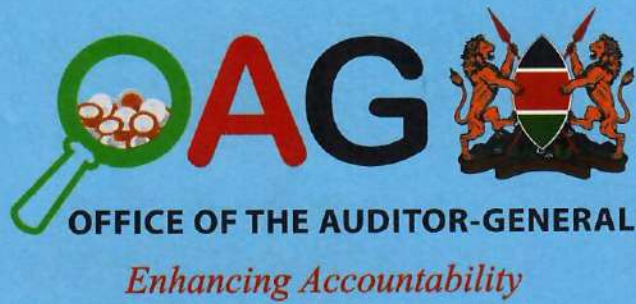


REPUBLIC OF KENYA



**REPORT**

**OF**

**THE AUDITOR-GENERAL**

**ON**

**KENYA AGRICULTURAL AND LIVESTOCK  
RESEARCH ORGANIZATION**

**FOR THE YEAR ENDED  
30 JUNE, 2023**

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**KENYA AGRICULTURAL AND LIVESTOCK RESEARCH  
ORGANIZATION  
(KALRO)**

**ANNUAL REPORT AND FINANCIAL STATEMENTS**

**FOR THE FINANCIAL YEAR ENDING  
30<sup>TH</sup> JUNE 2023**

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Prepared in accordance with the Accrual Basis of Accounting Method under the  
International Public Sector Accounting Standards (IPSAS)

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## **1. ACRONYMS, ABBREVIATIONS AND GLOSSARY OF TERMS**

### **A. Acronyms and Abbreviations**

AIA	Appropriation in Aid
AMRI	Agricultural Mechanization Research Institute
APVC	Agricultural Product Value Chains
ASA	American Society of Agronomy
ASAL	Arid and Semi-Arid Lands
BoM	Board of Management
CBPP	Contagious Bovine Pleuro-Pneumonia
CEO	Chief Executive Officer
CNA	Competence Needs Assessment
CS-APP	Climate Smart Agricultural Productivity Project
DUS	Distinctness Uniformity Stability
EAAPP	East African Agricultural Productivity Project
ECF	East Coast Fever
ERP	Enterprise Resource Planning
ESAMI	Eastern and Southern African Management Institute
FFS	Farmer Field Schools
GAP	Good Agricultural Practices
GCHERA	Global Consortium of High Education for Africa German Development Agency
GIZ	Gesellschaft für Internationale Zusammenarbeit
HRI	Horticulture Research Institute
ICWES	International Conference of Women Engineers and Sciences
IPSAS	International Public Sector Accounting Standards (IPSAS)
KALRO	Kenya Agricultural and Livestock Research Organization
KARI	Kenya Agricultural Research Institute
KEPHIS	Kenya Plant Health Inspectorate Services
KEVEVAPI	Kenya Veterinary Vaccines Production Institute
KCSAP	Kenya Climate-Smart Agriculture Project
MNLD	Maize Lethal Necrosis Disease
NPT	National Performance Trials
MoUs	Memorandum of Understandings
MT	Metric Tons
MTP	Medium Term Plan
NACOSTI	National Commission for Science, Technology and Innovation
NPT	National Performance Testing
NSRC	National Sericulture Research Centre
PCPB	Pest Control Products Board
PPR	Peste des Petits Ruminants
RVF	Rift Valley Fever
SSSEA	Soil Science Society of East Africa
ToTs	Trainer of Trainers
USAID-FtF	United States Agency for International Development - Feed the Future

**B: Glossary of Terms**

**Fiduciary Management** - Members of Management directly entrusted with the responsibility of financial resources of the Organization

**Comparative Year** - Means the prior period.



### **Our Vision**

Excellence in agricultural and livestock research towards transformed livelihoods.

### **Our Mission**

To conduct agricultural research through application of science, technology and innovation to catalyse sustainable growth and development in agriculture and livestock Product Value Chains.

### **Organization Goal**

To contribute to the growth of the agricultural sector through research coordination and regulation; technology and innovation development; and catalyse transfer and utilization of agricultural research outputs.

### **Our Guiding Core Values**

KALRO will be guided by the following core values in its operations:

**a) Customer orientation**

The central focus of KALRO is to provide timely and responsive demand-driven research interventions aimed at addressing the needs of the customers within the agricultural sector. KALRO will achieve this by maintaining a culture that promotes responsiveness to customer needs.

**b) Professionalism**

KALRO will uphold high standards of excellence in the provision of services to their customers. One of the hallmarks of excellence is integrity and ethics in all areas of operation. In this regard, KALRO research outputs and recommendations will adhere to the highest standards of scientific rigour, ethics and sound evidence base.

**c) Innovativeness**

KALRO recognizes the need for innovation in order to be responsive to the agricultural sector challenges. In this regard KALRO commits to develop flexible and integrated solutions in-tandem with the needs of customers and stakeholders.

**d) Collaboration**

Given the multi-stakeholder interest that the agricultural sector attracts, KALRO is expected to collaborate and forge partnerships for the development of the sector in Kenya and beyond. KALRO will therefore endeavor to create beneficial opportunities for agricultural research and development.

**e) Environmental consciousness**

KALRO will ensure that the environment is conserved while discharging its mandate.

**f) Integrity**

KALRO is committed to ethical delivery of its mandate to all stakeholders.



**I. KEY ORGANIZATION INFORMATION AND MANAGEMENT**

**(a) Background information**

The Kenya Agricultural and Livestock Research Organization (KALRO) is a State Corporation established under the Kenya Agricultural and Livestock Research Act, No 17 of 2013, with perpetual succession, the power to sue and be sued in its own name and the ability to own and alienate movable and immovable property. The organization is also governed by the provisions of the State Corporations Act, Chapter 446 of the Laws of Kenya, an Act of Parliament providing for control and regulation of state corporations. KALRO falls under the Ministry of Agriculture and Livestock Development, and is the country's principal national organization responsible for research and technology generation on crops, livestock, soil and water management and their socio-economics.

**(b) Principal Activities**

The Organization's mandate is to undertake, streamline, coordinate and regulate all aspects of research in agriculture and livestock development, and promote the application of the research findings, technologies and innovations. Its mission is to conduct agricultural research through application of science, technology and innovation to catalyze sustainable growth and development in agriculture and livestock product value chains. In pursuit of this mission, KALRO seeks to acquire and contribute knowledge and creative solutions that are participatory and client-oriented; holistic and system-oriented; gender-sensitive and affordable to its stakeholders.

**(c) Key Management**

The Organization's day-to-day management is under the following:

1. Director General
2. Deputy Director General (Livestock)
3. Deputy Director General (Crops)

**(d) Fiduciary Management**

The key management personnel who held office during the financial year ended 30<sup>th</sup> June 2023 and who had direct fiduciary responsibility were;

**1. Directors**

No.	Designation	Name
1	Director General	Dr. Eliud K. Kireger
2	Deputy Director General-Livestock	Dr. Evans Ilatsia
3	Deputy Director General -Crops	Dr. Felister Makini
4	Director, Livestock Systems	Dr. Kipkemoi Changwony
5	Director, Socio-Economics & Policy Development	Dr. Festus Murithi
6	Director, Knowledge Management.	Dr. Karl Nyabundi
7	Director, Crops Systems	Dr. Lusike Wasilwa



**Kenya Agricultural and Livestock Research Organization**  
**Annual Report and Financial Statements**  
**for the year ended June 30, 2023**

No.	Designation	Name
8	Director, Natural Resources Management	Dr. David Kamau
9	Director, Partnership & Business Development	Dr. Margaret Makelo
10	Director, Planning & Performance Contract	Dr. Mumina Shibia
11	Director, Human Resources Management & Administration	Mr. Benjamin Onyancha
12	Director, Finance & Accounts	Mr. David Muriithi
13	Director, Supply Chain Management	Mr. Stevens Musewe
14	Director, Information Communication and Technology	Mr. Salim Kinyimu
15	Director, Corporate Communication	Ms. Virginia Ndungu
16	Director, Internal Audit	Mr. Francis Langat
17	Director, Security Services	Mr. Dennis Khisa
18	Director, Property Management	Mr. Henry Mbaluku
19	Corporation Secretary	Ms. Patricia Ngutu
20	Director, Agricultural Research Funds	Mr. Henry Tanui

