130,479.10	122.29	1.82
BELGIUM	24,000	2,545,373.26	106.06	1.58
ISRAEL	22,780	2,057,184.18	90.31	1.34

EPZ (MOMBASA)	22,500	2,625,480.00	116.69	1.73
BRAZIL	18,000	9,021,753.00	501.21	7.45
NEW ZEALAND	12,800	1,761,010.37	137.58	2.04
MAURITIUS	10,800	1,282,083.52	118.71	1.76
TANZANIA	8,110	2,551,959.20	314.67	4.67
SEYCHELLES	7,920	968,170.66	122.24	1.82
GRAND TOTAL	345,889,453	43,148,176,398.49	124.75	1.85

Source: Department of Land and Crops Development and Management

Chart 2: Pie chart on major tea exporting destinations, 2007



Coffee

Total area under coffee decreased from 170,000 ha in 2006 to 162,720 ha in 2007. This drop was by smallholders who reduced area under the crop from 128,000 ha in 2006 to 120,720 ha in 2007. Production however increased by 10.5% from 48,303 tons in 2006 to 53,368 tons in 2007. This was attributed to improved crop husbandry stimulated by improved prices which also triggered interest in the rehabilitation of neglected coffee trees. The processed coffee prices increased by 78% from Kshs. 10,952 per 100 kg bag in 2006 to Kshs. 19,561 in 2007.

Table 4. 10: Coffee Production, 2003 – 2007

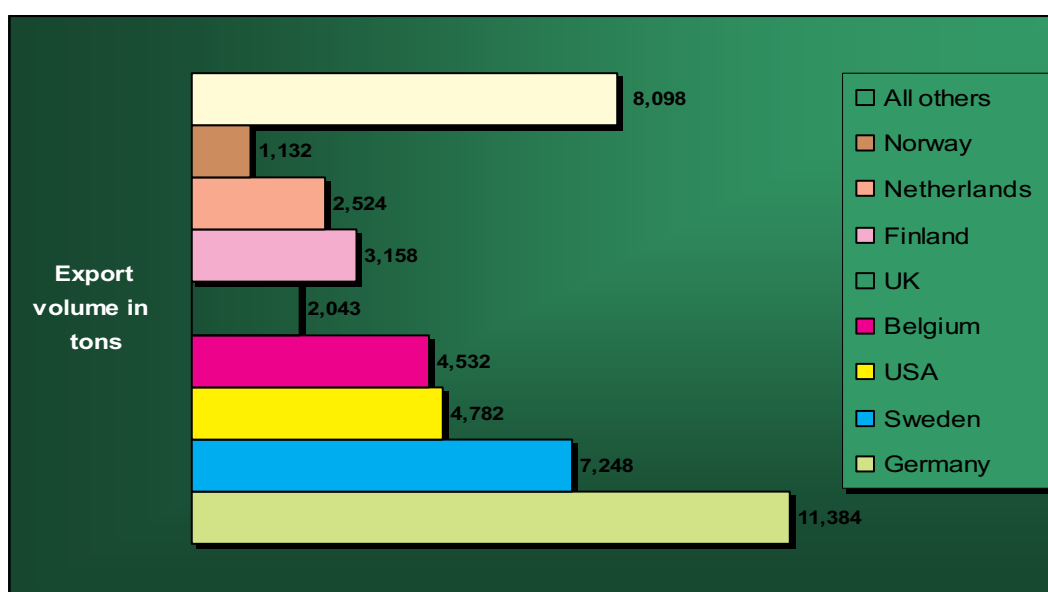
Year		2003	2004	2005	2006	2007
Estates	Area (ha)	42,000	42,000	42,000	42,000	42,000
	Production (Tons)	21,417	18,473	20,745	21,257	25,000
Small Holders	Area (ha)	128,000	128,000	128,000	128,000	120,720
	Production (Tons)	34,026	29,958	24,500	27,046	28,368
Yield (tons/ha)	Estate	3	3	0.5	0.5	0.595
	Small Scale	0.3	0.2	0.2	0.2	0.235
Total crop area (ha)		170,000	170,000	170,000	170,000	162,720

Total Production (tons)	55,443	48,431	45,245	48,303	53,368
Price of processed coffee (per 100 kg)	11,793	12,696	11,824	10,952	19,561
Local Consumption (tons)	2,218	1,937	1,810	1,932	1,960
Exports (million Kshs.)	6,075.30	7,135.20	8,224.70	8,704.30	8,803.00
Total Value (billion Kshs.)	5.7	6.7	8.33	8.7	8.89

Source: Coffee Board of Kenya

Germany remained the major export destination for Kenya's coffee followed by Sweden.

Chart 3: Kenya's Coffee Export Destinations, 2007



Sugar

Sugar production registered increased production to 520,404 metric tons in 2007 compared to 475,670 metric tons in 2006, representing a 9.4% increase. Area under sugarcane also increased by 7.3% from 147,730 hectares in 2006 to 158,568 hectares in 2007. The high sugar production was attributed to improved raw sugarcane payment that enhanced cane delivery to the factories.

Table 4. 11: Sugar Production, 2003 – 2007

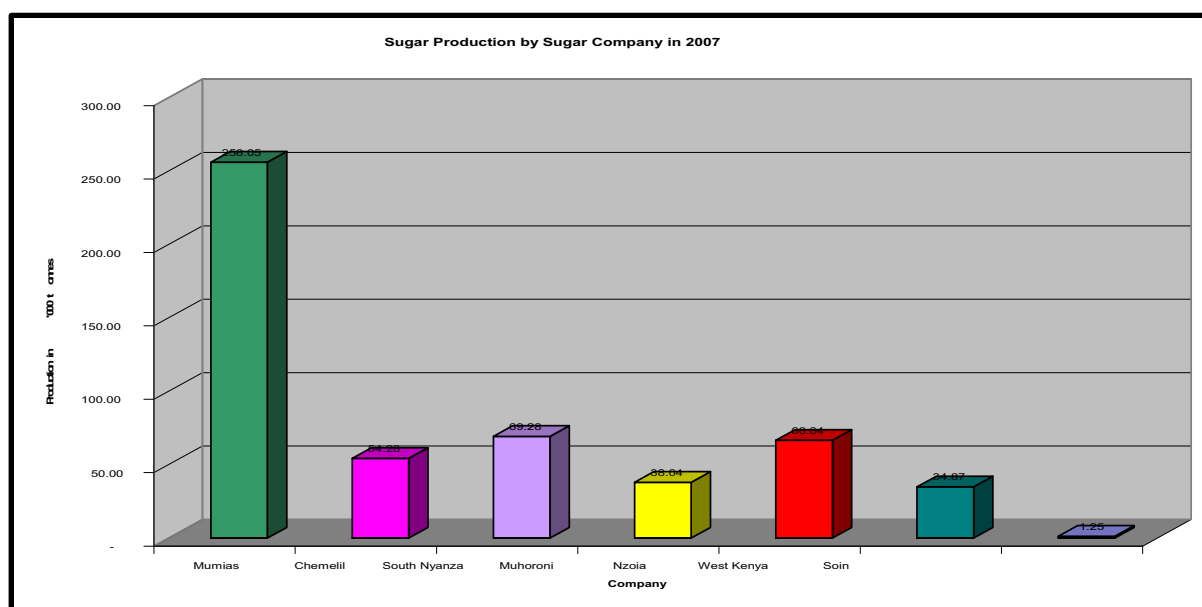
Year		2003	2004	2005	2006	2007
Area (ha)	Under Cane	122,580	131,507	144,765	147,730	158,568
	Harvested	50,468	54,191	56,537	54,621	59,201
Sugarcane production (tons)		4,204,055	4,660,995	4,800,820	4,932,839	5,204,214
Yield of Sugarcane (tons/ha)		69.2	73.8	71.5	70.89	70.87
Price of Cane (Kshs./tons)		1,800	1,800	1,910	2,027	2,249

Sugar Production (tons)	448,489	516,803	488,997	475,670	520,404
National Consumption (tons)	663,780	669,914	695,622	718,396	741,190
Domestic price of sugar (Kshs/ton)	28,833	33,810	48,449	52,547	57,063
Exports (tons)	11,300	11,580	21,760	13,533	20,842
Imports (tons)	182,225	164,020	167,235	166,280	230,011
Imports (million Kshs)	3,786	3,823	4,048	4,801	7,299

Source: Kenya Sugar Board

Despite the government interventions, a number of constraints still faced the sugar industry. These include: weak research and extension services leading to low productivity at the farm and factory levels; ineffective out-growers institutions; lack of active participation by most farmers in cane farming; poor synchronization of cane development and factory capacities; poor state of infrastructure; high cost of production; high indebtedness and insolvency of many sugar companies; poor governance in farmers' institutions; inadequate funds for factory rehabilitation; maintenance of infrastructure and modernization/expansion of factories; poor marketing strategies; over-reliance on a narrow product base; reliance on rain-fed cane; and a bloated workforce in the industry.

Chart 4: Sugar Production by Sugar Company, 2007



Cotton

Area under cotton dropped slightly from 36,277 ha in 2006 to 35,929 ha in 2007. However, production increased by 11% from 22,492 tons of seed cotton in 2006 to 24,993 tons in 2007. The increase was attributed to favourable weather conditions and improved agronomic practices that resulted to higher crop yields. However, the major challenge remained low producer prices; the average prices offered to farmers dropped from Kshs. 21 per kg in 2006 to Kshs. 20 per bag in 2007.

Table 4. 12: Cotton Production, 2003 – 2007

Year	2003	2004	2005	2006	2007
Area (ha)	24,955	30,000	32,357	36,277	35,929
Production of Seed Cotton (tons)	17,776	18,000	19,414	22,492	24,993
Price of Seed cotton (Kshs./kg)	21	19	20	21.00	
Yield (tons/ha)	0.7	0.6	0.6	0.6	0.69
Total Value of Seed cotton (million Kshs)	373	342	388	472	1,250

Source: Cotton Secretariat

Pyrethrum

Due to delayed payment to pyrethrum growers triggered by a glut in the world market since 2001/02, the area under pyrethrum dropped to 3,522 ha in 2005 from a peak of 17,520 ha in 2003. However, government interventions including payment of outstanding growers' arrears have resulted in improved deliveries. The area under pyrethrum also increased to 5,120 ha in 2007 as shown here under.

Table 4. 13: Pyrethrum Production, 2003 – 2007

Year	2003	2004	2005	2006	2007
Area (ha)	17,520	10,950	3,522	6,325	5,120
Production of Dry Flower (tons)	5,796	2,207	1,003	762.7	906.3
Price of Dry Flower (Kshs./kg)	73	73	73	73	108.75
Yield (tons/ha)	0.3	0.2	0.2	0.2	0.3
Exports (tons of pyrethrum extract)	123	133	124	130	142

Local Value (Kshs mil)	781.9	305.7	1581.1	1133.1	229.84	
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Source: Department of Land and Crops Development and Management

NB: The dry flowers have 1.4% pyrethrin content.

Source: Pyrethrum Board of Kenya (PBK) & Department of Land and Crops Development and Management

Tobacco

The area utilized for tobacco production increased by 10% from 12,179 ha in 2006 to 13,379 ha in 2007 thus maintaining a steady rise in the area under the crop since 2005. However, the yield declined by 36.7% from 17,605 tons to 11,153 tons over the same period thus reversing the sustained growth in production recorded since 2003. Performance in terms of yields has been erratic over the same period as shown in the table below. This can be attributed to inconsistency in application of the recommended farm inputs.

Table 4. 14: Tobacco Production, 2003 – 2007

Year	2003	2004	2005	2006	2007
Area (ha)	14,000	16,360	10,296	12,179	13,379
Production (tons of dry leaves)	13,871	13,983	15,959	17,605	11,152.50
Price of Dry Leaves (Kshs./kg)	65	65	65	65	65
Yield (kgs/ha)	991	855	1,550	1,400	834
Exports (tons)	12,368	24,503	15,431	-	-
Total Local Value (Kshs. mil)	902	909	1,037	1,144	725

Source: Department of Land and Crops Development and Management

Sisal

Sisal production recorded a 7% decrease from 26,375 tons in 2006 to 24,602 tons in 2007 as highlighted in the table below. However, export volumes increased from 19,771 tons in 2006 to 21,809 tons in 2007. Consequently, the export earnings increased by 24% from Kshs. 1.07 billion in 2006 to Kshs. 1.33 billion in 2007.

Table 4. 15: Sisal Production, 2003 – 2007

Year	2003	2004	2005	2006	2007
Area (ha)	34,650	31,800	31,800	24,962	23,125
Production (tons)	25,009	26,604	25,600	26,375	24,602
Yield (tons/ha)	0.7	0.8	0.8	1.08	1.5
Local Consumption (tons)	5,926	5,522	4,335	5,278	2,793
Exports (tons)	20,470	20,876	20,609	19,771	21,809

Value of Export (million Kshs.)	826.8	1,108.70	1,144.90	1,071.6	1,334.70
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Source: Department of Land and Crops Development and Management

Coconuts

Area under coconut production increased marginally in 2007 to 37,813 ha from 37,137 ha in 2006. Quantities produced therefore remained almost level from 61,117 tons in 2006 to 61,874 tons in 2007 as shown in the table below.

Table 4. 16: Coconut Production, 2003 – 2007

Year	2003	2004	2005	2006	2007
Area under Crop (ha)	42,220	43,162	37,293	37,137	37,813
Production (tons)	56,937	69,245	61,824	61,117	61,874
Yield (tons/ha)	1.3	1.6	1.7	1.6	1.6
Unit Price (Kshs./kg)	12.3	11.2	11.2	11.3	12
Total Value (million Kshs.)	700.3	775.5	692.4	690.6	742.5

Source: Department of Land and Crops Development and Management

Bixa

Area under bixa dropped from 5,658 ha in 2006 to 5,257 ha in 2007. Production however remained fairly stable, recording 6,617 tons in 2007. However, due to improved prices, the value of produced bixa increased from Kshs. 77 million in 2006 to Kshs. 86 million in 2007.

Table 4. 17: Bixa Production, 2003 – 2007

Year	2003	2004	2005	2006	2007
Area under Crop (ha)	5,537	5,519	5,252	5,658	5,257
Production (tons)	3,182	6,117	6,468	6,607	6,617
Yield (tons/ha)	0.6	1.1	1.2	1.17	1.26
Total Value (Kshs millions)	29	61	65	77	86

Source: Department of Land and Crops Development and Management

4.2.3 HORTICULTURE

The Strategy for Revitalizing Agriculture (SRA) and the Economic Recovery Strategy (ERS) recognize the role that the horticulture sub-sector offers in realization of the Vision 2030. In 2007 the sub sector reported an increased volume and value of the exported products from 304,000 metric tons worth KES 49 billion in 2006 to 403,000 metric tons worth KES 57 billion. The domestic production saw moderate rise from 7.035 million metric tons worth Kshs 110 billion to 7.102 million metric tons worth Kshs 119 billion.

4.2.4 VEGETABLES

Vegetables are an important part of the diet and play a major role in the nutritional balance. Different types and varieties are grown all over the country depending on the rainfall and availability of irrigation. The popularity and demand of indigenous vegetables has continued to increase due to campaigns on their medicinal and nutritional value.

See details of Vegetable production (2006-2007) in Annex IV

Cabbages

Cabbage is a major vegetable grown mainly for the domestic market. The main producing areas are Rift Valley (Narok, Nakuru, Molo, Kericho,); Nyanza (Kisii); Central (Nyeri, Nyandarua, Kiambu); Coast (Wundanyi) and Eastern (Meru, Embu) provinces among other cool climate areas. The most common varieties include Victoria, Riana, Pructor, Rinda, Gloria, Golden Acre, and Amigo.

Kales

Kales are grown under rain fed and irrigation systems. The main producing areas include Central (Kiambu, Nyeri, Nyandarua), Nyanza (Kisii, Migori and Bondo), Rift valley (Molo, Nakuru, Bomet, Narok). Notable varieties include Collards, Sukuma Siku, Marrow stem.

Tomatoes

Tomatoes are grown under both rain fed and irrigation conditions. The most common varieties include; Beauty, Cal.j, Fortune maker, Rio-grande, Roma VF, Anna F1, Kentom F1, Money maker, Monsett among others.

Onions

Onions are mainly grown for domestic consumption in Loitokitok, Narok, Nyeri, and Taveta. Varieties grown include Texas Ea rly Grano, Bombay Red, Tropicana Hybrid, and Green bunching.

Carrots

Carrots are largely grown for domestic market with limited quantities of baby carrots exported in pre-packs. Production of carrots is largely under rain fed. The crop is consumed fresh or processed.

French Beans

Kenya faces stiff challenge from Morocco and Egypt in the supply of the beans in the EU market. The crop is grown mainly by smallholder farmers under irrigation in Central, Rift Valley and Eastern Provinces.

Spinach

The crop is mainly grown under rain fed and in some cases using irrigation.

Garden Peas/Field peas

It is grown under rain fed conditions in the cool areas of the country. There is an increasing demand for fresh shelled peas in the export market.