**2. Assistant Directors**

No.	Designation	Name
1	Assistant Director, Crop Systems - Production, Agronomy, Breeding and Seed systems	Dr. Benjamin Kivuva
2	Assistant Director, Crop Systems- Health	Dr. Zakayo Kinyua
3	Assistant Director, Livestock Systems- Production, Breeding and Commercialization	Dr. Elkana Nyambati
4	Assistant Director Livestock Systems- Health	Dr. Eric Mungube
5	Assistant Director, Socio-Economics & Policy Development- Socio-Economics and Policy	Dr. Wellington Mulinge
6	Assistant Director, Socio-Economics & Policy Development- Research Methods and Analytics	Dr. Alice Murage
7	Assistant Director, Planning & Performance Contract- Planning, Monitoring and Evaluation	Ms. Betty Cheroigin
8	Assistant Director, Performance Management and Quality Control	Mr. David Kipkoech Nyamasia
9	Assistant Director, Partnership & Business Development- Business Development	Ms. Lilian Kerio
10	Assistant Director, Partnership & Business Development- Partnership and Resource Mobilization	Dr. Scholastica Wambua
11	Assistant Director, Knowledge Management- Knowledge and Information	Dr. Fredah Maina
12	Assistant Director, Natural Resources Management - Environmental	Dr. Michael Okoti



No.	Designation	Name
	and Sustainability	
13	Assistant Director, Finance & Accounts	Ms. Ebby Musembi
14	Assistant Director, Supply Chain Management	Mr. Amos Mugo
15	Assistant Director, Information Communication and Technology	Mr. Simon Mulwa
16	Assistant Director, Human Resources & Administration- Human Resources Management	Ms. Gladys Wangia
17	Assistant Director, Human Resources & Administration - Training and Development	Dr. Kepha Ombui
18	Assistant Director, Corporate Communication	Ms. Florida Maritim
19	Assistant Director, Internal Audit	Mr. Stephen Kigo

**(e) Fiduciary Oversight Arrangements**

- Ministry of Agriculture and Livestock Development
- The National Treasury and Economic Planning

**(f) Organization Headquarters**

Kaptagat Road, Loresho  
P. O. Box 57811-00200  
Nairobi, Kenya

**(g) Entity Contacts**

Telephone : 0709 104 000, 0722 206 986/8/ 0733 333 223/4  
Email: [director@kalro.org](mailto:director@kalro.org)  
Website: [www.kalro.org](http://www.kalro.org)

**(h) Organization Bankers**

1. Kenya Commercial Bank  
P.O. Box 46950-00100  
Nairobi  
Tel No. 020-2214878,
2. NCBA Bank Kenya  
P.O. Box 44599- 00100  
Nairobi.  
Tel No. 020-4450882,
3. Co-operative Bank of Kenya Ltd  
P O Box 48231 - 00100  
Nairobi  
Tel No. 020-2776000



4. Stanbic Bank Kenya  
P.O Box 30550-00100  
Nairobi.  
Tel No. 020-3268888.
5. National Bank of Kenya  
P.O Box 72866-00200  
Nairobi.  
Tel No.020-2828000.
6. Absa Bank Kenya  
Westend Building,  
Off Waiyaki Way.  
PO Box 30120 - 00100.  
Nairobi.  
Tel: +254 (20) 3900000. Cell: +254 (722) 130120. Cell: +254 (732) 130120.

**(i) Independent Auditors**

Office of the Auditor General,  
Anniversary Towers, University Way  
P.O. Box 30084-00100  
Nairobi, Kenya

**(j) Principal Legal Adviser**

KALRO Legal Office  
P.O. Box 57811 – 00200  
Cellphone. 0709 104 000, 0722 206 986/8/ 0733 333 223/4  
Email: director@kalro.org  
Nairobi

## **II. THE BOARD OF MANAGEMENT**

### **Hon. Peter Weru Kinyua**



Hon. Peter Weru Kinyua has extensive knowledge and experience in legislation, corporate administration, management, public service, finance and environment. He has a BSc. in Surveying from the University of Nairobi, Accountancy from Strathmore College (Currently Strathmore University) and Certified Environment Practitioner from Jomo Kenyatta University of Agriculture and Technology (JKUAT). He is a lead expert for the National Environmental Management Authority (NEMA), and works as a Consultant in Environment Impact Assessment (EIA), Consultant in Engineering Surveying for roads for various Road Contractors and Engineering Projects, Consultant for AMREF in aid of Ministry of Health in acceleration of Health-related Bills in Parliament and others in Youth Empowerment Programs.

Hon. Peter Weru Kinyua is appointed Member, Chairman KALRO BoM.

### **Prof. Walter O. Oyawa, PhD**



Prof. Walter O. Oyawa is currently the Director General/Chief Executive Officer of the National Commission for Science, Technology and Innovation (NACOSTI). He holds a PhD in Civil Engineering (Structural Engineering), at Kyoto University, Japan, M.Sc. Civil Engineering (Structural Engineering), at the University of Nairobi, Master of Tropical Veterinary Science at the University of Edinburgh and a B.Sc. Civil Engineering, at the University of Nairobi. He holds an Executive Master of Business Administration (EMBA), at JKUAT. He is a Registered Professional Engineer, Engineers Registration Board of Kenya (ERB), Corporate member, Institution of Engineers of Kenya (IEK), and Lead Expert, National Environmental Management Authority (NEMA).

Prof. Walter O. Oyawa is a member of KALRO BoM.

### **CPA Margaret Wamuyu**



CPA Margaret Wamuyu is a professional accountant with experience at different Boards and is currently pursuing a PhD in Finance. She is a Certified Public Accountant and a Member of Institute of Certified Public Accountants of Kenya (ICPAK).

She also holds a Master of Business Administration degree from the University of Nairobi and Bachelor of Commerce degree (First Class Honors) from KCA University. She is a Senior Government Officer with a wealth of experience in



Accounting, Performance Contracting and Public Financial Management. She is currently working at the National Treasury and Economic Planning. She represents, PS National Treasury and Economic Planning.

### **Ms. Clara W. Mwangi**



Ms. Clara W. Mwangi is appointed as an Independent Member of the Board and Chairs the Finance and Administration Committee of the Board. She has over twenty years' experience at Senior Management Levels with International Educational Institutions and with a special focus in areas of Finance, Human Resource and Administration.

She is a holder of a Bachelor of Education Degree (Kenyatta University) and has attended various International Management Courses globally. Clara is currently serving as a Deputy Director at a leading International School in the Region.

### **Ms. Teresia Wambui Karanja**



Ms. Karanja holds a Master Degree in Plant Pathology. She heads the Pathology, Weeds and Pesticide Advisory Services Branch at Plant Protection Services Division. She is also a Board Committee Member of Technical Registration of new pest control products and Audit committees.

She represents, Principal Secretary, State Department for Agriculture, Ministry of Agriculture and Livestock Development.

### **Mr. Johana K. Cheruiyot**



Mr. Johana Kipkorir Cheruiyot is an appointed Member. He Chairs the Audit, Risk and Governance Committee of the Board. He holds a Bachelor of Science Degree in Animal Production and a Post Graduate Diploma in Education. He has wide experience in leadership skills. Was Chairperson for various Secondary Schools; County Executive Committee Member in-Charge of Transport, Roads and Public Works Narok County. Was Chief Officer also in Narok County Government.

### **Dr. Mukiri Wa Githendu**



Dr. Githendu holds a Ph.D. in Agricultural Education from Iowa State University and an M.Sc. in Seed Technology from Edinburgh University. He also holds HSC (Head of State Commendation). He is an appointed

Member. He chairs the Research, Technical and Innovation Committee of the Board.

### **Mr. George Ombua**

Mr. Ombua represents Inspector General, State Corporations. He is a Member with no voting rights.

### **Dr. Eliud K. Kireger, OGW**



Dr. Eliud Kiplimo Kireger is the Director General/CEO of KALRO. Prior to this appointment, he served as the Managing Director/CEO of the Tea Research Foundation of Kenya. Dr Kireger attained his PhD in Plant Eco-physiology from the University of Wales, (UK), MSc in Genetics and Tree breeding from University of Toronto (Canada) and a BSc in Forestry from Moi University (Kenya). He has trained in Conflict Management and Resolution, Strategic Leadership, Company Directorship and Change Management among others. He was an Appointed Member of the board of management of Kenya Agricultural Research Institute (KARI) where he chaired the Audit Committee. He is the Secretary to the KALRO Board of Management.



## **II. MANAGEMENT TEAM**

### **1. Dr. Eliud K. Kireger-B.Sc.; M.Sc.; PhD, OGW** **Director General**



Dr. Eliud Kiplimo Kireger is the Director General/CEO of KALRO. Prior to this appointment, he served as the Managing Director/CEO of the Tea Research Foundation of Kenya. Dr Kireger attained his PhD in Plant Eco-physiology from the University of Wales, (UK), MSc in Genetics and Tree breeding from University of Toronto (Canada) and a BSc in Forestry from Moi University (Kenya). He has trained in Conflict Management and Resolution, Strategic Leadership, Company Directorship and Change Management among others. He was an

Appointed Member of the board of management of Kenya Agricultural Research Institute (KARI) where he chaired the Audit Committee.

### **2. Dr. Evans D. Ilatsia (BSc, MSc, Dr.sc.agr.)** **Deputy Director General, Livestock**



Dr. Evans D. Ilatsia holds a Doctorate degree in Animal Breeding and Genetics from University of Hohenheim, Germany; a Master of Science degree in Animal Breeding and a Bachelor of Science in Agriculture Extension from Egerton University. Prior to his current position, he served as the Institute Director, Dairy Research Institute where he led a team of scientists in implementing over 22 research and development projects. Dr.sc.agr. Ilatsia is

an accomplished scientist who has (co) authored over 80 research publications including refereed journal articles, conference papers, technical bulletins, reports and training manuals and contributed to various policy documents. He also holds various academic supervisory roles for post graduate MSc and PhD candidates in local and international universities

### **3. Dr. Felister W. Makini - B. Sc.; M.Sc.; PhD.** **Deputy Director General, Crops**



Dr. Felister Makini holds a BSc in Botany and Chemistry from the University of Nairobi, Kenya and an MSc in Plant Pathology from Georgia State University, USA. She also has a PhD in Plant Pathology from the University of Greenwich, UK and has done several short courses in various fields. Prior to her current position, she worked as the Deputy Director in charge of the Department of Outreach and Partnerships at KARI. Recently together with others she published an operational

field guide to innovation platforms as the lead author.



#### **IV. CHAIRMAN'S STATEMENT**

The year under review marked the beginning of the first term for implementation of the 2<sup>nd</sup> KALRO Strategic Plan (2022-2027). The KALRO Board of Management (BoM) ensured that conducive environment for the organization operations was improved and maintained. This included the implementation and adherence to the new paradigm shift based on the Government Bottom-Up Economic Transformational Agenda (BETA) through mainstreaming of the agenda in the development of the 2<sup>nd</sup> KALRO Strategic Plan (2022-2027). The management facilitated sensitization of staff on the BETA Agricultural Transformation and Inclusive Growth. In addition, the Board spearheaded the implementation of policies that guided the annual activity planning and milestones of the Organization. Subsequently, a performance contract with the Ministry of Agriculture and Livestock Development was drawn and we committed ourselves to the achievement of the set targets. I am pleased to report that we recorded commendable achievements on the targets for the year. The organization will continue the course in honing the adoption of the Agricultural Productivity Value Chain (APVC) approach for all research programs and projects.

The period saw increased activities due to return to normalcy after the lifting of the restrictions occasioned by the COVID-19 pandemic. The Board of Management recognizes the fundamental role that the internal revenue generation plays in support of research activities and capital investments in light of declining development funding from the exchequer. The board took advantage of increased activity and improved rains to enhance revenue generation through doubled efforts in strategic investments of scarce resources. Therefore, AIA target from sale of farm produce was achieved and exceeded buoyed by aforementioned BoM efforts. KALRO continued implementation of Kenya Climate Smart Agriculture Project (KCSAP) and AgriFI Climate Smart Agricultural Productivity Project (AgriFI CS-APP) Projects and support from the National Government. The implementation was carried out through partnership and collaboration which is one of our pillars. The BoM also ensured that the Organization's innovation programs were developed and efficiently implemented in collaboration with sector stakeholders, especially the county governments, industry and donors. The BoM will sustain the pursuit of collaboration and partnerships as a strategy to maintain sustainable investments in research to propel KALRO to play a significant role in developing and disseminating technologies, innovations and catalyze knowledge sharing in both local, regional and global markets.

With these achievement of the Organization's strategic objectives, the board will endeavor to build considerable momentum to maintain these results in future. The board in its wisdom will support the enhancement of stakeholder awareness for increased and sustained support for agricultural and livestock research initiatives to generate technology and innovation for enhanced production and productivity in agriculture. This will ensure improved economic returns and livelihoods for farmers,



attainment of food and nutrition security and employment through value addition. The Organization recognizes the need for continual improvement of internal process efficiencies in order to counter the challenges facing the agricultural innovation system promptly, efficiently and cost effectively. Management has commendably accelerated implementation of plans to address identified challenges through capacity building and investments in technology.

Finally, KALRO management finalized the development of the 2<sup>nd</sup> KALRO strategic plan 2022/2027 after the expiry of previous one during the previous year under review. In this regard, the management incorporated the BETA Agricultural Transformation and Inclusive Growth and supported public participation through stakeholder consultation and feedback as required under the Constitution of Kenya 2010 after the Board of Management. It is anticipated that the continued public consultation will strengthen the eventual implementation and deepen good governance, promote transparency and foster accountability in the implementation of the new strategic plan.

I take this opportune moment to thank the Government of Kenya, development partners, collaborators, farmers, the KALRO Management and the entire staff for working hard to record these commendable achievements. Let us work even harder and smart we build our beloved nation and the Kenyan people even more for next year, under the BETA Agricultural Transformation and Inclusive Growth.



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**Hon. Peter Weru Kinyua**  
**Chairman, KALRO BoM**



## **V. REPORT OF THE CHIEF EXECUTIVE OFFICER**

The Kenya Vision 2030 development blueprint is the desire for Kenya to become a knowledge-based economy. Under the Government Bottom-Up Economic Transformational Agenda (BETA) the Kenya Government is committed to Agricultural Transformation and Inclusive Growth. KALRO Management recognizes the central role the organization is expected to play in the generation technology, knowledge and skills support the envisaged economy for its growth and competitiveness. The management therefore continue to apply this ideal in the implementation of the projects planned for the year under review to instill the requisite technology, innovations and knowledge in the agricultural sector which is KALRO's core business. To ensure quality research, the management invested in its human resource through staff development and welfare, both of which are meant to provide a conducive working environment, through compensation and motivation of staff. This is in addition to the development and maintenance of facilities in line with the country's research priorities. The research projects undertaken during the year were aligned to the second KALRO Strategic Plan (2022-2027), The Fourth Medium Term Plan (MTP 2023-2027) of Kenya Vision 2030, the Agriculture Sector Growth and Transformation Strategy (ASTGS 2019-2029) and the Bottom-Up Economic Transformational Agenda (BETA). Furthermore, research projects focused on the assessment, validation and development of Climate Smart Agricultural (CSA) technologies identified along the Agricultural Product Value Chains (APVC) in effort to mitigate adverse climate change.

KALRO management welcomed the increased activities due to return to normalcy after the lifting of the restrictions occasioned by the COVID-19 pandemic. This enabled researchers to continue conducting various research projects activities with funding mainly from World Bank and European Union and other development partners. During the period under review, the Kenya Climate Smart Agriculture Project (KCSAP) and AgriFI Climate Smart Agricultural Productivity Project (AgriFI CS APP) funded projects were the major continuing projects. The Organization managed to achieve A.I.A totaling to over Ksh. 848.93Million up from Ksh. 797.53 Million in 2021/22 due the prevailing favorable weather during the year under review. The Management continued to apply the best practices by ensuring that funds allocated to the Institutes were utilized for the programmes and activities for which they had been planned and to provide excellent services for Kenyans. In this regard, the management facilitated Sensitized 50 employees in the five named Institutes and Centres (10 each) on the commitments and standards stipulated in the service charter and trained 20 employees on excellent customer service culture.