Snow/Snap peas

Snow/snap peas are mainly grown for export with the key destination being the European Union market. The major producing areas are Central (Nyeri), Eastern (Meru,) and Rift Valley (Nakuru) provinces.

Irish Potatoes

Irish potatoes are the second most important food crop in the country after maize. Diseases and pests have had a notable negative impact on the performance of potatoes.

Chilli

Commonly grown varieties include long, bullet, thin and African Birds eye chillies. The main producing areas are Eastern, Central, Rift Valley and Coast Provinces.

Asian Vegetables

The Asian Vegetables category includes Brinjals, Karella, Dudhi, Okra, Turia, Valore and other minor vegetables. Initially they were grown mainly for export, however a big proportion of these vegetables are now consumed locally. They are grown both under rain fed and irrigated conditions. There is high potential for production of these vegetables under irrigation.

Other Vegetables

These include Cucumbers, Courgettes, Cauliflower, lettuce, shallots, capsicums, Cauliflower, Asparagus, Baby Corn, Brussels Sprout, Broccoli and others. These vegetables are grown in small quantities under irrigation and rain fed conditions for specialized markets in urban centres and the Hotel Industry. The main production areas are Central, Rift Valley, Eastern and Coast provinces.

Table 4. 18: Other Vegetables Production 2006-2007

CROP	Target Hectares		Achieved Hectares		Production (MT)		Value (Shs 000)	
	2007	2008	2006	2007	2006	2007	2006	2007
Capsicum	1,128	951	1,075	920	10,750	9,200	322,500	276,000
Spring Onion	1,190	1,355	1,140	1,256	13,680	15,072	82,080	90,432

Cucumber	86	69	76	52	850	660	29,750	23,100
Courgettes	263	190	251	178	2,510	1,780	62,750	44,500
Cauliflower	144	78	138	70	2,346	1,190	105,570	53,550
Lettuce	124	147	115	138	1,212	1,504	78,480	45,520
Asparagus	38	40	36	39	1,260	312	113,400	15,600
Radish	22	26	19	19	152	152	3,800	3,800
Baby Corn	125	199	116	185	928	1,480	18,560	29,600
Pumpkin	232	275	221	259	3,315	7,020	99,450	336,000
Runner beans	335	355	323	342	11,305	11,970	494,235	538,650
Butter Nut Squash	111	85	105	77	1,043	627	20,860	13,540

Source: Department of Land and Crops Development and Management

Indigenous Vegetables

The indigenous vegetables include Amaranthas, Mitoo, Spider weed, Cowpeas, Murenda, and Black-Nightshade among others. The vegetables are commonly grown in Nyanza, Western, Rift Valley, and Coast provinces mainly for home consumption and local urban markets. The local demand for these vegetables is still largely unsatisfied. Seeds of high yielding varieties of Amaranthus, spider plant and black nightshade are now available.

Herbs, Spices, Medicinal and Aromatic Plants

These crops are grown for their culinary, aromatic and therapeutic properties. For culinary purposes, herbs and spices are used in very little quantities

Emerging Crops/Special Crops

These include Mushroom, Vanilla, Muringa, Aloe, tea tree, Jatropha and Artemisia. They play a major role in provision of income, nutrition and health. Cultivation of these crops provides the most economical way to utilize low potential agricultural land and by products that would otherwise be wasted.

4.2.5 FRUITS AND NUTS

Fruits

Fruits and nuts were a major enterprise as sources of food and income. Production was both for the local fresh and processing markets and export market. The obstructionist

“Food miles” campaign in some foreign market was countered appropriately with facts and figures to secure the lucrative European market. However there was stiff competition in the foreign market from other tropical countries.

Table 4. 19: Tropical Fruits Production summary 2006 – 2007

CROP	Target Hectares		Achieved Hectares		Production (MT)		Value (Shs 000)	
	2007	2008	2006	2007	2006	2007	2006	2007
Banana	84,406	85,732	82,518	77,356	1,237,770	1,160,340	15,100,794	13,924,080
Mangoes	20,550	23,450	17,264	14,387	248,531	280,884	3,682,965	4,385,904
Avocado	7,875	6,788	7,995	6,368	103,935	84,396	1,559,025	1,265,940
Citrus	11,225	12,100	13,901	4,540	111,688	84,792	2,233,760	1,695,840
Passion fruits	4,615	4,820	4,420	4,501	58,342	57,264	1,750,260	1,717,875
Pineapples	14,895	14,225	15,124	13,308	417,860	429,065	4,330,900	4,330,975
Pawpaws	7,390	7,245	7,653	5,965	229,590	214,020	3,173,040	2,987,400
Melons	1,420	1,465	1,642	511	32,840	27,060	985,200	811,800

Source: Department of Land and Crops Development and Management

1. Bananas

The key production areas include Kisii, Maragwa, Meru and Embu districts. The demand for planting materials is high especially for new varieties. Tissue culture seedlings are available at Jomo Kenyatta University of Agriculture and Technology (JKUAT), National Horticulture Research Centre -Thika, Africa Harvest and other private firms in Juja and Kabete.

2. Mangoes

Mangoes are produced by both large scale farms and small scale holders. The main varieties grown include Sabine, Ngowe, Boribo, Apple, Kent, Haden, Dodo, Tommy Atkins and Van Dyke. The main producing areas are Eastern Province, Central and Coast province.

3. Avocados

This is an important fruit for both export and local consumption. The main varieties grown are Hass and Fuerte with the latter being the main variety grown for export market.

4. Citrus

General trend of decreased production in Central, Coast, Rift valley areas is attributed to citrus greening disease. Some of the citrus grown in Kenya include oranges (Valencia late, Washington navel, Minneola, Pixie), lemons, lime, tangerine, grape fruit.

5. Passion Fruits

It is a very popular fruit in the domestic market either used as fresh fruit or for processing into juices. The major challenge in passion fruit production is lack of clean planting materials free from fusarium wilt which is rampant in the country.

6. Pineapples

Smooth Cayenne is the commonly grown variety and it has high brix content. Central Province is the main producer with the bulk coming from Delmonte farm and Kakuzi Ltd.

7. Paw paws

It is a popular fruit in desserts and production of wine locally. Good quality fruits are produced in the lower warm parts of the country mainly in Eastern and coast provinces

8. Melons

The crop comprise of Water and Sweet melons. The main production areas include Eastern, Central, Coast and Rift Valley Provinces. The crop performs well under irrigation. Water melon and sweet melons are the main types grown in Kenya. The production of the sweet melon is usually done by large scale growers due the special care and technology needed for its production.

9. Temperate Fruits

Temperate fruits are best suited to cool climate unlike tropical fruits which thrive best in warm agro-ecological zones. They are grown in the high altitude cool areas of the country and include apples, plums, pears and peaches.

Table 4. 20: Temperate Fruits Production summary 2006-2007

CROP	Target Hectares		Achieved Hectares		Production (MT)		Value (Shs 000)	
	2007	2008	2006	2007	2006	2007	2006	2007
Apples	266	207	253	198	4,554	3,564	113,850	89,100
Plums	180	163	824	851	13,184	13,616	105,472	108,928
Pears	765	478	729	455	10,206	6,370	91,854	57,330
Peaches	100	90	96	86	1,536	1,376	18,432	16,512

Source: Department of Land and Crops Development and Management

10. Minor Fruits

These are grown on a very small hectareage and include Grapes, Strawberries Guavas, Loquats, Tree Tomatoes (Tomar illos) and Custard Apples.

Table 4. 21: Minor Fruits Production summary 2006-2007

crop	Target Hectares		Achieved Hectares		Production (MT)		Value (Shs 000)	
	2007	2008	2006	2007	2006	2007	2006	2007
Guavas	330	410	308	380	1,540	1,900	23,100	28,500
Tree Tomatoes	404	631	376	587	3,008	4,696	45,120	70,440
Custard Apple	119	113	112	108	560	540	11,200	10,800
Loquats	152	135	140	125	840	750	5,484	4,500
Grapes	407	423	377	404	1,131	1212	39,585	42,420
Strawberries	43	54	41	39	240	276	9,600	11,040
OTHERS	87	70	81	76	1,215	1,140	19,440	18,240

Source: Department of Land and Crops Development and Management

Nuts

1. Macadamia Nuts

High yielding improved varieties of macadamia were introduced in the early 90's in the coffee zones of Central and Eastern provinces. Macadamia are mainly marketed as in-shell and shelled through Kenya Nut and Equatorial nut (Kenya Farm-Nut) and Mt. Kenya Nut Ltd companies.

Table 4. 22: Nuts Production summary 2006-2007

	Target Hectares		Achieved Hectares		Production (MT)		Value (Shs 000)	
	2007	2008	2006	2007	2006	2007	2006	2007
Macadamia	2,762	3,035	2,875	2,801	20,125	19,607	1,228,500	962,080
Cashew Nuts	27800	28000	27,602	27,750	14,117	15,045	635	676
Groundnuts	23,195	18,880	22,948	18,226	68,844	54,678	2,753,760	2,388,420
Total								

Source: Department of Land and Crops Development and Management

2. Cashew Nuts

Cashew nuts are grown in the Coast province. It is currently being promoted by Kenya Horticultural Development Programme through the Cashew nut Productivity Enhancement Programme which is coordinated by the Ministry of Agriculture (MOA) and the National research (KARI). The programme supports campaigns to establish new orchards to replace old ones Key processors of the nuts include Millennium Management Ltd (Kilifi), Equatorial nuts, Kenya Nut Company (Thika), Wonder nuts and Cottage Processors (Mombasa).

3. Ground Nuts

These are grown mainly in Nyanza (Homa Bay, Rachuonyo, Siaya), western (Kakamega, Bungoma, Busia) and Rift Valley (Baringo, Koibatek). It is used to blend with other nuts to process snacks, chocolates among other processed product.

4.2.6 FLORICULTURE

The export of flowers is the leading sub-sector activity in terms of generation of foreign exchange. In 2007 the earnings from flowers alone stood at Kshs 29.7 billion. Notably, the floriculture industry has been recording the highest growth in both volume and value in comparison to the fruits and vegetables. Cut flowers, cuttings and plants have been exported every year. The accelerated growth started from year 2001 when 44.462 tons valued at Kshs 9.57 billion were exported and reaching a record of 108.375 tons worth Kshs 29.715 billion in year 2007. Further growth is expected in the future with more value addition and renewal of varieties as well as replacements in response to reasonable return on investment, favourable production conditions and developed infrastructure. Kenya is currently a major exporter of cut flowers to the EU. It contributes about 32% of all flowers imported to the EU followed by Columbia and Israel among others. The main market for our cut flowers and cuttings are Holland, United Kingdom, Germany, France, Switzerland, Italy, Scandinavian Countries and the Russian Federation. Australia, Japan, USA, Middle East are also emerging as potential markets. There are over 150 flower farms (excluding the small holders). To enhance standards and ethical business practices most flower growers operate under flower labels approved by their buyers. Locally they subscribe to Kenya Flower Council code of practice and KENGAP under FPEAK.

Flowers production areas are in the Rift Valley (Naivasha, Laikipia, Nakuru, Kajiado, Kericho, Trans Nzoia, Uasin Gishu, Nandi), Central (Nyandarua, Kiambu, Murang'a, Maragua, Thika), Eastern (Machakos, Meru Central and Embu) and Nairobi Provinces.

Table 4. 23: Floriculture Production 2006 – 2007

	Target Hectares	Achieved Hectares	Production (M- Stems)	Value (Shshs 000)
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Province	2007	2008	2006	2007	2006	2007	2006	2007
Central	673	675	653	655	24,006	24,565	4,252,140	5,880,520
Eastern	530	527	515	512	19,106	19,202	3,549,305	4,645,308
RVP	1,914	1,953	1,858	1,896	70,350	71,109	14,890,820	17,044,865
Total	3,260	3,300	3,026	3,063	113,461	114,878	22,692,265	27,570,693

Source: Department of Land and Crops Development and Management

4.3 PLANT PROTECTION SERVICES

4.3.1 MIGRATORY PESTS SITUATION

Armyworms, locusts and quelea birds are the major migratory pests that caused a lot of concern in the year under review. In the year, the country experienced 2 pests' outbreaks Namely Quelea quelea and Locusts (*Schistocerca gregaria* and *Anacridium spp*) in various regions. Adequate measures were put in place to ensure that serious damage to crop did not occur. The management of these pest outbreaks was done in collaboration with the PDA's, DAO's IRLCO-CSA and the Desert Locust Control Organization of Eastern Africa (DLCO-EA).

Armyworms (*Spodoptera exempta*)

Among the plague pests the armyworm is second only to Locusts in its ability to cause considerable damage to young cereal crops and pasture grasses. During the year various activities were carried out towards the management of this pest. These include:

Armyworm Monitoring

(a) Trap Network

(b) Trap Servicing and Reporting

Surveys and Control of Outbreaks.

In the year under review, only one district reported armyworm outbreak. Approximately 125 ha. of maize, sorghum, finger millet and natural pasture were reported attacked in Aldai area of Nandi South District and immediate control measures were undertaken.

Locust Survey and Control Operation:

**Dessert Locust (*Schistocerca gregaria*)
Survey**

Swarms invaded Mandera District and immediately ground survey team composed of staff from Desert Locust Control Organisation for Eastern Africa (DLCO-EA) and Plant Protection Services Sub- Division (PPSSD) of Ministry of Agriculture (MoA) Kenya visited infested areas to survey. During the control operation, hopper bands were found concentrated in areas west of Mandera town at Neboi, Jirma, Fikow, Gingo, Karow and Maikorobi.

Control

Control operation on hatchings and 1st instar hopper bands was started on 6th of December 2007 and by the end of the month the operation was 95% complete.

Pesticide used.

Decis 5gm/litre and Fipronil 12.5gm/litre were used by ground and by air respectively to control the hopper bands and swarms.

4.3.2 VERTEBRATE PESTS

Quelea Quelea Birds

The vertebrate pests of main concern are namely the Quelea birds and Rodents. The birds cause crop loss by picking ripening grains. The crop loss is highest during the ripening stage of the small grained cereal crops of the graminiae family namely wheat, sorghum, rice and millets. Quelea breeding takes place in the following areas: -Tsavo East and West National Parks, Magadi, Lambwe Valley, Meru National Park, Tana river Districts, Ijara, Huri Hills, Amboseli and Samburu districts.

Quelea Quelea natural food source is grass seeds. The year under review experienced a higher Quelea outbreak than in the past. This can be attributed to poor control in Tanzania and also opening and reclamation of farmland from the dry bird season concentration areas (Swamps). A total of 135 million birds were controlled compared to 56 million birds in 2006. The major challenge in Quelea control is weather as it determines the length and success of the control operations.

(a) Monitoring

Though a continuous exercise, monitoring was intensified in the months of April, May June, July and August to assess population build-up of birds in the wheat growing areas of Narok and Uasin Gishu Districts.

(b) Quelea Outbreak Situation

The table below shows the outbreak situation and the actions taken as far as Quelea birds' management is concerned.

Table 4. 24: Quelea Control

District	Population of birds controlled (million)
Narok	46.2
Bondo/Siaya	53.1

Nakuru	4.5
Naivasha	9.4
Busia	1.8
Nyando/Kisumu	10.4
Uasin Gishu	4.5
Kirinyaga	5
TOTAL	134.9

Source: Plant Protection Services Division, MOA

Rodents

Types of rodent.

Rodents (porcupines, rats, mole rat, squirrels) are endemic but outbreaks were experienced in all provinces except Western and North Eastern.

4.3.3 CROP POST HARVEST AND STORAGE MANAGEMENT

The crop post-harvest and storage management advisory services were provided to farmers in order to reduce losses during and after harvest, in line with the National Policy on food Security.

During the year under review the activities were focused on:

- Awareness creation on appropriate post-harvest techniques to avoid grain contamination with mycotoxins (Aflatoxins).
- Management of Larger Grain Borer (LGB) and other storage insect pest and rodents.
- Survey on possible causes of Aflatoxin contamination of grains at all levels.

The main activities and achievements are as tabulated below:

Table 4. 25: Post Harvest Activities

Activity	Achievements	Remarks
(a) Trainings (i) Staff Training	<ul style="list-style-type: none"> 116 Agricultural Extension Officers from Tigania, Meru Central, Imenti North, Imenti South, Meru South, Tharaka Districts were trained on LGB and Aflatoxin management. 	16 people had died of Aflatoxicosis in Meru North Districts.