A major achievement during the year was the submission of 26 promising lines of different crops to KEPHIS for NPT, including fifteen (15) Sugar cane, eleven (11) maize, six (6) Sweet potatoes, five (5) finger millet, four (4) each for sorghum, green grams, cassava and coffee; three (3) each for Irish potato, rice, cowpeas, beans, cotton and ground nuts; two (2) each for soya beans and wheat; one (1) each for sunflower and bambara nut. KALRO Developed four (4) crops product profiles; developed and released fourteen (14) crop varieties; commercialized six (6) crop varieties. In 2021/22 FY, testing of 22,828 soil samples was achieved through collaborative linkages with the Counties and International partners. Further, five (5) soil surveys for characterization and mapping were conducted for Busia, Trans Nzoia, Kericho, Vihiga and Nyandarua; in addition to three (3) multi-purpose land suitability map surveys. Moreover, four (4) technologies on food waste management were developed, ten (10) post-harvest losses for



crops (Mango, pawpaw, citrus fruits, cassava, passion fruits, potatoes, maize, avocado, bananas, and various vegetables) were documented and four (4) pre and postharvest technologies to reduce food contamination and wastage disseminated.

In addition, the Adaptive Research Programme KALRO evaluated three (3) bio-pesticides and three (3) plant extracts for management of key insects submitted by PCPB and provided the evaluation reports. KALRO also developed and promoted ten (10) crop health management technologies and practices in addition to evaluation of 150 and 50 crops lines resistance to key diseases and pests respectively. Analyzed 3,701 animal feed samples for their nutritive values and provided feedback in terms of advice to livestock farmers and feed processors accordingly; Disseminated six (6) climate smart and natural resource adaptation technologies, innovation and management practices and six (6) energy saving environmentally sustainable technologies; Packaged and disseminated eight (8) food safety technologies for Mycotoxin management; Developed two (2) rapid diagnostic kits for MRLs, heavy metals, biological toxins; and produced and availed to farmers 84 MT of Aflasafe KE01 for each quarter of the year under review.

On research knowledge sharing, over 120 papers from KALRO researchers were internally reviewed for publication in renowned peer reviewed journals. Another 252 papers internally reviewed for presentation in scientific conferences and some 95 Technical Notes were published with 30 Extension materials developed/updated and availed to users. This offered an opportunity to our researchers to communicate to farmers, the extension workers and other stakeholders on the technologies available. A total of 498 stakeholder-training sessions farmer training workshops, field days and demonstrations were held during the period under review. In addition, ten (10) visibility materials were developed and disseminate the same through all available media forums; 60 Agricultural Product Value Chain (APVC) and Innovation Platform (IP) champions were trained. One hundred fifty (150) farmers were trained on bee husbandry and other apiculture value chain nodes.

To ensure that farmers used improved crop varieties and livestock breeds around the country, the Organization produced and sold 615.1 metric tonnes of basic seed (cereals, potatoes, grain legumes and cotton) and availed to farmers. This also included 5.2879 million tea cuttings, 0.987 million coffee seedlings, 6,816 improved coconut seedlings and 40,080 cashew-nut seedlings and 306,052 Fruit seedlings (avocado, sweet yellow passion, mango, grafted purple passion, sunrise solo papaya and tree tomato) of improved varieties to enhance crop production. On livestock production side, 296 breeding bulls and heifers of Sahiwal (milk and beef) and Boran (beef production); 651,474 Indigenous Chicken chicks and 245 breeding boars and gilts/sows and 303 bucks and rams; were produced and availed to farmers. To ensure availability of quality livestock feed, the Organization tested 3,701 animal feed samples for development of feed rations, produced and availed to farmers 168.6MT clean napier grass cuttings and 6,912kg rangelands grass seed. Developed two (2) forage varieties, commercialized three (3) forage varieties i.e. Enteropogon macrostachyus, Cenchrusciliaris Ecotypes TVT 1, MGD 3 and Chlorisrox burghiana and formulated eight (8) feed rations.

The management continued to ensure human resource development through the KALRO Training Master Plan, by coordinating, monitoring and evaluating staff on PhD and MSc training in both local and overseas universities as well as identifying potential sponsors for the trainings.



KALRO also provided 47 Youth Internships and 690 students' industrial attachment and Apprenticeships during the period.

On behalf of the Management, I would like to take this opportunity to thank the Government of Kenya and our development partners for the support they accorded to KALRO during the reporting period. This support ensured that the Organization met the set targets leading to a commendable achievement of most of our Performance Contract targets.



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**Eliud Kiplimo Kireger (PhD, OGW)**  
**DIRECTOR GENERAL**

## VI. REVIEW OF KALRO PERFORMANCE FOR FY 2022/2023

Section 81 Subsection 2 (f) of the Public Finance Management Act, 2012 requires the Accounting Officer to include in the financial statement, a statement of the national government entity's performance against predetermined objectives.

KALRO has *five* strategic pillars and objectives within its Strategic Plan for the FY 2018/2019-2022/2023. These strategic pillars are as follows:

Pillar 1: Technologies and innovations for priority agricultural products value chains generated and disseminated;

Pillar 2: Knowledge, information and technologies on priority agricultural products value chains research collated, stored and shared;

Pillar 3: Socio-economics information, market and policy options supporting priority agricultural product value chains generated and advocated;

Pillar 4: Organization's capacities and resource management strengthened;

Pillar 5: Systems for coordination, prioritization and regulation of research developed and operationalized.

KALRO develops its annual work plans based on the above *five* pillars. Assessment of the Board's performance against its annual work plan is done on a quarterly basis. The *organization* achieved its performance targets set for the FY 2022/2023 period for its strategic pillars, as indicated in the table below:

Strategic Pillar	Objective	Key Performance Indicators	Activities	Achievements
Pillar 1: Technologies and innovations for priority agricultural products value chains generated and disseminated	1. To improve crop production, productivity and utilization	No. of crop varieties developed	Develop improved crop varieties for better nutrition and industrial development.	62 crop varieties were submitted to KEPHIS for National Performance Trials (NPT), 37 candidates are being evaluated for distinctness, uniformity and stability (DUS) upon which variety release indicators will be determined and 14 varieties have been released out of which six (6) crop varieties have been commercialized.
		Technologies developed	Develop good agronomic technologies and practices for priority APVCs	i. Analyzed 22,828 soil samples; ii. Conducted five (5) soil surveys, characterizations and mapping (Busia, Trans Nzoia, Kericho, Vihiga and Nyandarua); iii. Conducted three (3) multi-purpose land suitability map surveys. iv. Developed four (4) technologies on food waste management; v. Developed and promoted ten (10)



Strategic Pillar	Objective	Key Performance Indicators	Activities	Achievements
				<ul style="list-style-type: none"> <li>crop health management technologies and practices;</li> <li>i. Validated and promoted one (1) organic farming technology;</li> <li>ii. Tested and adapted five agricultural machineries;</li> <li>ii. Designed and fabricated five (5) agricultural machineries/implements;</li> </ul>
		No. of disease resistant crop varieties for food safety.	Improve and maintain crop health and food safety	<ul style="list-style-type: none"> <li>i. Developed and promoted ten (10) crop health management technologies and practices;</li> <li>ii. Evaluated 150 crops lines resistance to key diseases;</li> <li>iii. Evaluated 50 crops lines resistance to key insect pests.</li> <li>iv. Evaluated thirty-three (33) pesticides submitted by PCPB and submitted reports;</li> <li>v. Evaluated three (3) bio-pesticides for management of key insects;</li> <li>vi. Evaluated three (3) plant extracts for management on pests.</li> <li>vii. Packaged and disseminated eight (8) food safety technologies for Mycotoxin management;</li> <li>viii. Analyzed 1583 food samples for mycotoxin contaminants, Minimum Residue Levels (MRLs), heavy metals contaminants and biological toxins in produce or products;</li> <li>ix. Developed two (2) rapid diagnostic kits for MRLs, heavy metals, biological toxins;</li> <li>x. Produced and availed to farmers 84 MT of Aflasafe KE01 quarterly;</li> <li>xi. Validated and promoted one (1) organic farming technology;</li> </ul>
		Technologies developed for pre and post-harvest	Develop pre and post-harvest handling and storage technologies and practices	<ul style="list-style-type: none"> <li>i. Produced and availed to farmers 84 MT of Aflasafe KE01 quarterly;</li> <li>ii. Packaged and disseminated eight (8) food safety technologies for Mycotoxin management;</li> <li>iii. Analyzed 1583 food samples for mycotoxin contaminants, Minimum</li> </ul>



Strategic Pillar	Objective	Key Performance Indicators	Activities	Achievements
				<p>Residue Levels (MRLs), heavy metals contaminants and biological toxins in produce or products;</p> <p>iv. Developed two (2) rapid diagnostic kits for MRLs, heavy metals, biological toxins;</p> <p>v. Developed and promoted one bee pest and disease management technology/ innovations;</p>
		Genetic resources conserved	Support plant genetic resources conservation.	<p>i. Regenerated and bulked 2909 against a target of 500 genetic resources;</p> <p>ii. Carried out a study on plant biodiversity loss.</p>
	2. To improve livestock production, productivity and products utilization	Disease free planting materials	Material produced and disseminated	<p>Basic seed (cereals, potatoes, and grain legumes) (MT), 615.145, Tea planting material (No. Millions), 2.624, Coffee planting material (No. Millions), 0.263, Seed cane production (No.'000' MT), 0.532, Cassava (No. Million), 3.55, Sweet Potato vines (No. Million), 16.69, Coconut seedlings (No.), 6,816, Cashew nut seedlings (No.), 40,080, Cotton basic seed (ton) 11.03, Mulberry cuttings (No) 32,000, Macadamia 10,070, Fruit seedlings(avocado, sweet yellow passion, mango, grafted purple passion, sunrise solo papaya, tree tomato, pepino melon, Thorn melon and banana), 306,052</p>
		Develop improved livestock breeds	Develop improved livestock breeds	<p>i. Evaluated and selected dams and sires based on breeding values;</p> <p>ii. Developed and implemented online livestock recording schemes;</p> <p>iii. Provided data on selected dams and sires for performance evaluation and pedigree recording of selected dams and sires by Kenya Stud Book;</p> <p>iv. Carried out two (2) assessments to approve bulls for availing to farmers;</p> <p>v. Carried out 50 inseminations using Orma Boran semen;</p> <p>vi. Availed 296 breeding bulls and heifers to farmers;</p> <p>vii. Availed 3,000 doses of Sahiwal semen for storage and distribution by</p>



Strategic Pillar	Objective	Key Performance Indicators	Activities	Achievements
				<p>KAGRIC.</p> <p>viii. Aailed 176 breeding bulls to farmers.</p> <p>ix. Produced and aailed 303 breeding bucks and rams.</p> <p>x. Aailed forty (40) camel breeding bulls to farmers.</p> <p>xi. Produced and aailed 651,474 chicks to farmers</p>
		No. of forage varieties developed	Develop forages, improved feeds and feeding systems	<p>i. Developed two (2) forage varieties;</p> <p>ii. Commercialized three (3) forage varieties i.e Enteropogon macrostachyus, Cenchrusciliaris Ecotypes TVT 1, MGD 3 and Chlorisrox burghiana;</p> <p>iii. Analyzed 3,701 animal feed samples for their nutritive values and provide feedback in terms of advice to livestock farmers and feed processors accordingly;</p> <p>iv. Formulated and disseminated eight (8) feed rations and share with farmers.</p>
		Forage seed Systems developed	Develop a robust and sustainable forage seed systems	<p>i. Produced 168.6 MT Napier grass cuttings;</p> <p>ii. Produced 6,912 kg Rangelands grass seed against a target of 7,500 kg</p>
		No. of vaccines developed	Improve and maintain livestock health and food safety	<p>i. Developed and validated four vaccine candidates through; Bio-containment testing of candidate sub-unit vaccine for RVF, Camel pox and PPR;</p> <p>ii. Documented and disseminated of field trial and confined animal trial experiment findings of Contagious Caprine Pleuropneumonia (CCPP) modified vaccine;</p> <p>iii. Conducted capacity building on molecular techniques using gene-editing tool on Camel mastitis vaccine development;</p> <p>iv. Conducted validation trials for a commercial batch of thermos-tolerant</p>

Strategic Pillar	Objective	Key Performance Indicators	Activities	Achievements
				<p>PPR vaccine in sheep and goats and produce a dossier for registration of the vaccine in the East African Region;</p> <p>v. Evaluated two (2) vaccine samples developed using irradiation facility i.e. in development of a mucosal vaccine from irradiated Gumboro virus combined with I-2 Newcastle vaccine for use in chicken;</p>
		No. of diagnostics developed		Evaluated two (2) diagnostic tools.
		Tests for mycotoxins, drug residues and heavy metals (in feeds and food) validated		Developed two (2) techniques for testing Mycotoxins, drug residues and heavy metals (in feeds and food) and availed to farmers;
		Number of feed samples analysed for contaminants	Improve and maintain livestock health and food safety	Analyzed 150 post-harvest animal products samples for contaminants;
		No. of value-added livestock products developed	Support the development of processing and value addition of livestock products	<p>i. Developed Camel meat value added product (Camel meat sausage);</p> <p>ii. Developed Vacuum preserved camel meat ('Nyirinyiri' product);</p> <p>iii. Developed one cow milk added product (cheese).</p> <p>iv. Developed two value added products from honey, propolis and beeswax;</p>
	3. To develop appropriate agricultural machinery and equipment/implements	No of Machinery acquired deployed	Machinery acquired deployed Improved efficiency	<p>v. Tested and adapted five agricultural machineries;</p> <p>vi. Designed and fabricated five (5) agricultural machineries/implements;</p> <p>vii. Established twelve (12) (Five farmer groups, five individual farmers and 2 fabricators) linkages on improving mechanization on four value chains; Maize, beans, Cassava and sorghum and availed the implements.</p>



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Strategic Pillar	Objective	Key Performance Indicators	Activities	Achievements
<b>Pillar 2:</b> Knowledge, information and technologies on priority agricultural products value chains research collated, stored and shared	1.Promote knowledge and information management and outreach	No of Databases developed	Collect and collate KALRO Knowledge Information and Technologies (KITs) for storage, ease of retrieval and dissemination;	i. Developed one (1) bee races characterization manual; ii. Developed (10) visibility materials and disseminate the same through all available media forums; iii. The organization digitized it services by: a) Customer Relation Management b) Bulk SMS c) Agro Weather advisory Applications
		No of Mechanisms for ease of retrieval deployed	Strengthen, digitalize and provide innovative library products and information services;	Digitized forty (40) agricultural value chains platforms;
		No of Digital libraries services in place		Integrated, updated and implemented agricultural dashboards for analytics the organization will develop one dynamic database;
		No of Improved Journals for information sharing	Sustain and improve publication of the organization's peer reviewed journals to international repute, including the East African Agricultural and Forestry Journal and the Tea Quarterly Journal	i. Submitted 120 internally reviewed papers for publications in peer reviewed refereed journals; ii. Developed 95 internally reviewed technical publications; iii. Submitted 252 papers internally reviewed for presentation in scientific conferences.
		No. of Capacity building programs No. of Counties covered	Provide capacity building services within the 47 counties and in the African	i. Conducted 498 Stakeholder trainings on various crops and livestock technologies; ii. Conducted 498 Stakeholder trainings on various crops and livestock technologies;