	<ul style="list-style-type: none"> 16 Public Health Officers trained on LGB and Aflatoxin management. 	
(ii) Awareness campaigns through field days, barazas and demonstration on Aflatoxin and LGB management	<ul style="list-style-type: none"> Continue countrywide after the launching by the Minister of Agriculture Hon. Kipruto Arap Kirwa in august 2006 	Other stakeholders continue to support these campaigns.
b) Survey on Aflatoxin causes done in 15 Divisions ,11 Districts of Eastern Province	<ul style="list-style-type: none"> Survey done in Makueni, Machakos, Kitui, Mbeere, Mwingi, Embu, Tharaka, Meru Central, Meru North. Yatta Districts. 	Possible causes of Aflatoxin contamination identified in the field.
(c) Radio Programs	<ul style="list-style-type: none"> 2 radio programs were aired on KBC on management of Larger Grain Borer and Aflatoxin. Radio live broadcast aired on Inoro FM 	Country wide coverage.
(d) Production and distribution of extension aids	<ul style="list-style-type: none"> Over 10,000 posters were also distributed to the Districts. 	This boosted information capacity to staff and farmers.
(e) ASK - Agricultural shows	<ul style="list-style-type: none"> Officers attended and participated in Nairobi, Nakuru, Embu and Nyeri shows to demonstrate post-harvest management skills to attendants. 	Farmers showed a lot of interest in this section.
(f) (i) Procurement and distribution of pesticides for storage pests. (ii) Procurement and distribution of 130 Moisture meters	<ul style="list-style-type: none"> 10,000 g of Skana super dust were issued to farmers in all provinces 	Agricultural extension officers demonstrated to farmers on mixing and safe handling of pesticides as well as measuring the moisture content of stored Grains.

Source: Plant Protection Services Division, MOA

4.3.4 PESTICIDES ADVISORY SERVICES

Pesticides advisory services entail ensuring safe production, distribution, use, storage and disposal of pest control products. This is done in collaboration with other service providers like the Pest Control Products Board. The Agro Chemical Association of Kenya, the Kenya Plant Health Inspectorate Services, the Ministry of Environment and Natural resources with its affiliate organizations like National Environmental Management Authority (NEMA) and other relevant stakeholders.

Achievements of activities in 2007

- Seven interdepartmental committee meetings were held to plan and direct the safe use of pesticides programs.
- One Agrovets/stockists bridging course was held in November in KEPHIS and the attendance was 20 out of 20 invited participants. The participants were drawn from across the country

- One TOT course on safe use of pesticides for field staff was held in Nakuru in June with an attendance of 36 out of 40 invited participants.
- 12 monthly meetings of environmental sub-committee and training subcommittee of AAK were attended.
- Ten (54th to 63rd) technical and registration committees of PCPB were attended.
- 35 safe uses of pesticides farmers' field days were conducted in collaboration with Agrochemicals Association of Kenya.
- The Sub-Division participated in the initial formulation of the Safeguarding Project of Crop-life International as well as a project proposal on cleaning up of pesticides contaminated sites in Kenya.
- Kitengela site proposed for pesticide disposal was visited thrice on a fact finding mission. There is need to demarcate the site for pesticide waste disposal.
- 134.9 million Birds were controlled in 2007 compared to 56.2 million in 2006.

CHAPTER 5: AGRIBUSINESS, MARKET DEVELOPMENT AND INFORMATION MANAGEMENT

5.1 FARM BUSINESS

5.1.1 NATIONAL FARM JUDGING.

This exercise is carried out every year to appreciate the efforts of farmers who have taken an orientation of “Farming as a Business” and expand the number of farm models that are usable for training of other farmers in various Agro- Eco-Zones of the country.

The judges took into consideration specific parameters on the score sheet including: Crop enterprises, Application of recommended practices, Livestock enterprises, Farm planning and layout, Productivity and marketing knowledge, Farmer training linkages and Environmental conservation for sustainability of profitability with sufficient details to distinguish rationality in farm investment from farming as a hobby.

Details of farm judging in the year were as follows:

Table 5. 1: Winners’ (Ranking)

Name of farmer/ farm	Category entered	Points out of 420	Position/ rank	Province
Gideon Mangu Kiandani farm	Large scale	334	1	Eastern
Edward Shifuna	Large scale	237	2	Western
	Large scale	177	3	Nairobi
Haji Gure	Large scale	155	4	North Eastern
Paul Mukhula	Small Scale	242	1	Western
Douglas Muturi	Small Scale	215	2	Eastern
	Small Scale	199	3	Central
Peter Mburu	Small Scale	165	4	Rift valley
	Small Scale	163	5	Nairobi
Andrew .O. Komanga	Small Scale	161	6	Nyanza
Charles Gichebo (Green Valley farm)	Small Scale	153	7	Coast
Khalif Hammed	Small Scale	125	8	North Eastern

5.2 FARM INPUTS

The annual fertilizer consumption during the period under review stood at 410,000MT. Fertilizer prices were high this year. They rose gradually from the beginning of the year. Mavuno planting and top dressing fertilizers were slightly cheaper than DAP fertilizer and farmers opted to use them (See the tables below).

Table 5. 2: Annual Fertilizer Off-take, 2001-2007 (tons)

TYPE OF FERTILIZER	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
PLANTING	122,516	192,825	137,817	169,445	172,760	200,011
TOP-DRESSING	88,292	85,144	70,617	76,473	101,839	100,107
TEA	78,751	64,083	47,168	76,375	60,624	70,325
COFFEE	22,042	12,656	16,985	2,948	26,980	18,834
SPECIALISED	17,848	25,528	31,691	25,994	21,082	20,938
GRAND-TOTAL	329,449	335,009	312,440	351,776	383,285	410,214

Source: Department of Agribusiness, Market Development and Agricultural Information

Table 5. 3: Average Retail Fertilizer Price, 2002-2007 (Kshs/50kg)

Fertilizer Type	2002/03	2003/04	2004/05	2005/06	2006/07
SSP	850	850	1,100	1,100	1,075
TSP	1,150	1,500	1,600	1,680	1,680
DAP	1,125	1,500	1,680	1,700	1,730
MAP	975	1,450	1,680	1,700	1,625
ASN	925	1,250	1,300	1,350	1,300
CAN	900	1,250	1,350	1,350	1,375
SA	750	1,250	1,300	1,300	1,125
UREA	900	1,250	1,400	1,450	1,600
NPK 20:20:0	1,100	1,350	1,600	1,600	1,630
NPK 20:10:10	1,100	1,250	1,350	1,400	1,450
NPK 25:5:5	950	1,250	1,400	1,400	1,420
Mavuno planting				1,100	1,300
Mavuno T/dressing				800	950
NPK 17-17-17	980	1,250	1,400	1,450	1,620
KCL	1,100	1,250	1,400	1,400	1,420
NPK 23:23:0	1,065	1,400	1,600	1,600	1,630

Source: Department of Agribusiness, Market Development and Agricultural Information

SSP was in high demand in Keiyo district especially after the soil sampling done in collaboration with KEL chemicals. In north Eastern province there was low fertilizer usage due to the farmers' low purchasing power. Most stockists don't stock fertilizers and the farmers who required them were forced to place orders in advance

The most commonly demanded fertilizers were readily available in all major towns except in north Eastern where the fertilizer is availed on demand. It was reported that deficit was only experienced in areas where there is poor distribution of stockists and with respect of specific types and packages such as TSP and some specific NPK fertilizers.

During the period under review, a total of 41,484,932 Kgs of hybrid seeds were consumed. This comprised of 35,984,912 Kgs locally produced and 5,500,020kgs imports (See table below). A bulk of those imported was vegetable seeds.

Table 5. 4: Certified Seeds Production and Importation (2003-2007)

Total	Local production (KG)	31,203,247.0	29,159,066.9	29,879,312.4	34,682,090.2	35,984,912
	Imports (KG)	2,037,236.1	2,319,031.2	3,847,506.0	4,773,827.2	5,500,020
	Total (KG)	33,240,483.0	31,478,098.1	33,726,818.5	39,455,917.4	41,484,932
	Imports (as % of Total)	6.1	7.4	11.4	12.1	13

Source: KEPHIS and Department of Agribusiness, Market Development and Agricultural Information

Use of hybrid vegetable seeds is still low despite the fact that yields from use of these seeds are higher than from the ordinary seeds probably due to the high prices. Above are indicative retail prices that prevailed during the year 2007.

Import of insecticides and acaricides decreased from 2,844 tons in 2005/06 to 2,638 tons in 2006/07 as import of herbicides increase from 1,311 tons to 1,902 tons over the same period. Fungicides also registered a similar trend with imports rising from 2,361 tons in 2005/06 to 2,638 tons in 2006/07 (Table 9.7). These increases were attributed to increased demand for the products arising from improved agricultural activities in Kenya.

Table 5. 5: Quantities and values of imported pesticides 2004/05 – 2006/07

Category	2004/2005		2005/2006		2006/07	
	Quantity in tons	Value in '000' KSHS	Quantity in tons	Value in '000' Kshs	Quantity in tons	Value in '000' Kshs
Insecticide	2,881	2,077	2,844	2,031	2638	2109
Fungicide	2,031	1,113	2,361	1,506	2638	2109
Herbicide	1,538	650	1,311	620	1902	698
*Others	597	133	1,192	337	748	205
Total	7,047	3,973	7,708	4,494	8071	4740

** These include fumigants, rodenticides, growth regulators, defoliators, proteins, surfactants, wetting agents.*

Source: Pest Control Products Board.

The prices of agro chemicals remained generally stable during the year under review. However, **misuses** of chemicals were noted where farmers did not seek advice from extension staff. The misuses included under application, over application or even application of the wrong chemical. Application of chemicals was mostly done by horticultural farmers

5.3 AGRICULTURAL CREDIT AND RURAL FINANCING

Table 5. 6: Institutions offering Credit to farmers

	Institution	Credit/ Grant Area	Products available for farmers	Interest rate (%)	No. of loans disbursed	Total amount loaned	Comments
1	NMK	Nationwide	Agriculture and livestock	grant		18.7M	
2	K-REP		Farm Development	16	44	2000000	Rachuonyo
3	AFC	National-wide	All primary agricultural and livestock production, Agro-processing loans, Agri-business for market development, Farm infrastructure loans, Group lending, Working capital loans, Water development loans, Permanent/ semi permanent crops loan, Credit management services, Technical and managerial advice to beneficiaries, and Safe keeping of security documents e.g. land title deed	10			
4	Faulu Kenya	Nationwide	-groups loans -Loans for small businesses	18-22% p.a	Information unavailable	Information unavailable	Group members are guarantors
5	Kenya Commercial Bank	Nationwide	-Mavuno loans -overdraft for Agricultural projects	16-18% p.a	Information unavailable	Information unavailable	Collateral: -title deed - group guarantors
6	Equity bank	Nationwide	-loans for farm development -overdraft	15-18% p.a	Information unavailable	Information unavailable	Collateral is title deed or salary
7	Family finance bank	Nationwide	"	15-18% p.a	Not available	Not available	Collateral: -salary -title deed
8	Barclays bank	Nationwide	Development loan	18% p.a.	Information not available	Information not available	Collateral: title deed
9	Cooperative Bank of Kenya	Nationwide	Development loan	12-19% p.a	Information not available	Information not available	Collateral: title deed

	Institution	Credit/ Grant Area	Products available for farmers	Interest rate (%)	No. of loans disbursed	Total amount loaned	Comments
10	Barclay Bank	Nationwide	Farm Business Loans Development Loans	14-16%	N/A	N/A	
11	K-Rep bank	Nationwide	Farm development loan	19% p.a	Not available	Not available	Collateral: title deed
12	FSA		Credit	15%	3	144000	-
13	NALEP(Rural Finance Facility)	Nationwide	Grant to stakeholder Fora	Determine d by groups			Revolving fund for the vulnerable
14	Kenya women Finance Trust (KWFT)	Nationwide	Credit through groups	Not available	Not available	Not available	Guarantee by groups
15	Unity finance	Nationwide	Loans for farm development	13-17% p.a	Information not available	Information not available	Title deed is collateral
16	Tobacco Loans		Finance tobacco farm inputs				Kuria
17	Atiri project	Nationwide	Training grants				-
18	Red Cross -	Nationwide	Grant	Nil			5 households each restocked with 20 goats and 1 donkey.
19	Action Aid	Nationwide	Passion fruit growing	grant		300,000	Purchase of passion fruit seedlings- Kuria
20	World Vision	Nationwide	Grants for Agricultural development	-	-	-	Given to groups
21	CFSA		Small scale agricultural entrepreneurs	2		piloting	
22	Saga	Nyando, Kisumu East	Small entrepreneur, farm inputs			5.078M	Nyando, Kisumu East
23	SASA(Kenya) NGO	Suba district	Agricultural related projects especially horticulture	10		256,000	
24	SISDO	Central Province	loans through groups	15% p.a	Information not available	Information not available	Guarantee by group members
25	Nyamarandi CFSA	Suba district	Small scale entrepreneurs	20		38250	
26	Kenya Women Finance Trust	Nationwide	Short term business loans	20		245,000	
27	Youth Affairs ministry	Nationwide	Small enterprises for the youth			2.2M	
28	Magunga (ESA)	Suba district	Micro finance	8		320,000	

	Institution	Credit/ Grant Area	Products available for farmers	Interest rate (%)	No. of loans disbursed	Total amount loaned	Comments
29	KAPP	Nationwide	Various agriculture and livestock enterprises	grant		4,349,584	
30	HELPAGE Kenya	Siaya	Primary school	grant	80000		
31	GAWI	Nyando	Small enterprises	12		180,000	
32	SCC/VI Cosave (NGO)	Nyando	Merry go round	10		300,000	
33	AEP(Agricultural and Environment programme)	Nyanza Province	Cassava multiplication Posho mill	2	1,255,000		
34	Lake basin land use-Homa bay	Nyanza Province	Lake Victoria environment conservation	18	1,341,000	Homa Bay	
35	KTDA	Tea growing areas	Fertilizer loan, farm development	12		>364M	Collateral: farm produce
36	TEA SACCO	Nyanza Province	Tea advance loan	11		300,000	Tea improvement
37	Gusii SACCO	Nyanza Province	Coffee advance loan Development	10		2.84M	Kisii ,Gucha Masaba,, Nyamira
38	Muramati SACCO	Central Province	Farm development loan	18% p.a	Not available	Not available	Collateral: -farm produce -shares
39	Murata SACCO	Central Province	Farm development loan	15-18% p.a	Not available	Not available	Collateral: -shares -farm produce
40	Kakuzi rural SACCO	Central Province	Agricultural development loan	12% p.a	Not available	Not available	Collateral: -title deed -shares -Logbook
41	Coffee SACCOs	Central Province	Devt. Loans	12% p.a	Information not available	Information not available	Collateral is produce
42	Dairy SACCOs	Central Province	Dairy Devt. loans	17% pa	Information not available	Information not available	Collateral is produce
43	Tea SACCOs	Central Province	Tea devt. Loans	12-15% p.a	Information not available	Information not available	

	Institution	Credit/ Grant Area	Products available for farmers	Interest rate (%)	No. of loans disbursed	Total amount loaned	Comments
44	Brookside Dairy Ltd.	Central Province	Dairy improvement loans	16% p.a	Information not available	Information not available	Collateral is produce
45	AGMARK		marketing	18		690,000	
46	Adok Timo	Nyando church based)	Small loans	22		0.8M	
47	American Embassy	Rachuonyo	shoats	grant	320,000		
48	ECLOF		Business development loan	16% p.a	Not available	Not available	Guarantee from group members
49	Githita rural agro-finance		Farm development loans	12% p.a	8	225,000	Not given
50	Jamii Bora		Loans for development	Not available	Information not available	Information not available	Collateral: title deed
51	Faidika Kenya	Rift Valley province	Agric Loans	20%	"	"	
52	Veg. Pro	Rift Valley province	Inputs Credit for snow peas			N/A	
53	Torongo Sacco	Rift Valley province		12%	250	N/A	
54	Baringo Farmers SACCO	Rift Valley province	Farming in Poultry fruits & Beekeeping	12% p.a			
55	Rongai rural sacco	Rift Valley province	Agribusiness loans	1.5% per month		510,995	
56	KCC	Rift Valley province	Dairy farming				
57	Salgaa welfare group	Rift Valley province	Farm dev.	10%	22		
58	ALDEF (Kenya)	Wajir	Loan to finance production & marketing of high-value horticultural crops.	10%	222(varying amounts disbursed to women groups)	3,471,000/-	.
59	OXFAM GB	Wajir	Grant for livestock and farm development	Nil	8 households in Buna division; Farmers in Wajir central and Kutulo	600,000/-	

	Institution	Credit/ Grant Area	Products available for farmers	Interest rate (%)	No. of loans disbursed	Total amount loaned	Comments
					divisions		
60	Arid lands Resource Management Project	Wajir	Grant for CIG's for farm inputs	Nil	3	230,000/-	
61	Catholic Church development fund	Central	Development	18% p.a	Not available	Not available	Shares serve as collateral:
62	Faith based organization Catholic diocese	Muranga	Short term credit for entrepreneurial development	2% p. month	-	-	2 guarantors with tangible assets
63	COPED international	Coast Province	inputs	19	3	50,000	-
64	Malindi Biashara Sacco (MABISA)	Coast Province	Credit		-	-	-
65	Kenya Red Cross Society	Coast Province	Assistance in kind	-	-	-	-
66	MESPT/ABD	Coast Province	Credit	9	-	-	-
67	Coast Development Authority	Coast Province	Farm inputs, power saw and motorized pumps	-	-	-	-
68	Cadet	Nationwide		-	-	-	MFI
69	Pawdep	Nairobi province		-	-	-	MFI

Source: Department of Agribusiness, Market Development and Agricultural Information

5.4 AGRICULTURAL FINANCE CORPORATION (AFC)

2,284 loans were dispersed in 2006/07 FY as opposed to 1,502 in 2005/06

Table 5. 7: Details of AFC loans in 2007.