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Strategic Pillar	Objective	Key Performance Indicators	Activities	Achievements
			region in order to enhance synergy and benefits from agricultural research and products	<ul style="list-style-type: none"> <li>iii. Capacity built Lead farmers from 20 farmer groups on Livestock product value addition;</li> <li>i. Trained 150 farmers on bee husbandry and other apiculture value chain nodes;</li> <li>ii. Capacity built Lead farmers from 20 farmer groups on Livestock product value addition;</li> <li>iii. Trained 60 Agricultural Product Value Chain (APVC) and Innovation Platform champions;</li> <li>iv. Established a hive production workshop;</li> <li>v. Validated and promoted one honey processing technology;</li> </ul>
<b>Pillar 3:</b> Policies and market options supporting and facilitating priority agricultural product value chains developed and advocated	To generate socio-economics, gender and promotion of Participatory Research Methods information	No. of Improved information generated and shared	Generate and promote socio-economics information;	<ul style="list-style-type: none"> <li>i. Developed and updated 128 against a target of 300 extension materials, that include policy briefs, technical bulletins, pamphlets, leaflets and online library;</li> <li>ii. Developed and published agricultural market information on four (4) commodities namely cassava, sorghum, coconut and avocado;</li> <li>iii. Conducted economic analysis studies in two institutes ABIRI and SG&amp;CRI and avail reports;</li> </ul>
<b>Pillar 4:</b> Capacity building to undertake research on priority agricultural product value chains strengthened	1. To improve human resource capacity development and management	% of Competitive remuneration package in place	Develop a reward and recognition system with an attractive and competitive salary and benefits package commensurate with work output;	Employee Performance Management - this refers to the assessment of individual employee's performance. It is based on the negotiated and agreed performance targets that are drawn from the KALRO's annual work plan and the PC. KALRO undertook the following: <ul style="list-style-type: none"> <li>a) Set individual employees annual targets and completed the Staff Performance Appraisal using the prescribed format;</li> <li>b) Undertook Staff Performance Appraisal and compiled the appraisal report for the previous</li> </ul>



Strategic Pillar	Objective	Key Performance Indicators	Activities	Achievements
				<p>year;</p> <p>c) Implemented recommendations emanating from the staff appraisal reports.</p>
		No. of staff trained	Learning and development through regular short and long term training (technical and operational) of staff based on identified needs;	<p>i. Executed interventions to address the identified skills gaps and training needs through recruitment of 224 staff;</p> <p>ii. Execute interventions to address training needs through, capacity building/training, coaching, mentoring, Conferences, congress;</p> <p>iii. Trained 2 sign language interpreters;</p> <p>iv. Allocated resources for implementation of HIV, Non-Communicable Diseases and mental health interventions;</p> <p>v. Promoted attainment of UI-IC at the workplace through offering services for HIV prevention, wellness promotion for NCDs and mental health for at least 50% of staff and family members by:</p> <p>a) Facilitating staff to access the prescribed health screening package for HIV, NCDs and mental health;</p> <p>b) Implementing the prescribed sensitization package for NCDs;</p> <p>c) Implementing the prescribed sensitization package on HIV Prevention;</p> <p>d) Promoting mental wellness and preventing mental health illnesses.</p> <p>vi. Submitted quarterly performance reports</p>
		Level Improved Leadership index	Develop leadership and management skills in order to meet the corporate goals while observing	<p>a) Tracked compliance with the commitments and standards in the charter by;</p> <p>i. Displayed the charter (in the prescribed dimensions of 3' x 4') prominently at the point of entry/service delivery points in both English and Kiswahili at Five Institutes</p>

Strategic Pillar	Objective	Key Performance Indicators	Activities	Achievements
			integrity and good governance;	<p>and centres namely; Biotechnology Research Institute (BIORI), Non-ruminant Research Institute (NRI), Arid and Range Land Research Institute (ARLRI), Sheep, Goats and Camel Research Institute (SG&amp;CRI), KALRO Seeds Centre (KS) and Beef Research Institute (BRI Garissa Centre) with clear visible font size of the content;</p> <p>ii. Customized the service charter to unique needs of customers by: -</p> <ul style="list-style-type: none"> <li>a) Developing a customized audio clip for the blind to be played on television screens at ICRI, HRI, KS TRI, SRI and CRI;</li> <li>b) Translating five, Institutes' (BIORI, NRI, ARLRI, SG&amp;CRI, and KS) service charters to Braille;</li> <li>c) Availing sign language interpreters during meetings and stakeholder functions;</li> <li>d) Training two employees on the use of Braille language at the Headquarters'.</li> </ul> <p>iii. Sensitized 50 employees in the five named Institutes and Centres (10 each) on the commitments and standards stipulated in the service charter and trained 20 employees on excellent customer service culture;</p> <p>iv. Undertook the following activities to track compliance with the commitments and standards in the charter:</p> <ul style="list-style-type: none"> <li>a) Maintained records on service delivery in all quarters,</li> <li>b) Maintained feedback registers in all quarters,</li> <li>c) Operationalized and</li> </ul>



Strategic Pillar	Objective	Key Performance Indicators	Activities	Achievements
	2. To mobilize and manage financial resources	Revenue generated	<p>Increase Internally Generated Revenue through commercialization of technologies, products and services;</p> <p>Strengthening the KALRO Seed Unit (KSU);</p> <p>Raising revenue from royalties, contract research and consultancies;</p>	<p>maintained the Customer Relation Management (CRM) system</p> <p>d) Analyzed and compiled a report on the feedback and shared it with the service providers.</p> <p>i. Kshs. (Million) 1,463.4</p> <p>ii. Scientists in all KALRO Research Institutes Developed and submitted to donors for small grant research proposals for funding;</p>
	3. To improve organizational business processes for effective management and coordination	Cumulative % to achieve a Robust ICT	Establish, maintain and manage Information and Communications Technology (ICT)	<p>i. Re-engineered two (2) service delivery processes namely:</p> <p>a) Customer Relation Management (CRM),</p> <p>b) KAOP- Big Data App innovation platform;</p> <p>ii. Trained BPR champions from key implementing departments in application of CRM and Big Data App innovation platform;</p> <p>iii. Implemented and monitored the reengineered processes;</p> <p>v. Submitted BPR Reports to PSTD using the prescribed format provided.</p>

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<b>Strategic Pillar</b>	<b>Objective</b>	<b>Key Performance Indicators</b>	<b>Activities</b>	<b>Achievements</b>
		Support and facilitate KALRO Security Service for effective services	Security service implemented	<ul style="list-style-type: none"> <li>i. Implemented the annual Road Safety Implementation Plan;</li> <li>ii. Developed an Annual Road Safety Implementation Plan based on the Road Safety Policy with the following key components included; <ul style="list-style-type: none"> <li>a) Eight (8) road safety activities stipulated in the Work Place Road Safety Policy,</li> <li>b) Annual Motor vehicle inspections of all the vehicles,</li> <li>c) Training of drivers on defensive driving,</li> <li>d) Reporting on quarterly basis using the prescribed Reporting Template the noncompliance on road safety at the workplace.</li> </ul> </li> <li>iii. Submitted quarterly reports to NTSA in the prescribed format within 15 days after the end of a quarter;</li> </ul>
	4.To enhance collaboration and partnerships	No. of collaborative initiatives	Build and maintain collaborations with other NARS such as universities, county governments, NGOs, agro-industry, commercially-oriented farms, and international organizations	Held 130 against a target of 150 consultative fora as follows; - <ul style="list-style-type: none"> <li>a) Institute based research priority setting fora based on their Agricultural Product Value Chains (APVC) mandate;</li> <li>b) Engagements with strategic partners including the youth;</li> <li>c) Research coordination forums (i.e. project steering committee meetings).</li> </ul>
		No. of linkages with Country Governments	Establish and maintain linkages with County	The organization enhanced its collaboration with Counties through: <ul style="list-style-type: none"> <li>a) MOUS</li> <li>b) Analyzed 22,828 samples of Soil, plant and fertilizer</li> </ul>



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Strategic Pillar	Objective	Key Performance Indicators	Activities	Achievements
			Governments	c) Conducted 498 Stakeholder trainings on various crops and livestock technologies

**TECHNICAL RESEARCH PROGRAMME ACHIEVEMENTS: FY/2022/2023**

The year recorded significant achievements in various projects under Crops and Livestock Research. Presented below is the summary of the key achievements for the FY 2022/2023 as per the set Performance Contracting document.