Item	(Kshs million) 2005/06	(Kshs million) 2006/07	(Kshs million) 2007/2008 FY upto December 07
Loan Demand	8,500.0	-	-
Loan approvals	1,502.4	2,284	536
Loan collection	993.8	1,6403.8	802
Total portfolio	7,049.7	7,234.7	7,422
Loan Disbursement	1,799.0	1,722.7	623

Source: Department of Agribusiness, Market Development and Agricultural Information

Products available

- All primary agricultural and livestock production
- Agro-processing loans
- Agri-business for market development
- Farm infrastructure loans
- Group lending
- Working capital loans
- Water development loans
- Permanent/ semi permanent crops loan
- Credit management services
- Technical and managerial advice to beneficiaries
- Safe keeping of security documents e.g. land title deed

Constraints

The major constraint for the corporation during the year was low capital base. The demand for the loans averaged 10.0 billion, but the corporation met less than 20% of this required amount.

Recommendation for Agricultural Credit

The credit trends indicate that more institutions and increasing amounts of money are being lent to agriculture sector over time. Staff and farmers need capacity building on agriculture financing to minimize loan funds being diverted to other uses; increase effective and efficient financial resource; and concentrate on commercial enterprises which have high productivity and are market oriented.

Financial institutions need to be encouraged to formulate products that are friendly to and meet farmers' needs and also collaborate with ministry staff to avoid diversion of funds.

5.5 AGRO-PROCESSING

The agro-processing activities for the year 2007 were geared towards up scaling the previous year's levels. These activities were identified through studies to identify constraints and opportunities in agro-processing; identification and promotion of agro-processing technologies; and capacity building extension providers and also budding agro-processing enterprises.

Table 5. 8: Activities undertaken in Agro-processing

Category of Activity	Achievements
Identification of Constraints and opportunities	<ul style="list-style-type: none"> -Survey on 21 enterprises engaged in agro-processing of oils and nuts; in western, Nyanza and Central province. -Survey on 7 enterprises engaged in processing of oils and nuts in coast and Nyanza provinces. -Survey of one large scale agro-processing enterprise engaged in processing of fruits - Survey on one enterprise each engaged in nutritious flours, cassava crisps, paper making.
Promotion of agro-processing technologies	<ul style="list-style-type: none"> -Seven major equipments (Soya milk making, peanut butter, pulper, cassava chipper, impulse sealer, cup sealer, and juice extractor) were promoted through Nairobi Trade Fair and through field and open days in e.g. Kisii, Nairobi, and Thika. Also promoted were measuring and control equipments (PH meters, refractometers and thermometers)
Capacity building	<ul style="list-style-type: none"> -Training of ATC managers and agro-processing officers on agro-processing -Training Thika agro-processing farmers groups on agro-processing (conducted through SACDEP-Thika) -Groups visited during the constraints and opportunities studies were also capacity build. - Demonstrations on selected recipes from the fruits, vegetables, and Soya processing Manual to Baraka group in Meru Central, Jonsa group in Kisii and Wamother/Gakaki groups in Murang'a. Demonstrations inputs from Thailand experts'
Development of extension materials	<ul style="list-style-type: none"> -11 posters were developed: Posters were on status of agro-processing in Kenya, interventions by Ministry on agro-processing procedures and equipments for processing: fruits-mangoes, roots and tubers-cassava, Soya beans, groundnuts. Others were on; Soya and mango product diversification, quality and safety assurance, standards, and packaging -Finalizing and printing (few copies) of the fruit, vegetable and Soya bean processing manual.
Others	<ul style="list-style-type: none"> -Preparation of proposal for Promoting Sustainable Small holder Agro-Processing for Income Generation and Food Security-Forwarded to JICA -Workshop to finalize the Fruits, Vegetable and Soya processing manual- held on 15th and 16th March and had 21 participants drawn from the Ministry of Agriculture (Province, Districts, ATDC, ATCs, headquarters and AIRC), Kenya Bureau of Standards, NGOs – SACDEP, Kenya Gatsby Trust, and the two Thailand experts -Participating in the development of value addition concept papers on

Source: Department of Agribusiness, Market Development and Agricultural Information

Constraints/Challenges:

The reports from the provinces for the year under review indicate that there was an increase in the number of enterprises included in agro-processing in comparison to the previous year despite challenges facing agro-processors and resulting in low level of processing such as:

- ¾ Lack of processing skills. – The ministry has managed limited number of trainings and will continue more training in subsequent years.
- ¾ Lack of entrepreneurial skills - Demand for processed food products is small and unreliable in informal marketing. Marketing and record keeping practiced at low level.
- ¾ High cost of production. – Due to high cost of raw materials, labour, electricity, water, transport and fuels; and lack of incentives/subsidies
- ¾ Lack of use, awareness and/or availability packaging materials. Packaging materials are costly and sometimes unavailable. Some enterprises resort to using recycled packaging materials which raises food safety and hygiene concerns.
- ¾ Raw materials are not available or the supply is sometimes erratic due to droughts resulting in crop failure;
- ¾ Limited hygiene and basic food safety procedures which need to be adhered to as required by the food safety regulations. Most informal processors also view the costs of meeting the required Kenya Bureau of Standards and Public Health regulations as prohibitive.
- ¾ Lack of appropriate processing technology attributed to high cost of agro-processing equipment, low know-how on operation and maintenance.
- ¾ Lack of awareness on appropriate equipments.
- ¾ Lack of capital to purchase equipment and to start agro-processing.

There is also need to strengthen the farmers-processors linkages to ensure; many groups/entrepreneurs engage in agro-processing With appropriate processing equipment, processing skills, packaging material, and marketing information there is potential to create viable business ventures in agro-processing.

Plate 10: Display of agro-processed products (Fruit juice and jam)



5.6 MARKET DEVELOPMENT

For farming to be profitable, farmers need to access timely market information and the physical markets efficiently. The roads leading out of the farms to the market places should be passable throughout the year. The place where the commodities are displayed should be of high hygienic status so as to ensure food safety. These places should also be easily accessible to enable the customers reach there with ease. The Division has one of its mandates as that one of collaborating with other stakeholders to facilitate improvement of the marketing physical infrastructure. This entails spot maintenance of access roads, rehabilitation of markets. The activities that the Division carries out towards the objective include; Market surveys, stakeholder consultations, contribution to policies etc.

The Division also conducts trainings on standards, market requirements, traceability, market research and market prospecting. Wholesale prices for agricultural products in the markets are collected, collated and disseminated to various stakeholders through the print media and email.

5.6.1 MARKET INFRASTRUCTURE DEVELOPMENT

In the year 2007 the following activities geared towards improving the marketing infrastructure were carried out;

Table 5. 9: Marketing Activities

Category of Activity	Achievements	Remarks
Conduct market surveys	Three surveys carried out and reports compiled	The surveys were on physical market infrastructure in the major markets in Kenya. 26 markets were covered
Disseminate information to media houses	290 articles on market (local) prices posted in the business daily and standard newspapers.	
Training staff on marketing	150 staff were trained on agricultural marketing and food safety	This training was very necessary since most of the staff and even the previous trainings were production oriented.
Rehabilitate rural access roads	-About 600 km of access roads rehabilitated in seven Districts where ASPS is operating	These were done using the roads 2000 model. Support was from DANIDA

Source: Department of Agribusiness, Market Development and Agricultural Information

Constraints

³/₄ Disorganized farmers

- ¾ Low, dispersed and unstandardized production
- ¾ Low value addition
- ¾ Subsistence farming
- ¾ Poor flow of information
- ¾ Low quality produce
- ¾ High transaction costs
- ¾ Poor roads
- ¾ Inadequate facilities in the market places
- ¾ Cartels in the supply chains
- ¾ Inadequate marketing skills

5.6.2 MARKET RESEARCH AND INFORMATION

In general, the year 2007 witnessed cheap food prices with the average wholesale price of agricultural commodities lower than that recorded the previous year, 2006. Cereals and vegetables recorded the greatest reduction in prices averaging 14 per cent compared to the previous year. In addition, the wholesale market prices appeared to be more stable in 2007 compared to 2006. However, in terms of cost, Kajiado market appeared to record the highest average food prices followed by Taveta and Busia Markets. Loitoktok market seemed to have the lowest average food prices in 2007.

5.6.3 PRICE ANALYSIS OF MAJOR AGRICULTURAL PRODUCE

Dry Maize

In 2007, a 90 kg bag of dry maize averaged Ksh 1,135 with Taveta recording the highest average price of Ksh 1,517 in November 2007. Interestingly, the same market also had the lowest recorded average of Ksh 677 earlier in the year, March 2007. Though there were officially no importation of dry maize during the year, it is likely that informal cross border trade with Tanzania caused the observed low price. Consequently, Taveta market also witnessed the greatest change in price within the year with prices nearly doubling within the year. The table below shows the average prices of dry maize in different wholesale markets.

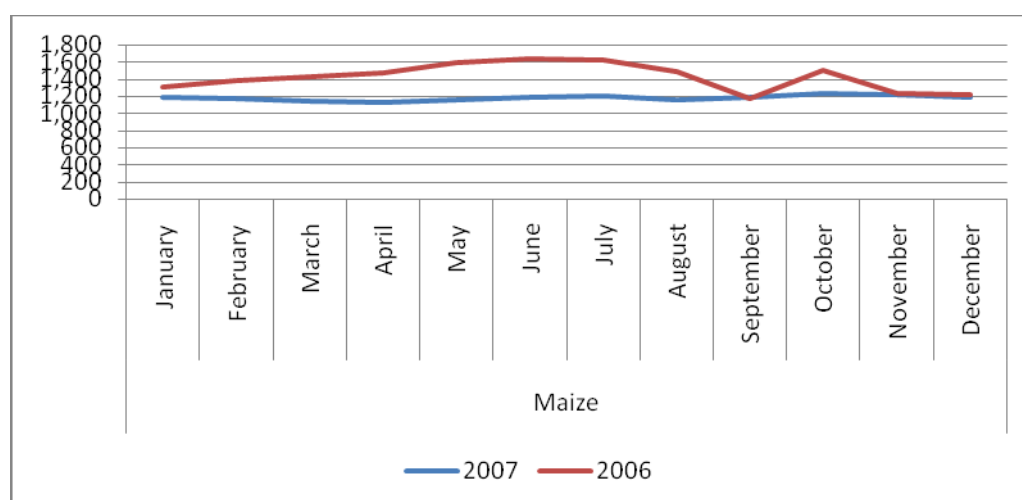
Table 5. 10: Monthly Average wholesale price of dry maize in 2007

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Average
Nairobi	1,338	1,323	1,194	1,178	1,243	1,204	1,216	1,198	1,239	1,229	1,235	1,069	1,222
Mombasa	1,062	1,063	1,035	1,047	1,079	1,200	1,184	1,202	1,230	1,214	1,274	1,274	1,155
Nakuru	1,253	1,163	1,057	1,100	1,100	1,153	1,200	1,200	1,200	1,200	1,057	950	1,136
Kisumu	1,400	1,400	1,384	1,226	1,292	1,272	1,387	1,400	1,231	1,250	1,307	1,214	1,314
Eldoret	948	944	1,028	1,113	1,171	1,205	1,191	1,195	1,201	1,303	1,214	1,156	1,139
Meru	1,300	1,350	.	900	950	1,100	1,025	875	1,222	1,125	1,100	1,200	1,104
Thika	.	.	.	900	983	.	.	1,125	1,000	1,075	1,133	1,150	1,070
Kisii	.	.	1,140	1,160	1,200	.	.	.	.	1,400	1,063	1,200	1,194
Taveta	.	750	677	800	850	900	917	1,120	1,200	1,363	1,517	1,500	1,054
Machakos	.	.	1,350	1,350	1,100	1,140	1,033	1,200	1,140	1,200	1,200	.	1,190
Nyahururu	1,100	1,000	1,025	1,000	1,000	1,080	933	1,000	1,000	1,200	.	.	1,034
Kajiado	.	.	.	.	1,400	1,450	1,500	1,500	.	1,500	1,500	.	1,475
Kutus	.	.	.	900	900	.	.	1,000	.	.	.	.	933
Kitui	.	.	.	.	.	.	1,075	1,000	.	1,100	1,167	1,200	1,108
Embu	.	.	.	.	.	.	.	1,000	1,000	1,000	1,000	.	1,000
Loitokitok	.	1,250	1,100	1,000	700	800	800	.	.	.	.	.	942
Busia	1,300	1,238	1,376	1,227	1,194	1,100	1,290	955	1,136	1,229	1,272	1,335	1,221

Source: Department of Agribusiness, Market Development and Agricultural Information

As the chart below shows, average price of a 90 kg bag of dry maize was more stable in 2007 compared to the previous year. Overall, average wholesale price was below Ksh 1200 except in October where it rose to Ksh 1,233, the highest recorded increase.

Chart 5: Trend of average wholesale price of maize in 2007



Source: Department of Agribusiness, Market Development and Agricultural Information

Rosecoco Beans

A 90 kg bag of Rosecoco beans averaged Ksh 3,206 in 2007 with the lowest average price of Ksh 2,200 recorded in Meru market. The highest average of Ksh 4,500 was recorded in Kitui and Taveta markets. Generally, the average price of beans appears to increase throughout the year peaking towards the year particularly in November and December.

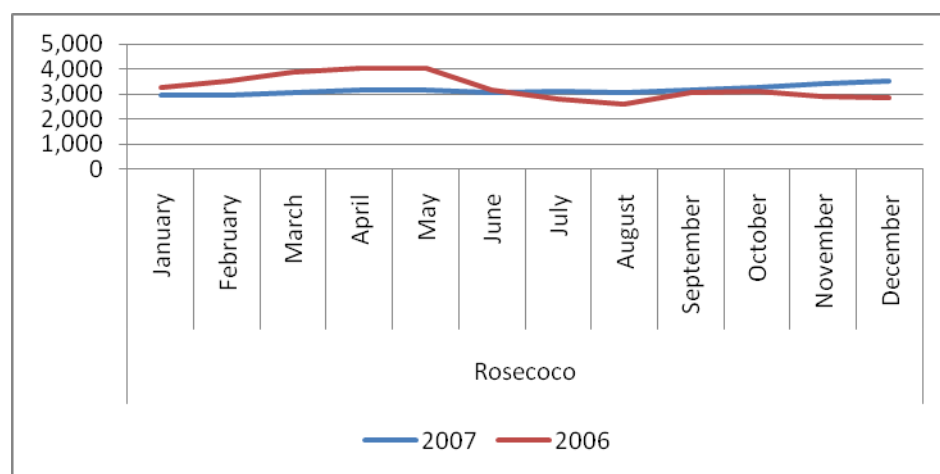
Table 5. 11: Monthly Average Wholesale price of Rosecoco in 2007

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Average
Nairobi	3,107	2,810	3,056	3,016	3,071	3,083	3,261	3,148	3,237	3,023	3,168	3,450	3,119
Mombasa	3,000	3,053	3,072	3,050	3,195	3,194	3,311	3,372	3,518	3,273	3,484	3,489	3,251
Nakuru	2,840	2,967	2,787	2,988	2,867	2,824	2,727	2,808	2,537	2,744	2,895	3,057	2,837
Kisumu	3,300	3,170	3,530	3,600	3,257	3,200	3,733	4,000	3,415	3,367	4,000	4,000	3,548
Eldoret	2,730	2,784	2,729	2,840	2,772	2,800	2,723	2,412	2,423	2,615	2,882	2,913	2,719
Meru	2,200	2,350	.	2,500	2,650	2,700	2,633	2,750	2,940	3,300	3,433	3,500	2,814
Thika	.	.	.	3,000	3,000	.	2,775	2,433	3,100	3,867	2,920	3,240	3,042
Kisii	.	.	3,360	3,320	4,200	.	.	.	.	3,200	3,250	3,200	3,422
Taveta	.	2,850	3,030	3,163	3,300	4,000	2,857	2,880	3,150	3,938	3,870	4,500	3,412
Machakos	.	.	2,900	3,200	3,300	3,380	3,100	3,333	3,400	3,400	3,750	.	3,307
Nyahururu	2,900	3,200	3,338	3,500	3,000	3,200	3,000	3,000	2,900	3,000	.	.	3,104
Kajiado	.	.	.	.	4,000	3,750	4,000	3,500	.	3,250	3,250	.	3,625
Kutus	.	.	.	2,800	2,800	.	.	2,900	.	.	.	.	2,833
Kitui	.	.	.	.	.	.	2,813	3,300	.	3,600	3,967	4,500	3,636
Embu	.	.	.	.	.	.	.	3,000	3,000	3,400	3,400	.	3,200
Loitoktok	.	3,000	2,400	.	.	.	.	.	.	.	.	.	2,700
Busia	3,120	3,625	3,850	3,850	3,946	3,900	3,560	3,700	4,500	4,462	4,250	4,417	3,932

Source: Department of Agribusiness, Market Development and Agricultural Information

Average price of rosecoco beans recorded a gentle increase through out the year 2007. However, prices increased more from the month of october. However, compared to the year 2006, the average price of rosecoco beans was less erratic as shown in the chart below.

Chart 6: Trend of average Wholesale price of Rosecoco in 2007



Source: Department of Agribusiness, Market Development and Agricultural Information

Roots and Tubers

In 2007, Kongowea market in Mombasa recorded the highest average price for white irish potato with a bag selling for an average of Ksh 2,473. This market also recorded the highest average monthly price during the year except in September 2007 when Nairobi recorded a monthly average of Ksh 2,895 for a 110 kg bag. On the other hand, Nyahururu market recorded lowest average price of Ksh 1,086 per bag. This is one of the major producing areas, which also recorded the lowest monthly average price of Ksh 625 in August 2007 as shown in the table below. Overall, average market price of white irish potato in the year 2007 was Ksh 1,740 for a 110 kg bag.

Table 5. 12: Monthly Average wholesale price of white I- potatoes in 2007

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Average
Nairobi	1,695	1,538	1,304	1,545	1,900	1,978	2,109	2,148	2,895	2,182	2,300	2,217	1,984
Mombasa	2,438	1,875	2,071	2,332	2,729	2,578	2,452	2,578	2,683	2,464	2,695	2,783	2,473
Nakuru	1,340	1,089	1,122	1,435	1,510	1,506	1,395	1,433	1,568	1,544	1,633	1,957	1,461
Kisumu	1,531	1,453	1,496	1,624	1,673	1,562	1,460	1,530	1,657	1,800	1,829	1,933	1,629
Eldoret	1,215	874	1,163	1,367	1,495	1,200	1,118	1,188	1,192	1,531	1,582	1,663	1,299
Meru	1,400	1,450	.	1,900	2,100	1,700	1,550	1,550	1,440	1,550	1,900	1,900	1,676
Thika	.	.	.	1,400	1,367	.	1,525	1,542	1,650	1,767	1,550	1,860	1,583
Kisii	.	.	1,500	1,720	1,700	.	.	.	.	1,800	2,100	2,000	1,803
Taveta	.	.	.	2,000	.	.	.	.	.	.	.	.	2,000
Machakos	.	.	1,700	1,700	1,900	1,675	1,700	1,733	1,820	2,050	2,025	.	1,811
Nyahururu	950	1,100	1,000	1,500	1,550	933	1,000	625	1,000	1,200	.	.	1,086
Kajiado	.	.	.	.	1,800	1,900	1,900	1,867	.	2,000	1,900	.	1,894
Kutus	.	.	.	1,600	1,600	.	.	1,600	.	.	.	.	1,600
Kitui	.	.	.	.	.	.	2,075	1,560	.	2,500	2,325	2,300	2,152
Embu	.	.	.	.	.	.	.	1,460	1,700	1,933	2,033	.	1,782
Loitokitok	.	1,250	1,400	1,500	2,300	1,500	1,800	.	.	.	.	.	1,625
Busia	1,200	1,263	1,586	1,500	1,788	1,000	1,500	1,600	1,867	2,000	2,440	2,875	1,718

Source: Department of Agribusiness, Market Development and Agricultural Information

Horticultural Crops

On average, the wholesale price of a 13 kg dozen of pineapples sold for Ksh 539. However, Kitui market recorded the highest average price, more than double the overall average at Ksh 1,120. Further, this market recorded the highest monthly average of Ksh 1,500 in August and October 2007. On the other hand, Nakuru market recorded the lowest average price with a 13 kg dozen of pineapple going for an average of Ksh 202. This market also recorded the lowest monthly average of Ksh 174 in June 2007. The table below shows average wholesale price of pineapple in major markets in Kenya.

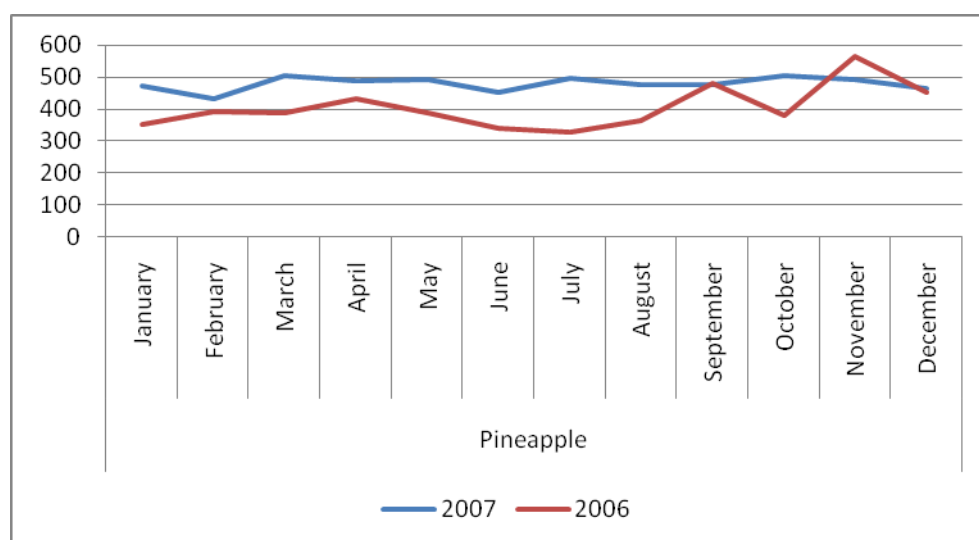
Table 5. 13: Monthly Average wholesale price of pineapple in 2007

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Average
Nairobi	635	467	831	808	900	828	861	633	648	716	687	730	729
Mombasa	643	698	723	640	636	573	493	535	399	553	538	626	588
Nakuru	202	186	211	199	183	174	225	198	224	225	207	194	202
Kisumu	352	432	391	367	315	305	348	393	422	376	333	445	373
Eldoret	306	257	250	280	300	261	323	389	375	264	270	266	295
Meru	500	500	.	550	600	600	535	563	570	600	567	633	565
Thika	.	.	.	350	293	.	273	240	245	340	264	308	289
Kisii	.	.	360	296	360	.	.	.	.	360	360	360	349
Taveta	.	.	.	360	.	.	.	.	.	.	.	.	360
Machakos	.	.	450	550	450	440	567	533	540	600	500	.	514
Nyahururu	.	840	.	.	.	.	.	.	360	.	.	.	600
Kajiado	.	.	.	.	.	.	.	300	.	300	300	.	300
Kutus	.	.	.	850	800	.	.	800	.	.	.	.	817
Kitui	.	.	.	.	.	.	875	1,500	.	1,500	1,225	500	1,120
Embu	.	.	.	.	.	.	.	620	738	817	767	.	735
Busia	800	738	788	683	782	800	782	768	782	809	932	774	786

Source: Department of Agribusiness, Market Development and Agricultural Information

Generally, average wholesale price of pineapple recorded in 2007 was higher than that recorded in 2006. However, the figure below shows, average price recorded in November 2007 was about ten per cent lower than in November 2006.

Chart 7: Trend of average wholesale price of pineapple in 2007



Source: Department of Agribusiness, Market Development and Agricultural Information

See additional market price information in annex VI

5.6.4 AGRICULTURAL TRADE PROMOTION

In the year 2007 the activities included monitoring cross border trade with an aim of facilitating trade between Kenya and the neighbouring countries i.e Tanzania, Uganda, Ethiopia and Somali. Secondly, the ministry organized for various trade fairs and exhibition with an aim of promoting trade of agricultural commodities, Documentation and trainings on standards and requirements of various market destinations of Kenyan agricultural commodities in collaboration with the export promotion organizations like the Horticultural Crop Development Authority (HCDA) market profiling for specific commodities.

Table 5. 14: Agricultural Trade Promotion Activities

Activity	Achievements	Remarks/way forward
Monitoring and facilitating cross border survey	Initial survey on the agricultural cross border trade activities. The most active borers include the Taveta, Lughu lugha, Loitokitok, Namaga, Isebania, Busia and Malava.	Surveys done at the Kenyan borders with Tanzania and Uganda. Need to monitor the cross border trade and identify point of intervention to facilitate the same.
Compile market profile for specific commodities in Kenya	In the year 2007 a market profile for specialty tea in the country was completed.	The special teas in Kenya are Organic tea, green tea, silver tips and teas processed through orthodox means
Identifying, compiling and Training on standards and market requirements for agricultural export	This was mainly on cereals and horticultural produce generally.	Need to do the same for specific commodities for specific markets.

Tax analysis for agricultural inputs and commodities.	A report on the analysis of fertilizer "taxation" and cost analysis	Fertilizer ideally isn't taxed in the country but this report looked at the accumulative costs.
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Monitoring and facilitating cross border survey

The primary pillar upon which agricultural development is based is trade and Cross Border Trade plays (CBT) a major role in countries economic growth. It can occur both formally and informally, both forms are equally important for any country's economy's growth. The Informal Cross Border Trade (ICBT) refers to registered or unregistered business activities undertaken across the borders based mainly on popular economy. One of the main characteristics of this trade is that it is not mandatory to submit tax returns at the end of each financial year hence not entered in national accounts. Generally, Cross Border Trade is conducted by small-scale quasi-professional traders including women, who use various means to move small quantities of goods across national frontiers, conduct trade.

Africa's informal Cross Border Trade sectors are "larger, more dynamic and more regionally integrated" than the official economies, Kenya included.

Table 5. 15: Commodities movement /traded across the borders

Commodity	Country From	Country To	Remarks
Oranges, tea, millet, Sorghum, maize, Irish potatoes, tomatoes, onions, cabbages, spices, Bananas, ground nuts, Cashew nuts, sugar ,wheat, sunflower cake, onion seeds	Tanzania	Kenya	- Maize Onions, and Irish potatoes gets into Kenya only during times of deficit. Millet is usually meant for animal feed manufacturers in Mombasa
Maize, beans, finger millet, sunflower cake, bananas, pineapples, Irish potatoes, Rice cowpeas	Uganda	Kenya	-
Sweet potatoes, water melon, unprocessed sunflower, rice puddy	Kenya	Uganda	- Rice and sunflower are taken to Uganda and after processing is sold back to the country
Lime, ginger coconut, pineapple, processed oil, Mangoes	Tanzania	Kenya	- Coconut usually fetches better in Tanzania, salt Destined for Zambia. Coconut is exported through out the year.

Source: Department of Agribusiness, Market Development and Agricultural Information

- Where large agricultural commodities consignments are concerned, import declaration form which is 2.75% of the value of the product.
- If the product is vatable, 16% is applicable rate
- Import duty is 10% of the value of the produce if from outside EAC
- Duties and taxes are applicable to agro-processed products (certificate of origin must be availed)
- Generally products traded in small quantities and thus difficult to ascertain quality and Variety
- Minor products from Tanzania include capsicum, chillies, carrots and cabbages mainly to Kongowea market
- HCDA export permit is charged at Ksh 2 per kilogram of horticultural produce.

5.6.5 CHALLENGES OF CROSS BORDER TRADE AT A GLANCE

- Porous borders making it very difficult to be captured.
- Little or no value addition on agricultural produce going across the border had this reduces the profit margin
- In some cases the Kenyan side lacks organized markets or market days, while just opposite in the neighbouring country there exists big organized markets. E.G Namaga border point.
- Accessibility to finance difficult from banks as the trade is considered to be high risk.
- Currently there are no policies to attract money earned from ICBTs.
- Most of traders lack business training which is crucial for business development access to finance to initiate and even expand their businesses.
- Traders have complaint about many bureaucracies the have to undergo to import or export commodities.
- At the border Kenyans are price takers.
- The staff working at the border complain of long working hours.
- Facilitation in terms of transport and telephone/airtime for staff on the ground

CHAPTER 6: STATUTORY BODIES

6.1 CENTRAL AGRICULTURAL BOARD (CAB)

The Central Agricultural Board, together with its affiliates – the Provincial Agricultural Boards, the District Agricultural Committees and the Agricultural Sub-committees, are established as Agricultural Boards and Committees under Part III of the Agriculture Act Chapter 318 of the Laws of Kenya. Their main function is to advise the Minister on all matters of national agricultural policy.

6.1.1 Organization and Functions of Central Agricultural Board

The functions of the Central Agricultural Board as spelt out under section 35 of Agriculture Act, Cap. 318 are:-

1. To advise the Minister on all matters of agriculture policy
2. To coordinate agriculture policy on matters affecting more than one province
3. To advise the Minister in determining scheduled crops and on fixing of prices in accordance with Part II of the Agriculture Act, Cap. 318
4. Carry out such other executive or advisory functions as are conferred upon it by or under the Agriculture Act or any other written Law, or as the Minister, after consultation with the Board, may delegate

However, some of the provisions that formed the major activities of the agricultural boards and committees in their earlier history are no longer tenable in the prevailing socio-politico-economic environment.

The day-to-day functions of the Central Agricultural Board are carried out by a secretariat that is headed by the Chief Executive Officer. The Officer provides professional and technical advice to the Board and has the following specific responsibilities;

- a) To provide professional advice and guidance to the Board on all technical matters on Agricultural policy, that arises from within or from outside the Board,
- b) To collect and collate background information material on topical agenda coming before the Board and thus facilitate focused discussion and decision-making,
- c) To provide effective administrative support to the Board including work planning and budgeting, and effective linkage and liaison with all relevant private individuals and organizations, Government departments, agribusiness people and other stakeholders,

To provide technical advice to provincial agricultural boards and district agricultural committees on matters of agricultural policy in regard to changes and implementation,

- d) Backstopping, monitoring and evaluation activities of the Provincial Agricultural Boards and District Agricultural Committees.
- e) Implementation of the Board recommendations and follow-up.

f)

6.1.2 CAB Finances.

Table 6. 1: Summary of finances allocated to CAB during the year.

CODE	ITEM	JAN- MAR	April- JUNE	JULY- SEPT	OCT- DEC	TOTAL
2210200	Communication Supplies	142,000	142,000	142,000	142,000	568,000
2210300	Domestic Travel	703,400	703,400	703,400	203,400	2,313,600
2210500	Printing, Advertising	307,500	307,500	307,500	307,500	1,230,000
2210700	Training Expenses	505,500	505,500	505,500	505,500	2,022,000
2210800	Hospitality Supplies	101,000	101,000	101,000	101,000	404,000
2211100	Office General Supplies	137,500	137,500	137,500	137,500	550,000
2211200	Fuel Oil and Lubricants		125,000	125,000	125,000	375,000
2220100	Routine Maintenance- Vehicles		146,750	146,750	146,750	440,250
2220200	Routine Maintenance- Other Assets	110,000	110,000	110,000	110,000	440,000
3110700	Purchase of Vehicles	0	0	0	0	0
3110800	Overhaul of Vehicles	0	0	0	0	0
3111100	Purchase of furniture	112,500	112,500	112,500	112,500	450,000
TOTAL		2,119,400	2,391,150	2,391,150	1,891,150	11,157,078

Source: CAB Calendar year Report – 2007

N.B: -The organization complied 100% with set budgetary levels.
-Utilization of allocated funds was 90%, the shortfall resulting from delays caused by the long procurement and accounting procedures.

6.1.3 CAB achievements during the year:

- CAB continued of developing the Strategic Plan the plan would have been launched during the fourth quarter but the circumstances were unfavourable.
- Crop and livestock compensation was also deliberated and some progress made in Eastern, Central, North Eastern and Coast provinces. The process will be

completed next year after consultations with the remaining provinces and the new rates will be gazetted.

- Consultation on agricultural credit insurance began. Two consultative meetings were held with agricultural credit and insurance providers. These will continue in the New Year and hopefully a position /concept paper on the matter be developed.
 - The organization disposed all idle assets through the normal government procedure.
 - Periodical reports were prepared on time especially all those related performance contracts and presented accordingly. Reports on field trips and workshops were also compiled.
- .
- The Board also achieved the following operational activities:

Table 6. 2: Activities carried out in the year

Activity		No. Planned	No. Achieved
1	Board Meetings	4	4
2	External Exposure Tour	0	0
3	Consultative Stakeholders' w/shops	8	8
4.	ASK Shows	8	7
5.	Review of mandate of Agric. Boards & Committees	1	1
6	Review Cap 318 workshops/retreats	1	1
7	Field Visits/Supervision	6	5
9	Training of Trainers W/shops	1	1
10	Development of agricultural sector policies database	Ongoing	Ongoing

Source: CAB Calendar year Report – 2007

6.2 AGRICULTURAL INFORMATION RESOURCE CENTRE

The primary role of AIRC is to provide agricultural information through the mass media to farmers; extension officers and other stakeholders; provide training in extension management; and publication and storage of agricultural information.

Government and other development partners supported the expansion of the capacity of the centre especially in production of radio and video programmes for broadcasting and in expansion of print media.

The centre is endowed with modest operational facilities, trained personnel, good location and space. Through legal notice No. 163 of 1993, AIRC operates partially as a commercial business entity for some of its services and products to allow sustainability for the huge demand of information from the public.