**Improved crop production, productivity and utilization**

**Development of improved crop varieties**

During the FY the following activities were undertaken targeting release of varieties of various crops:

- i) Compiled an inventory of promising lines /clonal introductions;
- ii) Submitted promising lines to KEPHIS for evaluation in National Performance Trials (NPTs) as follows; sweetpotatoes-6, soyabeans-2, maize-11, Irish potato-3, rice-3, cowpeas-3, sorghum-4 and ground nuts-3, cassava-4, beans-3, wheat-2, cotton-3, green grams-4, sunflower-1, bambara nut-1, finger millet-5, coffee-4, sugar-15;
- iii) Undertook trials for Distinctness, Uniformity and Stability (DUS) process for sweetpotatoes-4, soyabeans-2, maize-2, rice-3, cowpeas-1, sorghum-2, beans-1, beans-1, wheat-2, sunflower-1, Irish potato-2, sugar-7;
- iv) Developed four (4) crops product profiles;
- v) Developed and released fourteen (14) crop varieties against as target of 30 hence the negative variance;
- vi) Commercialized six (6) crop varieties.

**Production of crops' planting materials**

KALRO produced planting materials of various crops species and sold to farmers and seed companies for planting, multiplication and commercialization as shown in table 1 below.

**Table 1: Production of crops' planting materials**

Planting Material	Achievement
Basic seed (cereals, potatoes, and grain legumes) (MT),	615.145
Tea plants and cuttings (Millions),	5.2879
Coffee planting material (No. Millions),	0.987
Seed cane production (No.'000' MT),	2.147
Cassava (No. Million),	3.55
Sweet Potato vines (No. Million),	16.69
Coconut seedlings (No.),	6816
Cashew nut seedlings (No.),	40080
Cotton basic seed (ton)	11.03
Mulberry cuttings (No)	32,000
Produce 200,000 Fruit seedlings (avocado, sweet yellow passion, mango, grafted purple passion, sunrise solo papaya, tree tomato)	306,052
Macadamia (No)	10,070



### **Pre-and-Post-Harvest Handling and Storage Practices Technologies and Promoted**

During the FY, the following were the achievements:

- i) Developed four (4) technologies on food waste management;
- ii) Documented ten (10) post-harvest losses for crops (Mango, pawpaw, citrus fruits, cassava, passion fruits, potatoes, maize, avocado, bananas, and various vegetables);
- iii) Disseminated four (4) pre and postharvest technologies to reduce food contamination and wastage.

### **Improve and maintain crop health and food safety**

#### **Develop Crop health management technologies and practices**

During the FY: -

- i) Developed and promoted ten (10) crop health management technologies and practices;
- ii) Evaluated 1,836 against a target of 3,000 samples of insects' pests and diseases diagnosed and management recommendations given;
- iii) Established one monitoring and early warning pest and disease protocol;
- iv) Evaluated 150 crops lines resistance to key diseases;
- v) Evaluated 50 crops lines resistance to key insect pests.

#### **Evaluation of Pesticides for Crop Pest Management**

KALRO is licensed by Pest Control and Poisons Board (PCPB) to undertake efficacy trials for new pesticide products introduced in the country alongside other organization. All thirty-three (33) pesticides submitted to KALRO for efficacy were evaluated and reports done and given to PCPB. KALRO undertook:

- i) Evaluated all pesticides submitted by PCPB and submitted reports;
- ii) Evaluated three (3) bio-pesticides for management of key insects;
- iii) Evaluated three (3) plant extracts for management on pests.

#### **Validate and Promote Organic farming**

During the FY 2022/23 KALRO:

- i) Disseminated the evaluation findings of six (6) bio-fertilizers;
- ii) Validated and promoted one (1) organic farming technology (system comparison).

#### **Conservation, and promotion of Plant Genetic Resources**

KALRO maintains a National Gene bank of over 46,000 accessions of different crop species collected from all over the country. In addition, the Genebank preserves the world simsim and finger millet germplasm collection. There is need to continue with collection and preservation of indigenous crop germplasm.

During the FY 2022/23 KALRO: -

- i) Regenerated and bulked 2909 against a target of 500 genetic resources;
- ii) Carried out a study on plant biodiversity loss.



### **Develop Appropriate Agricultural Machinery and Equipment/implements**

In support of development and up scaling of agro-processing equipment/implements, KALRO will undertake agricultural mechanization research to determine appropriate agricultural machinery and their level of efficiency at farm level. During the FY 2022/23, KALRO: -

- i) Tested and adapted five agricultural machineries;
- ii) Designed and fabricated five (5) agricultural machineries/implements;
- iii) Established twelve (12) (Five farmer groups, five individual farmers and 2 fabricators) linkages on improving mechanization on four value chains; Maize, beans, Cassava and sorghum and availed the implements.

### **Development, validation and promotion of food safety technologies**

During the FY 2022/23 KALRO:

- i) Packaged and disseminated eight (8) food safety technologies for Mycotoxin management;
- ii) Analyzed 1583 food samples for mycotoxin contaminants, Minimum Residue Levels (MRLs), heavy metals contaminants and biological toxins in produce or products;
- iii) Developed two (2) rapid diagnostic kits for MRLs, heavy metals, biological toxins;
- iv) Produced and availed to farmers 84 MT of Aflasafe KE01 quarterly;
- v) Conducted ten (10) awareness creation fora on food safety (Aflasafe MRLs, Heavy Metals, biological toxins contamination and biological toxins) in Machakos, Trans nzoia, Uasin Gishu, Tharaka Nithi and Bomet counties.

### **Soil Analysis and Recommendations**

KALRO undertakes soil analysis to enhance food productivity through targeted fertilizer application to specific soil requirements. KALRO undertook the following: -

- i) Awareness creation on soil analysis and the availability of the services, the organization will hold 2 meetings per county to promote soil analysis services in each of the following five (5) Counties (Busia, Trans Nzoia, Kericho, Vihiga and Nyandarua);
- ii) Analyzed 22,828 against 27,000 soil samples;
- iii) Conducted five (5) soil surveys, characterizations and mapping (Busia, Trans Nzoia, Kericho, Vihiga and Nyandarua);
- iv) Conducted three (3) multi-purpose land suitability map surveys.

### **Develop and promote climate change adaptation and mitigation technologies**

During the FY 2022/23 the following was achieved:

- i) Disseminated six (6) climate smart and natural resource adaptation technologies, innovation and management practices;
- ii) Disseminated six (6) energy saving environmentally sustainable technologies;
- iii) Distributed, planted and nurtured 236,390 tree seedlings to enhance national tree cover.



## **Improve livestock production, productivity and product utilization**

### **Breeding Bulls**

Sahiwal (milk and beef) and Boran (beef production) cattle breeds are tolerant to a wide range of climatic conditions and diseases that limit dairy and beef production in the country. The use of Sahiwal and Boran bulls to improve local breeds will go a long way in improving milk and beef production in Kenya. In the FY 2022/2023, KALRO:

- i) Evaluated and selected dams and sires based on breeding values;
- ii) Developed and implemented online livestock recording schemes;
- iii) Provided data on selected dams and sires for performance evaluation and pedigree recording of selected dams and sires by Kenya Stud Book;
- iv) Carried out two (2) assessments to approve bulls for availing to farmers;
- v) Carried out 50 inseminations using Orma Boran semen;
- vi) Availed 296 breeding bulls and heifers to farmers;
- vii) Availed 3,000 doses of Sahiwal semen for storage and distribution by KAGRIC.

### **Breeding Bucks and Rams**

Goats and sheep are critical livestock for food and nutrition security in the Arid and Semi-Arid Lands (ASALs) of the country. KALRO researches and produces high quality breeding bucks and rams for availing to farmers. During the contract period FY 2022/23, KALRO availed 303 breeding bucks and rams against a target 270.

### **Breeding camel**

In support of food security in the ASAL areas, the organization availed forty (40) against a target of twenty (20) camel breeding bulls to farmers.

### **Improved indigenous chicken**

Chicken play an important role in the rural communities as a source of protein delicacy and cash from the sale of eggs and meat.

In the FY, 651,474 chicks were produced, against a target of 650,000; thus a positive variance of 1,474.