6.2.1 VIDEO SERVICES

The video unit is charged with dissemination of Agricultural Information packaged in two main formats-: Video cassettes and DVDs. Our clients were mainly drawn from two sectors - farming community and extension providers.

Products and Services provided in the Unit

- Video production from idea to product
- Script writing
- Hire out of crew
- Hire out of equipment

The net profit realized from the video unit was Ksh **1,719,340.00**



Plate 11: AIRC Video production unit

6.2.2 RADIO SERVICES

During the calendar year, the unit continued to produce programmes for broadcasting. The 'Sikio la Mkulima' radio program series were successfully aired by KBC and a total of which 48 programs were realized. For commercial radio program production, 5 clients were served who produced 25 radio programs and they bought airtime slots of 6 minutes each in the 'Sikio la Mkulima' radio series.

The studio was hired twice by Techno byte Ltd., whereas 2 students from KIMC were attached to the Unit for 3 months. Dubbing of 260 audio cassettes for PSDA/GTZ programme was done in the year.

In the last quarter of the year, the vernacular program production was revived; work plan and budget was done in 7 vernaculars. The teams collected data to be used in the programs in November-December and studio production of the first 10 programs commenced. The programs are ready for radio airing in 2008.

The radio unit utilized Ksh **317,495** and earned Ksh **931,005**.



Plate 12: AIRC Radio room

6.2.3 KENYA AGRICULTURAL DOCUMENTATION CENTRE (KADOC)

The Ultimate goal for KADOC is to make Agricultural Information easily accessible and available to various users including farmers, extension providers, researches, educating students and others engaged in the Agricultural Sector.

The activities achieved during the year were:

The Kenya Agricultural Bibliography 2007

In order to inform our users on the availability of our titles and stimulate demand for the same during the year in review, we produced the Kenya Agricultural Bibliography on March 2007 and distributed to all of our users and potential users free of charge.

The Agricultural Information Directory 2007

There were 2000 copies of the book printed and distributed to the users through the marketing office. A total Ksh. **306,000** was generated through selling space to advertisers and direct sales of the publication both at the centre and through ASK shows.

6.2.4 PUBLICATION SERVICES

The main clients served by the unit during the year were Ministry of Agriculture staff, CAB, Njaa Marufuku Kenya, NALEP, PCPB, KARI and Sugar Tribunal. The net income realized from publication was **Ksh 1,567,074**

6.2.5 LIBRARY SERVICES

Periodicals

- Subscribed to over **2,000** Online scientific and technical journals through Online Access to Research in the Environment (OARE) portal
- 480 Periodical titles were received on the Gift and exchange programme compared to 314 the previous year.
- Renewed annual subscription to Newsweek, Time and Economist International magazines.
- Daily Nation, The East African, Standard, The People and Kenya Times subscriptions also renewed.

Books

- 216 books were received on the gift and Exchange Programme mainly from ICRAF, FAO, CABI, CTA, IPAR, and the 16 centres under Consultative Group on International Agricultural Research (CGIAR).
- Received 2 CD's on the "The Face and Voice of the Public Servant" from Ministry of Public Service.
- Received soft and hardcopy of "Animal genetic resources for food and Agriculture"

Database management

- WebAgris database installed and made available on MOA Local Area Network.
- 2,970 records were captured on worksheets compared to 1,800 in 2006.
- 2,957 records were entered in the electronic in-house database compared to 1,400 the previous year.
- 1,100 in-house database searches conducted by staff on behalf of users compared to 1,320 in 2006. Searches were demand-driven
- 1,005 Online database searches conducted by staff on behalf of users compared to 940 in 2006. Searches were also demand-driven
- 661 records entered in the WebAgris database.

User services

- Distributed Online Access to Research in the Environment (OARE) user ID and password to Ministry staff.
- Developed library home page to be accessed through the MOA website.
- 1,480 users visited the library during the year under review compared to 1,650 the previous year.
- 14 new members were registered compared to 22 in the previous year.
- 308 documents were borrowed during the year compared to 296 in 2006.

- 390 users were allowed to photocopy documents elsewhere after depositing National Identification Cards/Passports.

6.2.6 TRAINING AND CONFERENCE FACILITIES

During the year the training Unit continued to support the farming community through provision of Agricultural information and extension skills. The unit conducted 8 one-week courses on extension management and communication skills for over 150 agricultural staff drawn country wide. There were 154 seminars and meetings organized for various groups. Some 860 people used the accommodation facility on self-sponsorship.

Table 6. 3: Training and conference services in 2007

Activity	Target	Achievements	Remarks
Seminars/Workshops	96 functions	154 functions	Consisted of various groups
Self Sponsored Accommodation	1000	860 beds occupied	-
Courses: 1 Week	11	8	MOA Sponsored 6
Courses: 2 Weeks	4	-	Lack of sponsorship for this courses poses a big challenge

Source: Agricultural Information Resource Centre

6.2.7 AIRC MARKETING AND BUSINESS DEVELOPMENT

During the year, demand for Agricultural Information Resource Centre products and services continued to increase. This prompted the unit to continue up scaling available services and products in order to satisfy the ever-increasing customer demands.

Achievements

Table 6. 4: Summary of planned and achieved activities of Marketing in 2007

Activity	Planned	Achieved	Remarks
Participation in- 1. ASK Shows	8	10	AIRC managed to exhibit in major Shows and Exhibition in high potential areas and to collect demanded information by users
2. Field Days	4	2	
3. Exhibitions	2	1	
Printing of 1. AIRC Products and services	250	250	These are essential tools and guides to the Centre's menu and service offered

catalogues	1000	2000	
2. AIRC Brochures			
3. AIRC service charters	2000	2000	
4. Marketing Posters	4	4	
Distribution of products to extension workers countrywide	2000 directories	1500	Advertisers, Directorates, PDAs and DAOs all received free copies. The rest were sold.
Collaboration and Networking			
• Stake-holder's visits	20	13	
• Seeking advertisers in the AIRC directory	30	15	
• Reach out to past and potential collaborators	>100 letters dispatched to call for adverts.	250	The centre is aggressively reaching out to many collaborators in order meet her client's expectations and demands.
Participation in editorial work of AIRC	Pamphlets Booklets Posters Data collection for information, education and communication materials	4 1 1 4	The materials were tomato, lettuce, passion and jatropha pamphlets, Mushroom booklet and AIRC show poster. Data collection was done during the shows.

Source: Agricultural Information Resource Centre

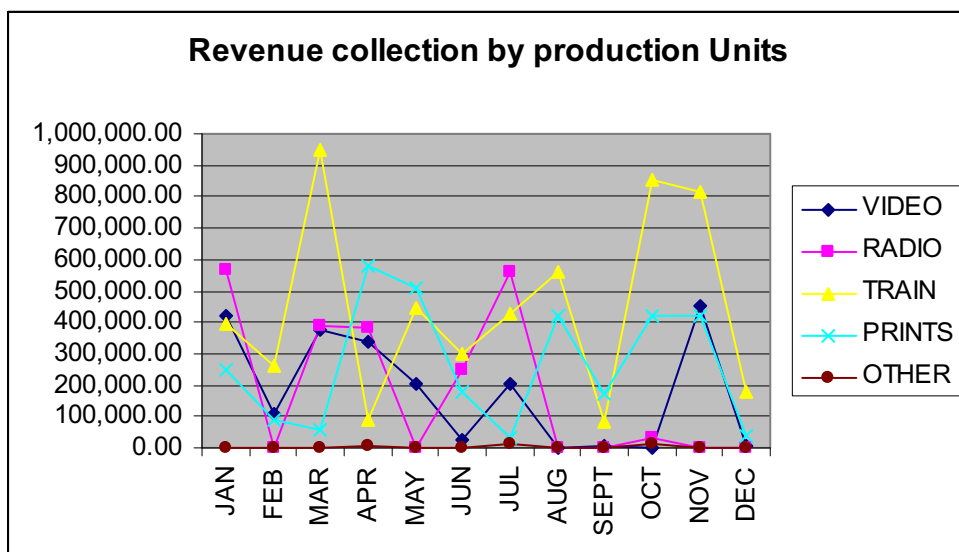
Repackaging Information

The institution participated in repackaging the mushroom booklet, passion fruit, tomatoes, and lettuce and Jatropha brochures during the year.

6.2.8 AIRC REVENUE COLLECTION IN 2007

Total revenue collected during the year under review was Kshs. **12, 885,913.00** and the details are shown below:

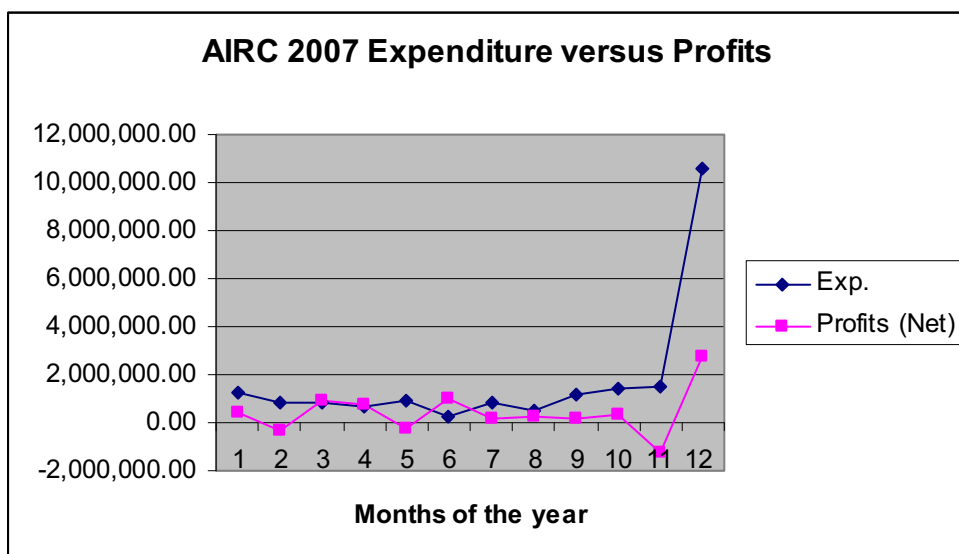
Chart 8: AIRC revenue collection in 2007



6.2.9 AIRC EXPENDITURES VERSUS PROFITS ACCRUED IN 2007

Much spending was evident as compared to profits because most of the customers (mainly from the Ministry headquarters) used our services on credit. This trend shall be looked into the following year and debt collection shall be done more aggressively.

Chart 9: AIRC expenditure trend in 2007



Source: Agricultural Information Resource Centre

CHAPTER 7: WORK-PLANS AND BUDGETS

The major activities carried out over the year include:

- Preparation and review of work plans and budgets for the technical department;
- Capacity building and backstopping on work plans and budget preparation and implementation;
- Liaising with relevant institutions and agencies in work plans and Budget preparation;
- Facilitating issuance of Authority to Incur Expenditure (AIEs);
- Participating in monitoring and evaluation of agricultural development programmes and projects.

Table 7. 1: Funds Allocation and Utilization in 2007

BUDGETED AMOUNT, FUNDS ALLOCATION AND EXPENDITURE: RECURRENT VOTE

Head	Name of Head/Programme	2007-08 Budgeted Amount (Ksh)	2007-08 Allocation (Ksh)	2007-08 Expenditure (Ksh)	2007-08 Balance
190	Headquarters Administrative Services	1,068,710,482.00	783,620,368.00	772,817,385.20	10,802,982.80
190	Headquarters Administrative Services (AIA)	-	1,500,000.00	6,629,632.85	(5,129,632.85)
190-0002	Information Communication Technology Unit	-	4,600,000.00	4,590,098.00	9,902.00
	TOTAL FOR HEAD 190	1,068,710,482.00	786,720,368.00	770,777,850.35	15,942,517.65
191	Agricultural Attache	165,624,905.00	115,786,848.00	119,686,799.20	(3,899,951.20)
193	Development Planning Services	22,053,824.00	26,210,370.00	25,033,090.95	1,177,279.05
195	Central Agricultural Board	19,792,728.00	10,645,396.00	10,751,626.80	(106,230.80)
	Policy and Agricultural Development and	64,584,059.00			
198	Coordination		27,833,518.00	26,818,696.65	1,014,821.35
202	Agriculture Secretary	30,210,664.00	46,566,511.00	45,255,006.00	1,311,504.95
228	Finance and Accounts Department	24,921,150.00	29,421,150.00	29,225,472.00	195,678.00
	Agricultural Technology Development and Testing				
229	Stations	42,585,892.00	32,021,548.00	31,642,056.30	379,491.70
230	Pesticide Control Board (PCPB)	70,200,000.00	75,700,000.00	45,499,998.90	30,200,001.10
230	Pesticide Control Board (PCPB)-AIA	30,200,000.00	35,700,000.00	-	35,700,000.00
	TOTAL FOR HEAD 230	40,000,000.00	40,000,000.00	45,499,998.90	(5,499,998.90)
235	Land and Crops Development Services	232,212,766.00	204,605,376.00	201,959,405.55	2,645,970.45
235-0018	Cotton Development Programme	154,634,024.00	230,252,810.00	229,475,618.56	777,191.44
235-0020	Plant Protection Services	-	-	-	-
235-0025	Plant Genetic Resource	134,874,550.00	47,792,550.00	47,089,496.00	703,054.00

	TOTAL FOR HEAD 235	521,721,340.00	482,650,736.00	478,524,520.11	4,126,215.89
238	Horticultural Crops Development Authority(HCDA)	300,000,000.00	300,000,000.00	300,000,000.00	-
247	Land Development and Machinery Services	134,447,057.00	389,439,250.00	385,021,560.25	4,417,689.75
247	Land Development and Machinery Services (AIA)	48,561,022.00	48,561,022.00	50,048,722.45	(1,487,700.45)
	TOTAL FOR HEAD 247	85,886,035.00	340,878,228.00	334,972,837.80	5,905,390.20
	Agricultural Business, Market Development and	74,032,542.00			
254	Agricultural Information		33,078,612.00	31,638,827.50	1,439,784.50
	Extension Research Liaison and Technical				
255	Backstopping	162,062,790.00	148,188,339.00	131,376,502.80	16,811,836.20
255-0001	Aids Control Unit	5,890,440.00	5,890,440.00	5,534,812.00	355,628.00
	TOTAL FOR HEAD 255	167,953,230.00	154,078,779.00	136,911,314.80	17,167,464.20
257	Agricultural Information Resource Center	25,410,226.00	48,325,362.00	48,107,264.00	218,098.00
258	Embu Agricultural College Headquarters	35,220,366.00	30,607,956.00	30,213,745.45	394,210.55
258	Embu Agricultural College Headquarters (AIA)	4,500,000.00	4,500,000.00	1,820,257.90	2,679,742.10
	TOTAL FOR HEAD 258	30,720,366.00	26,107,956.00	28,393,487.55	(2,285,531.55)
259	Bukura Agricultural College	84,496,287.00	77,435,710.00	77,174,291.90	261,418.10
259	Bukura Agricultural College (AIA)	2,380,000.00	2,380,000.00	5,561,411.00	(3,181,411.00)
	TOTAL FOR HEAD 259	82,116,287.00	75,055,710.00	71,612,880.90	3,442,829.10
260	Agricultural Training Center	103,812,207.00	119,829,451.00	109,767,772.75	10,061,678.25
261	Kilifi Institute of Agriculture	66,670,850.00	56,059,761.00	52,602,303.45	3,457,457.55
261	Kilifi Institute of Agriculture (AIA)	4,712,400.00	4,712,400.00	3,412,029.00	1,300,371.00
261	TOTAL FOR HEAD 261	61,958,450.00	51,347,361.00	49,190,274.45	2,157,086.55
	Food Security and Management Programme 'Njaa				
0-502	Marufuku Kenya'	106,115,470.00	71,101,830.00	116,039,064.60	(44,937,234.60)
564	National Food Security	-	2,227,615,000.00	2,227,615,000.00	-
596	Kenya Plant Health Inspectorate Services	448,000,000.00	448,000,000.00	447,999,998.90	1.10
638	Provincial Agricultural Extension Services	111,276,047.00	162,591,171.00	165,591,756.00	(3,000,585.50)
639	District Agricultural Extension Services	1,654,033,213.00	2,123,965,839.00	2,109,395,257.35	14,570,581.65
661	Sericulture Station-Thika	71,008,961.00	71,089,826.00	53,583,728.05	17,506,097.95
759	Kenya Agricultural Research Institute	1,420,000,000.00	1,650,000,000.00	1,650,000,000.00	-
	TOTAL R10 FOR THE MINISTRY	6,742,528,078.00	9,500,921,570.00	9,464,034,582.46	36,886,987.54

NOTE

* Expenditures Refers to Total AIEs + Total Payments + Total Commitments By 30-06-08 11:59 P.M. Total expenditure = 99.61%

* These figures are for Recurrent Vote

* The increased budget under Head 190 was for setting up Seed Tribunal(Ksh 6.18million), Sugar Arbitration Tribunal(Ksh 10million) and Ksh 340 million as Subscription to International Organizations.

* Ksh 22million under Head 254(Director Agribusiness) were used for 2KR fertilizer clearance

* The funding under Head 202(Agriculture Secretary) included hosting the FAO Conference.

* Ksh 1.038billion under various heads was Grants to GoK Agencies and other levels of government.

* Due to the increase in the number of districts from 71 to 108, there was consequently an increase in the level of funding to Head 639 (DAOs) to operationalize the new districts and a further increased funding to PDAs (Head 638) due to increased cost of management operations. Funds were used to purchase additional computers and office furniture and equipment.

BUDGETED AMOUNT, FUNDS ALLOCATION AND EXPENDITURE : DEVELOPMENT VOTE

Head	Name of Head/Programme	2007-08 Budgeted Amount (Ksh)	2007-08 Allocation (Ksh)
190	Headquarters Administrative Services	26,434,865.00	26,434,865.00
190	Headquarters Administrative Services(AIA)	-	5,634,865.00
	NET FOR HEAD 190	26,434,865.00	20,800,000.00
191	Agricultural Attache	-	-
193	Development Planning Services	14,186,400.00	14,186,400.00
193	Development Planning Services(AIA)	10,186,400.00	10,186,400.00
	NET FOR HEAD 193	4,000,000.00	4,000,000.00
195	Central Agricultural Board	-	-
	Policy and Agricultural Development and	4,000,000.00	
198	Coordination		4,000,000.00
202	Agriculture Secretary	-	-
228	Finance and Accounts Department	-	-
	Agricultural Technology Development and Testing		
229	Stations	20,225,000.00	20,225,000.00
230	Pesticide Control Board (PCPB)	-	-
235	Land and Crops Development Services		
	000-Emergency Relief and Refugee Programme	-	294,334,272.00
	000- Orphan crops	150,000,000.00	120,000,000.00

	000- Potato Seed Industry Development	20,000,000.00	20,000,000.00
	Small Holder Horticulture Empowerment Project(Jica)	3,078,000.00	
235			3,077,820.00
235	Small Holder Horticulture Marketing Project(IFAD)	15,752,819.00	-
235-0018	Cotton Development Programme	5,000,000.00	5,000,000.00
235-0020	Plant Protection Services	-	-
235-0025	Plant Genetic Resource	-	-
	TOTAL FOR HEAD 235	193,830,819.00	442,412,092.00
225	Integrated Development Programme(ASPS)	504,490,570.00	310,866,130.00
237	Horticultural Crops Production Services (EPHTFCP)	45,566,500.00	157,079,054.00
237	Horticultural Crops Production Services (EPHTFCP)-AIA	42,738,000.00	105,632,100.00
	NET FOR HEAD 237	2,828,500.00	51,446,954.00
246	National Agriculture and Livestock Development Programme (NALEP)	652,000,000.00	741,776,672.00
246	National Agriculture and Livestock Development Programme (NALEP)-AIA	338,243,050.00	338,000,000.00
	NET FOR HEAD 246	313,756,950.00	403,776,672.00
247	Land Development and Machinery Services	722,535,000.00	686,735,000.00
254	NAAIAP	500,000,000.00	245,000,000.00
255	Extension Research Liaison and Technical Backstopping	33,000,000.00	-
257	Agricultural Information Resource Center	10,510,000.00	10,510,000.00
258	Embu Agricultural College Headquarters	10,000,000.00	10,000,000.00
259	Bukura Agricultural College	16,000,000.00	16,000,000.00
260	Agricultural Training Center	161,510,000.00	147,610,000.00
261	Kilifi Institute of Agriculture	4,500,000.00	4,500,000.00
	Food Security and Management Programme 'Njaa Marufuku Kenya'	98,236,440.00	56,777,000.00
0-502			
564	National Food Security	-	-
596	Kenya Plant Health Inspectorate Services	71,000,000.00	27,000,000.00
596	Kenya Plant Health Inspectorate Services(AIA)	71,000,000.00	27,000,000.00
	NET FOR HEAD 596	-	-
271	000- Headquarters	-	-
271	PDA's and DAOs, etc	375,186,900.00	88,870,930.00
271	Water Harvesting	56,140,000.00	54,000,000.00

271-0113	PSDA		8,954,000.00	8,954,000.00
271-7251	CADSAL		7,511,430.00	7,493,430.00
	NET FOR HEAD 271		447,792,330.00	159,318,360.00
661	Sericulture Station-Thika	-		
759	Kenya Agricultural Productivity Project (KAPP) Western Kenya Integrated Ecosystem Management	1,337,053,961.00	1,185,299,451.00	
760	Kenya Arid and Semi Arid Lands (KASAL)	24,381,084.00	7,441,883.00	
761	Increased Rural Household Income	257,347,055.00	160,876,617.00	
763	Sustainable Land Management (KAPP- SLM)	74,045,696.00	44,427,418.00	
764		91,270,533.00	34,189,333.00	
	Sustainable Land Management (KAPP- SLM)-AIA	-	34,189,333.00	
	NET FOR HEAD 764	91,270,533.00	-	
765	Animal Production Research	77,723,768.00	46,690,583.00	
	TOTAL D10 FOR THE MINISTRY	4,945,658,971.00	4,022,265,730.00	

NOTE:

- * Funds under Head 193 to fund ASCU activities (SRA Conference)
- * Funds under Head 247 were used for purchase of tractors, crawlers and lowloaders. It also includes Donor funds for Green Zones Development Project(Ksh 364,516,100.00) by ADF
- * Development Index = 0.73 (as per budget); = 0.42(as per allocation)
- * Total amount budgeted(Recurrent and Development) = 11,688,187,049.00
- * Total amount allocated(Recurrent and Development) = 13,523,187,300.00
- * Development partners include ADF, DANIDA, EDF/EEC, IDA, IFAD, GTZ-GER, SIDA, UNDP, FAO/IFAD, JICA

Source: Budget Coordination Unit, MOA

CHAPTER 8: PROSPECTS FOR 2008

The Economic Recovery Strategy for Employment and wealth creation (ERS) document covered the period 2003 -2007, lapsing in December 2007. This brought a shift to the National development agenda focusing on the new economic blue print referred to as the Vision 2030 strategy. In this strategy, agriculture has been identified as a key sector that will have a major role in year 2008 and beyond, in attaining economic growth targets as reflected in the Millennium Development Goals (MDGs).

Year 2008 will also witness a shift from over-emphasis on increased production volumes to value addition and agro-processing of agricultural produce for better returns from farming. This will be done through innovative, commercially oriented and modern agriculture that improves the value gain in the production and value chain. This will consequently lead to agriculture generating higher revenue and contributing significantly to GNP growth mainly through better yields in key crops, increased smallholder specialization, more focus to farming as business and market development.

The ministry of agriculture together with the other sector ministries will from 2008 focus on the following flagship projects as envisaged in the Vision 2030:

1. Enactment of the consolidated Agricultural Reform Bill:

This will be vital in the provision of an enabling environment for successful implementation of other flagship. Hence it will entail review, harmonization and consolidation of legal framework

2. Investment in Fertilizer Cost-reduction:

This project will be implemented through a three-tiered fertilized cost-reduction programme that will involve the following activities:

- Purchase and supply chain improvements in the market for inputs;
- Blending and local manufacturing of fertilizer
- Working with the private sector and reviewing farmers' institutions ability to bulk imported fertilizer and distribute it.
- Capacity building of farmers and their cooperatives as well as their associations
- Estimating clear annual demands
- Efficient fertilizer ordering and distribution process
- Provision of warehousing
- Improving infrastructure
- Enhancing public-private partnership in the whole chain of fertilizer-cost programme

3. ASAL Development Project:

This will initially be implemented in the **Tana** and **Athi** river basins

4. Establishment of Disease-Free Zones (DFZs):

This will increase access of Kenya's livestock and livestock products to local, regional and international markets.

5. Land Use Master Plan:

This will enable efficient utilization of all forms of land.

6. Land Registry:

The Land Registry will be accessible to all and will be achieved through development of GIS based Land Information Management System and construction, rehabilitation and expansion of district registries. A land databank will also be developed in the consolidated land registries that will contain records on idle and under-utilized lands.

The financial year 2008/09 will in line with the Strategy for Revitalization of Agriculture (SRA) and the Vision 2030 see the light of implementation of a number of food security programme and projects viz:

1. Small-scale Horticulture Development Project:

The project's main objective is to improve irrigation infrastructure and enhance production and marketing in the target areas namely Machakos, Narok, Mbeere, Nakuru North, Kajiado, Loitokitok, Marakwe and Meru South. It will be funded through ADB.

2. Kenya Agricultural Productivity and Sustainable Land Management Project (KAPSLMP).

The project main goal is to build capacity on sustainable land management. It will be funded through World Bank, GEF and GOK. The project will cover Cherengani hills, Kinale-Kikuyu and Taita Taveta

3. Banana Stem Leaves Technology Development

The projects aims at adding value to the banana fibres by utilizing the banana stem and leaves for production of hand paper products, absorbent material for oil spillage end-uses thereby promoting measures against natural resource degradation. It will be a three year GOK.

4. Promotion of Tissue Culture Bananas:

This will be a GOK funded project covering Meru South, Murang'a and Vihiga Districts. It's main goal is to increase food production and boost farmers' income through improved post harvest handling and value addition.

5. NERICA Rice:

The project's main goal is to promote NERICA rice in low land areas. It is a GOK funded project that will be piloted in Kwale and Tana River districts.

ANNEXES

Annex I: Research - Extension Liaison activities

	Eastern		Rift valley		Nairobi		North Eastern		Nyanza	
	Target	Achieved	Target	Achieved	Target	Achieved	Target	Achieved	Target	Achieved
On farm trials	0	3	136	94	10	4	10	2	14	8
Courses/seminars			30	18	10	3	8	3	8	5
Professional Group meeting	2	1	72	46	2	1	3	0	36	15
Planning meeting	0	0	60	52	8	5	5	1	24	10
CRAC meeting	3	2	6	6	1	0	1	1	3	2
Collaboration meeting	13	3	3	1	1	0	1	0	3	2
Research Extension workshops	13	7	12	7	2	1	2	0	3	10

Source: Annual Report 2007 for Extension Department

Annex II: Agro-forestry nurseries (ownership, number of seedlings and tree species planted)

Province	No. of nurseries	Ownership			No. of seedlings raised			Common species			No. planted	No. survived
		Farmers	Groups	Institutional	Farmers	Groups	Institutional	Farmers	Groups	Institutional		
Central	1805	981	700	123	3380675	3971935	2769060	Grevillea Cypress Eucalyptus Avocados Mangoes	Grevillea Cypress Eucalyptus Avocados Mangoes	Grevillea Cypress Kei apple Eucalyptus	4945116	3717828
Eastern	4,617	2,112	2,194	210	3,559,378	6,483,112	4,363,947	Grevillea Mangoes Eucalyptus	Grevillea Mangoes Fruit trees	Grevillea Cypress Eucalyptus	8,940,060	5,604,688
Western	853	726	250	101	1851935	1315716	4005310	Avocados Grevillea Eucalyptus	Grevillea Eucalyptus Mango	Eucalyptus Grevillea Cypress	5197008	4070777
N. Eastern	61	37	8	16	7906	3600	52000	Mangoes Pawpaw	Mangoes Pawpaw	Acacia	44000	15400
Nairobi	94	41	45	14	35300	30900	18000	Casuarina Nandi frame Calliandra	Calliandra Grivellia Kei apple	Calliandra Grivellia K-apple	134300	52800
Coast	258	62	164	33	52620	271983	313882	Grevillea Eucalyptus Mango	Grevillea Cashewnut Eucalyptus	Grevillea Mangoes Kei apple	438950	344685
Nyanza	935	527	316	92	2660848	947546	1068810	Grevillea Mangoes Pawpaw	Grevillea Eucalyptus Mango	Grevillea Eucalyptus Mango	581461	323325
R. Valley	1478	602	507	369	2,205,750	3616585	10810642	Grevillea Cypress Eucalyptus	Grevillea Cypress Eucalyptus	Grevillea Cypress Kei apple	7234761	5158440

Source: Department of Land and Crops Development and Management, MoA

Annex III: Production of Food Crops by Province, 2007

Crop	Units of	Province								Total
	Measurements	Rift Valley	Nyanza	Eastern	Western	Coast	Central	N- Eastern	Nairobi	
Maize	Crop area (ha)	664,098	83,333	435,773	201,583	86,786	138,888	4,843	1,365	1,615,304
	Bags	18,000,000	1,500,000	4,194,131	5,813,212	466,489	2,500,000	68,311	20,939	32,542,143
	Yield (Bag/ha)	27.1	18	9.6	28.8	5.4	18	14.1	15.3	20.1
	Value (billion Kshs)	26.95	7.209	5.436	1.78	7.53	3.212	0.0765	0.0702	52.2637
Wheat	Crop area (ha)	121,423	0	9,470	1,041	0	8242	0	0	140,176
	Bags	3,560,130	0	27,681	125,760	0	222534	0	0	3,936,105
	Yield (Bag/ha)	29.3	0	2.9	11.1	0	27	0	0	28.1
	Value (Million Kshs)	8900	0	83	377	0	668	0	0	10028
Beans	Crop area (ha)	285,051	129,360	227,638	104,736	2,987	94,869	107	1,579	846,327
	Bags	1,567,780	846,380	1,157,650	589,235	11,948	569,214	352	12,953	4,755,512
	Yield (Bag/ha)	5.5	6.5	5.1	5.6	4	6	3.3	8.2	5.6
	Value (Million. Kshs)	4700	2,285.20	6,971.60	258.7	35.8	1992.25	4.1	45.3	16,292.95
Rice	Crop area (ha)	0	1,524	0	214	1,856	12,863	0	0	16,457
	Bags (50 Kgs)	0	93,565	0	39,199	14,848	797,506	0	0	945,118
	Yield (Bag/ha)	0	61.4	0	20.8	8	62	0	0	57.4
	Value (Million. Kshs)	0	215.2	0	90.2	34.2	2,392.50	0	0	2,732.10
Sorghum	Crop area (ha)	10,600	50,535	74,369	12,524	1,717	404.71	5,394	6	155,549.71
	Bags	124,191	642,200	666,690	99,185	13,400	2023.55	90,229	12	1,637,930.55
	Yield (Bag/ha)	11.7	12.7	9	7.9	7.8	5	16.7	2	10.5
	Value (Million. Kshs)	173	578	800	13.8	6.7	5.67	40.6	0.012	1617.782
Millet	Crop area (ha)	16,095	19,963	68,466	7,122	373	16,095	0	0	128,114
	Bags	181,328	162,573	626,106	175,677	1,865	181,328	0	0	1,328,877

	Yield (Bag/ha)	11.3	8.1	9.1	24.7	5	11.3	0	0	10.4
	Value (Million. Kshs)	362	526.9	1,252.20	13.2	3.73	362	0	0	2,520.03
Cow Peas	Crop area (ha)	1,780	3,219	115,384	1,278	6,897	1177.6	407	20	130,162.60
	Bags	14,596	18,652	841,752	2,587	34,455	5888	7,049	36	925,015
	Yield (Bag/ha)	8.2	5.8	7.3	2	5	5	17.3	2	7.1
	Value (Million. Kshs)	5.1	56	2,104.40	5.5	86.1	17.664	27.7	0.09	2,302.55
Green Grams	Crop area	739	2,684	75,648	336	3,157	43.3	177	0	82,784.30
	Bags	2,769	12,665	656,719	1,532	12,628	173.2	1,877	0	688,363.20
	Yield (Bag/ha)	5.1	4.7	8.7	4.6	4	4	10.6	0	8.3
	Value (Million. Kshs)	11.1	37.7	3284	12.1	50.5	0.78	9	0	3405.18
Pigeon Peas	Crop area (ha)	232	0	153,005		549	767.9	0	0	319,567.90
	Bags	13,456	0	1,043,145		2,196	3839.5	0	0	1,062,637
	Yield (Bag/ha)	5.8	0	6.8		4	5	0	0	3.3
	Value (Million. Kshs)	40	0	3,129.40		6.6	13.1	0	0	4,969.90
Sweet Potatoes	Crop area (ha)	2,640	40,960	7,226	6,762	1,237	2,248.68	0	37	61,110.68
	Tons	23,760	618,340	54,340	80,927	11,133	22486.6	0	544	811,530.60
	Yield (Tons/ha)	9	15.1	7.5	12	9	10	0	14.7	13.3
	Value (Million Kshs)	35.6	3401	1630	2427.8	333.99	449.7	0	54.4	8332.49
Cassava	Crop area (ha)	1,784	24,323	9,550	4,945	12,194	796.72	0	17	53,609.72
	Tons	17,483	244,175	7,849	10,363	109,746	7,967.20	0	122	397,705.20
	Yield (Tons/ha)	9.8	10	8	10	9	10	0	7.2	7.4
	Value (Million. Kshs)	104.8	2,441.80	1,744	0.209	1097.5	239	0	1.2	5,628.51
Arrow Root	Crop area (ha)	75	0	0	356	0	1412.45	0	53	1896.45
	Tons	622	0	0	2,713	0	12,299.60	0	415	16,049.60
	Yield (Tons/ha)	8.3	0	0	7.6	0	8	0	7.8	8.5
	Value (Million Kshs)	6.2	0	0	0.1	0	245.99	0	8.3	260.59
Yams	Crop area (ha)	0	0	760	0	0	165.1	0	0	0

	Tons	0	0	6,080	0	0	825.5	0	0	0
	Yield (Tons/ha)	0	0	8	0	0	5	0	0	0
	Value (Million. Kshs)	0	0		0	0	41.275	0	0	0
Soya Beans	Crop area (ha)	199	0	0	0	0	46.9	0	0	0
	Bags	139	0	0	0	0	234.5	0	0	0
	Yield (Bag/ha)	0.7	0	0	0	0	5	0	0	0
	Value (Million Kshs)	3.6	0	0	0	0	0.94	0	0	0

Source: Department of Land and Crops Development and Management, MoA

Annex IV: Vegetables Production 2006-2007

Crop	Target Hectares		Achieved Hectares		Production (MT)		Value (KSh)	
	2007	2008	2006	2007	2006	2007	2006	2007
Cabbages	21,640	25,290	20,559	24,892	493,376	609,292	2,785,713	3,345,848
Kales	30,120	29,630	28,899	28,250	433,485	423,750	4,334,850	4,237,500
Tomatoes	19,420	20,000	19,542	18,926	503,730	567,780	12,593,250	14,194,500
Onions	7,982	8,860	7,100	7,908	106,500	118,620	3,727,500	4,151,700
Carrots	3,356	4,925	2,976	4,475	41,664	62,650	624,960	939,750
French beans	6,447	6,713	6,154	6,358	61,540	63,580	1,846,200	1,907,400
Spinach	2,740	3,905	2,563	3,651	33,319	47,463	333,190	474,630
Garden peas	9,060	12,012	8,075	11,809	40,375	59,045	1,211,250	1,771,350
Snow peas	2,270	2,600	2,097	2,418	12,763	14,508	446,705	507,780
Irish potato	127,979	104,266	120,754	98,401	2,415,080	1,968,020	12,075,400	9,840,600
Chilli	937	949	885	875	8,850	8,750	221,250	218,750

Annex V: Farm Inputs

TYPE OF INPUT	UNIT	CENTRAL	EASTERN	N/EASTERN	NAIROBI	R/VALLEY	WESTERN	NYANZA	COAST
1.Fertilizers									
DAP	50kgs	1500-3000	2700-3000	2350-2500	1750-2250		2066	2400	1700-2000
	25kgs	800-1800		1400-1500		850-2000		1500	
	10kgs	400-700		550-600				500	
CAN	50kgs	1500-2500	2250-2300	2000-2100		1350-1900	1594	2150	1350-1700
	25kgs	800		1250-1400		750-950		850	
	10kgs			500-550		350		425	
TSP	50kgs	1500-2500		1800-2100			2075	1800	1850
ASN	50kg	1400				1250		1700	
20-20-0	50kgs	1500-2200	1850-2250				1750	2000	
	25kg	750-1200						850	
	10kg	350-500						425	
17-17-17	50kgs	1500-2200	1850-2300				2100		1350
	25kg	750-1150							
	10kg	400-600							
Urea	50kgs	1500	1750-1850			1600-2000	1444	1750	1650
SSP	50kg					850-1400	1228	1200	
23:23:0	50kg	1500-2200	1650-1850			1500-1800	1940	1350	
	25kg	800-1200							
	10kg	400-600							
26:5:5	50kg	1500							
20:10:10	50kg	1400-2200					2025		
22:11:11	50kg	1500							
22:6:12	50kg	1700							
25:25:5:5s	50kg	1400					1925	1300	
Mavuno planting	50kg	1800	1750-1800			2200	1813	1950	
Mavuno top dressing	50kg		1550			1700	1500		
	25kg	850							
Pymyx	50kg	1200							
Dolmax	50kg	1700							
SA	50kg	1400				1100-1150			
MAP	50kg	1550				1570-1950	1650		
Foliar feed	200ml						250	300	
Easygrow	1l		250-300				220	600	220
Farmphoska	5l		600						
Bayfolan	1l								

TYPE OF INPUT	UNIT	CENTRAL	EASTERN	N/EASTERN	NAIROBI	R/VALLEY	WESTERN	NYANZA	COAST
	5l	900						220	
	1l							250	250
	500ml	180-170							
Rock phosphate	50kg						1750		
Agricultural lime	50kg						850		
2. Maize Seeds									
Kenya seeds	2kgs	240	250		240	240-350	250	250	250
	5kg					575-600	288	575-600	
	10kg					1150-1350	1180	1150-1350	
	25kg						2875	2905	
Dekalb	2kgs	350	350		350				
Pannar 5243	2kgs	360				300-320	318	300-320	
Duma 41,43	1kg	150				150		200	
	2kg	300	360-380			320	320		
Pioneer seeds	2kgs	360	360-380			340	335	360-380	
Simba seeds	2kgs	320	320				320	320	
Pannar	1kg		170-180						
Western seeds	2kgs	260				260-300	275	260	
Katamani	2kg	245							
DH0 ₁ , DH0 ₂	2kg	260	250-280	350-380					
PH1, PH4	2kg								260-280
Maseno double cob	2kg						330		
Seedco	2kg						1800		
3. Sorghum and millet									
Sorghum	2kg			190-200		120-250	145	120-150	120-155
Millet						120-150	137	120-150	
Simsim	1kg			130-140					
4. Bean seeds									
Non certified	2kgs	110				60-80		70	
Certified	2kgs	200				165-180	175	160-180	155
Sunflower 8998	1kg	200	80			100	170	100	
Green grams(certified)	2kg	165							120
Green grams(non certified)	2kg	120							
Cowpeas	2kg					100-200		90-180	140
groundnuts	2kg								
4. Wheat									
Wheat(not certified)	50kg	1600				2100			
5. Iris potato seeds									
Certified	50kg	1650				1900-1950			
Non- certified	50kg	350				900			

TYPE OF INPUT	UNIT	CENTRAL	EASTERN	N/EASTERN	NAIROBI	R/VALLEY	WESTERN	NYANZA	COAST
6. Vegetables									
Water melon	50g	155	180						180
	100g			400-500					
	100g		275						
Capsicum	100g		800	300-350					300
Cabbage- Gloria	50g	1600				1400-1500	1633		
	10g		400						
Cabbage sugar loaf	100g					95-110		80	
Cabbage: Copenhagen market	100g					105-165		100	
	10g		60						
Carrots- Nantes	50g	135	120			120-130	70	120	
Coriander	50g	100							
Courgete	50g	345				200			
Kales- thousand headed	50g	95				100-120	77		90-100
Collards	50g	55						50	50
	500g	110							
Spinach	50g	85	400	60-80					
Onion-Red creole	50g	235		160-180		240-260	191		400
	500g						3345		
Bombay red	50g			180-190					
	250g		500						
Tropical hybrid	50g					300-400			
Tomatoes Cal j Ann Onyx	25g	185	200						
	50g	350		450-500			364	350	480
	25g	690							
	25g	225	230						
M82	50g	400				360-500		350	
	50			280-300					360-400
Tomatoes (hybrid)							1300		
Cucumber	50g	155							
	25g	105							
Sweet pepper	25g	200				320			
Butter nut	50g	190							
French beans	50g	1900							
Chilies	50g					150-170			70
Egg plant	50g					220-260			
Local vegetable	25g					80-100			
CHEMICALS									
7. Insecticides									
Fastac	50mls	280							
Dimethoate	100mls	100	100-110						
	1l		580-800						800
Bulldock granules	1kg	150	350						140

TYPE OF INPUT	UNIT	CENTRAL	EASTERN	N/EASTERN	NAIROBI	R/VALLEY	WESTERN	NYANZA	COAST
Deconil	450gm	450							
Marshall EC	100ml	280		290-300					
	1l					1850			1750
Furadan	1kg	445					702		350
	250g		120	300-350		100			
Diazinon	100ml	170							
	1l		990						
Actellic supper	200g	230						110	
	500g		250	240-250				230	
	1kg					350-370	370	580	350
Actellic EC	1L					2200			
Blue cross	400g								
Alphatata	50ml	190							
Sumi combi	1kg					1200			
	500g								
Skana dust	1kg					320		350	
	200g					100-150	110	130	
Spintor dust	1kg					980			
	250g							350	
Metasystox	100ml	235							
Buldock Ec	500ml	800							
Brigade	100ml	230		300-320					330
Polytrin	1lt	1625				1500			
Decis	1tab	65				50			
Karate	200ml	370				400			
	100ml			250-300		250-350			200
	1l		1350-1600	1500-1600		1300-1400			1600
Lebeycid	100ml		290			260			
Confidor	50ml					300-450			
	500ml					4500			
Thuricide	1kg					1200			
	500g					1400			
Malathion	1l					120			
Bestox	1l					2400			
	100ml		180			270			
8. Fungicides									
Ridomil	500g	810							
	120g			300-350					
	1kg	1600		1500-1700		1400	1513		1350
Dithane M 45	1kg	720				1400	810		600
	500g		350			180-250			
Milraz	1kg	1275					1600		

TYPE OF INPUT	UNIT	CENTRAL	EASTERN	N/EASTERN	NAIROBI	R/VALLEY	WESTERN	NYANZA	COAST
	300g			600-700		780			
	100g	190	120			180	200		225
Kocide 101	500g					340-500			
Oshothane	1kg	800							
	500g					230-250			
Antracol 70% WP	500gms	355				650-780	943		800
	100g		120	120-130					
	100g	120							
Thiovit	1kg	410							
Milthane Super	1kg	550							
	200g					250-260			
Copper oxychloride						300-390	250		
	500gm	230							
Galben M 8-85	1kg					1350			
Bayleton	100g			350-380		300			
Victory 75 WP	1kg					1500			
Acrobat	500g					400			
Cupro Caffaro	500g		350						
	1kg			1400-1500					
9. Herbicides									
Sencor	100mls	280							
Touch down	500mls	570	430						
	1kg	835							
Round up	500mls	380							500
	1l		950				1400		
Fuma complete	5l					20440			
Herbkill	500ml		450						
Farmuron	200g					240			
Glean 75 DF						7660			
Gramoxone	1lt	925	950			600-900	2300		950
Wipe out	200ml	230							
2,4-D amine	1lt	370				350-420			
	5l					900			
Eraser	1lt	775							
shellamine									
Lasso EC	5l					2500	2000		
Wipe out	1l					700-850			
10. Acaricides									
Triatix	100ml	180							
	40ml	90							
Tactic	100ml	195							
	40ml	90							
Steladone	40ml	80							

TYPE OF INPUT	UNIT	CENTRAL	EASTERN	N/EASTERN	NAIROBI	R/VALLEY	WESTERN	NYANZA	COAST
	100ml	160							
Almatix	100ml	170							
	40ml	80							

Source: Department of Agribusiness, Market Development and Agricultural Information

ANNEX VI: National Average Wholesale Price of Crops in 2007

CLASS	CROP	PKG	KG	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CEREAL	Dry Maize	Bag	90	1,192	1,176	1,140	1,121	1,156	1,192	1,200	1,159	1,189	1,233	1,218	1,180
	Green Maize	Ext	115	1,943	1,828	2,163	2,133	1,888	1,875	1,852	1,966	1,983	2,153	2,178	1,940
	Finger Millet	Bag	90	2,422	2,440	2,410	2,367	2,229	2,213	2,331	2,402	2,504	2,331	2,510	2,663
	Sorghum	Bag	90	1,530	1,741	1,634	1,500	1,552	1,571	1,485	1,508	1,600	1,514	1,509	1,470
	Wheat	Bag	90	1,960	2,038	2,050	2,100	2,044	2,117	1,190	2,700	2,600	2,644	2,829	3,000
LEGUMES	Beans	Bag	90	2,886	2,987	3,124	3,147	3,027	2,996	3,232	3,325	3,058	2,899	3,351	3,600
	Canadian Beans	Bag	90	2,974	2,975	3,096	3,190	3,157	3,095	3,125	3,094	3,155	3,257	3,444	3,523
	Rosecoco Beans	Bag	90	2,681	2,624	2,918	2,745	2,633	2,530	2,717	2,723	2,524	2,807	2,946	3,000
	Mwitmania Beans		90		2,532	2,638	2,760	2,714	2,667	2,703	2,707	2,716	2,771	3,018	3,034
	Moja Beans	Bag	90	3,898	3,891	3,628	3,823	3,724	3,578	3,460	3,563	3,546	3,424	3,589	3,833
	Dolichos (Njahi)														
	Green Gram	Bag	90	4,248	3,928	3,984	4,165	4,257	4,334	4,284	4,300	4,183	4,490	4,441	4,575
	Cowpeas	Bag	90	3,489	3,120	3,098	3,459	3,377	3,339	3,365	3,348	3,275	3,059	3,362	3,307
	Fresh Peas	Bag	51	1,730	1,482	1,283	1,290	1,398	1,781	2,011	1,313	1,400	1,388	1,422	1,456
	Groundnuts	Bag	110	5,315	5,212	5,414	5,763	5,941	5,742	5,783	5,935	5,889	5,851	6,064	6,213
ROOTS &	Red Irish	Bag	110	1,669	1,296	1,378	1,677	1,725	1,705	1,690	1,706	1,847	1,880	2,013	2,114

CLASS	CROP	PKG	KG	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
TUBERS	Potatoes														
	White Irish Potatoes	Bag	110	1,623	1,363	1,431	1,669	1,839	1,751	1,726	1,746	2,014	1,960	2,080	2,175
HORTICULTURE	Cassava	Bag	99	944	1,154	956	915	998	941	951	906	851	929	862	952
	Fresh Sweet Potatoes	Bag	98	1,514	1,434	1,518	1,360	1,518	1,652	1,595	1,586	1,673	1,668	1,483	1,655
	Cabbages	Ext Bag	126	1,238	1,029	1,088	1,125	1,262	1,319	1,492	1,364	1,212	1,215	1,204	1,094
	Cooking Bananas	Med Bunch	22	273	281	297	324	324	293	333	318	325	325	319	332
	Ripe Bananas	Med Bunch	14	344	284	352	333	310	297	330	322	327	324	364	348
	Carrots	Ext Bag	138	1,627	1,562	1,386	1,209	1,308	1,308	1,456	1,566	1,570	1,707	1,755	1,649
	Tomatoes	Lg Box	64	2,244	2,809	2,246	1,721	1,408	1,512	1,659	1,349	1,333	1,595	1,531	1,500
	Onions Dry	net	13	529	494	516	584	608	682	553	415	341	332	352	400
	Spring Onions	Bag	142	956	925	1,070	1,249	1,240	1,232	1,166	1,228	1,228	1,219	1,173	886
	Chillies	Bag	38	1,169	1,228	1,328	1,334	1,288	1,302	1,337	1,356	1,312	1,415	1,481	1,138
	Cucumber	Bag	50	1,217	1,150	963	895	1,099	1,089	1,136	1,216	1,212	1,249	1,245	1,131
	Capsicums	Bag	50	1,547	1,614	1,525	1,547	1,494	1,455	1,533	1,548	1,510	1,731	1,517	1,573
	Brinjals	Bag	44	844	1,051	986	975	956	937	1,023	940	1,120	1,092	1,025	946
	Cauliflower	crate	39	2,194	2,742	1,932	1,624	1,448	1,560	1,403	1,724	1,742	1,638	2,038	1,705
	Lettuce	Bag	51	1,084	1,045	1,297	1,153	1,029	1,135	1,082	1,230	1,239	1,264	1,317	1,164
	Passion Fruits	Bag	57	1,661	1,458	1,768	1,896	1,772	1,584	1,713	1,789	1,946	2,041	1,920	2,058
	Oranges	Bag	93	1,466	1,572	1,574	1,504	1,455	1,509	1,466	1,601	1,775	1,709	1,574	1,669
	Lemons	Bag	95	582	609	686	704	607	674	676	658	884	1,159	1,084	907
	Mangoes Local	Bag	126	1,062	1,039	1,038	1,224	1,263	1,223	1,208	1,017	1,143	1,166	939	778
	Mangoes Ngowe	Sm Bask	25	627	593	550	645	489	435	526	673	924	748	591	640

CLASS	CROP	PKG	KG	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		et													
	Limes	net	13	595	636	1,051	979	853	829	638	602	616	1,055	1,068	605
	Pineapples	Doze	13	472	432	505	491	493	453	496	478	476	505	492	465
		n													
	Pawpaw	Lg	54	820	834	917	923	893	894	740	686	717	754	673	653
		Box													
	Avocado	Bag	90	1,033	1,051	883	937	842	956	1,105	1,004	1,021	1,052	1,074	865
	Kales	Bag	50	652	638	737	780	818	782	785	615	636	599	612	770
OTHERS	Eggs	Tray		157	167	185	169	163	162	190	169	170	167	171	182

Source: Department of Agribusiness, Market Development and Agricultural Information