### **Improved breeding boars and sows**

With the increased demand for pigs' product and the growth in the industry. KALRO availed 245 breeding boars and sows against a target of 160.

## **Support the development of processing and value addition of livestock products**

In 2022/23 FY, KALRO:

- i) Developed Camel meat value added product (Camel meat sausage);
- ii) Developed Vacuum preserved camel meat ('Nyirinyiri' product);
- iii) Capacity built Lead farmers from 20 farmer groups on Livestock product value addition;
- iv) Developed one cow milk added product (cheese).



### **Improved Honey Production**

In 2022/23 FY the Organization: -

- i) Trained 150 farmers on bee husbandry and other apiculture value chain nodes;
- ii) Developed two value added products from honey, propolis and beeswax;
- iii) Established a hive production workshop;
- iv) Validated and promoted one honey processing technology;
- v) Developed and promoted one bee pest and disease management technology/innovations;
- vi) Developed one (1) bee races characterization manual.

### **Develop, Promote Forages and Improved Feeds and Feeding Systems**

In the FY 2022/23, KALRO:

- i) Developed two (2) forage varieties;
- ii) Commercialized three (3) forage varieties i.e, *Enteropogon macrostachyus*, *Cenchrusciliaris Ecotypes* TVT 1, MGD 3 and *Chlorisrox burghiana*;
- iii) Formulated eight (8) feed rations;
- iv) Analyzed 3,701 animal feed samples for their nutritive values and provide feedback in terms of advice to livestock farmers and feed processors accordingly.

### **Improve and Maintain Livestock Health and food health technologies**

During the FY 2022/23, KALRO had targeted vaccine development, testing and strategic use as key factors in maintenance of animal disease-free zones. In FY 2022/23, KALRO:

- i) Developed and validated four vaccine candidates through; Bio-containment testing of candidate sub-unit vaccine for RVF, Camel pox and PPR;
- ii) Documented and disseminated of field trial and confined animal trial experiment findings of Contagious Caprine Pleuropneumonia (CCPP) modified vaccine;
- iii) Conducted capacity building on molecular techniques using gene-editing tool on Camel mastitis vaccine development;
- iv) Conducted clinical trial for Contagious Caprine Pleuro-Pneumonia (CCPP) vaccine and use ILRI infection model for goats;
- v) Conducted validation trials for a commercial batch of thermos-tolerant PPR vaccine in sheep and goats and produce a dossier for registration of the vaccine in the East African Region;
- vi) Evaluated two (2) vaccine samples developed using irradiation facility i.e in development of a mucosal vaccine from irradiated Gumboro virus combined with I-2 Newcastle vaccine for use in chicken;
- vii) Analyzed 150 post-harvest animal products samples for contaminants;
- viii) Developed two (2) techniques for testing Mycotoxins, drug residues and heavy metals (in feeds and food) and availed to farmers;
- ix) Carried out two (2) surveillances and advisories on zoonotic diseases;
- x) Evaluated two (2) diagnostic tools.

### **Develop Robust and Sustainable Forage Seed Systems**

Developed and promoted improved feeds and feed systems, KALRO produced clean napier grass cuttings and rangelands grass seed as follows: -



- i) Produced 168.6 MT Napier grass cuttings;
- ii) Produced 6,912 kg Rangelands grass seed against a target of 7,500 kg.

**Develop and promote emerging livestock including beneficial insects**

KALRO develops and promotes emerging livestock including beneficial insects. In the FY 2022/23 the following were undertaken:

- i) Promoted two (2) species of arthropods (black soldier fly and crickets) for food and feed supplement and availed them to farmers;
- ii) Developed a database for sources of insect biomaterial innovation;
- iii) Developed five (5) human food packs with insects as protein source.

**Knowledge, information and technologies on agricultural products value chains research collated, stored and shared**

**Promotion of knowledge, information and technologies**

During the FY, the following activities were undertaken under the performance target:

- a) Conducted 498 stakeholder-training sessions on various crops and livestock husbandry practices throughout the country;
- b) Developed (10) visibility materials and disseminated the same through all available media forums;
- c) Digitized forty (40) agricultural value chains platforms;
- d) Trained 60 Agricultural Product Value Chain (APVC) and Innovation Platform champions;
- e) Held 130 against a target of 150 consultative fora as follows; -
  - a) Institute based research priority setting fora based on their Agricultural Product Value Chains (APVC) mandate;
  - b) Engagements with strategic partners including the youth;
  - c) Research coordination forums (i.e. project steering committee meetings).

**Research Proposals and Publications**

To enhance research funding and ensure research findings are shared with stakeholders on timely basis, KALRO undertook the following activities

- i) Developed and updated 128 against a target of 300 extension materials, that include policy briefs, technical bulletins, pamphlets, leaflets and online library;
- ii) Developed and published agricultural market information on four (4) commodities namely cassava, sorghum, coconut and avocado;
- iii) Conducted economic analysis studies in two institutes ABIRI and SG&CRI and avail reports;
- iv) Integrated, updated and implemented agricultural dashboards for analytics to one dynamic database;
- v) Submitted 120 against a target of 200 internally reviewed papers for publications in peer reviewed refereed journals;
- vi) Submitted 252 against a target of 200 papers internally reviewed for presentation in scientific conferences;
- vii) Developed 95 against a target of 250 internally reviewed Technical Notes.

**Project Completion rate**

In the FY, KALRO undertook the following activities:

**Table 2: Project Completion**

S/No	Project Name	Project Description	Location
1.	Office Block	Construction	OI- Joro Orok
2.	Office Block	Construction	Olo Sentu Sub- Centre
3.	Staff Houses	Rehabilitation	KALRO
4.	Construction of hatchery house at NRI Kakamega	Hatchery constructed	NRI Kakamega
5.	Election of an irrigation system at KALRO OI- Joro Orok	Irrigation System installed	OI- Joro Orok

**Science, Technology and Innovation (STI) mainstreaming**

In 2022/23FY, KALRO: -

- i) Developed or implemented the institutional STI mainstreaming strategy using the template provided on NACOSTI's website;
- ii) Developed and implemented annual work plan for institutional STI mainstreaming;
- iii) Submitted quarterly and annual reports to NACOSTI using the STI mainstreaming reporting template provided on NACOSTI's website.



## **VII. CORPORATE GOVERNANCE STATEMENT**

### **Overview**

The Kenya Agricultural and Livestock Research (KALR) Act, No 17 of 2013 established the Kenya Agricultural and Livestock Research Organization (KALRO) as a consequence, Kenya Agricultural Research Institute (KARI), Kenya Sugar Research Foundation (KESREF), Tea Research Foundation of Kenya (TRFK) and the Coffee Research Foundation (CRF) were merged. The Organization consists of the Board of Management and a Secretariat which implements Board decisions. The Act further established 16 Research Institutes which focus on different thematic research areas. KALRO complies fully and strictly with all requirements of the regulatory and other non-commercial entities in Kenya including clarity of financial reporting and accountability to the public (citizens and stakeholders) and aims to set best practice standards in agricultural research and fair conduct towards its staff, suppliers and general public.

The KALRO Board of Management held 19 Board meetings during the period under review. A schedule of the board meetings held and attendance by members is attached herein. The Board has a board charter; new members are issued with a copy upon joining the board. The process of appointment and removal of board members is outlined in the KALR Act Sections 6,7 and 8. Further, the roles and functions of the Board are listed under Section 9 of the KALR Act. The Board ensures that a performance evaluation is conducted annually and results therefrom discussed. The Board's remuneration is guided by the Guidelines for Terms and Conditions of Service for Chancellors of Public Universities, Board Chairpersons, Board Members and Staff of State Corporations. New members are taken through induction by being issued with copies of the KALR Act, Strategic Plan, Board Charter, main organizational policies and a presentation on the Organization which is done by the Director General. Training for Board Members is conducted from time to time on a need basis.

### **Organization structure**

KALRO is governed by a Board of Management as per the KALR Act No. 17 of 2013, while the day to day management is vested in the Director General who is the secretary to the Board.

The object and function for which the organization is established is to:

- a). Promote, streamline, coordinate and regulate all research in crops, livestock, genetic resources and biotechnology in Kenya;
- b). Promote, streamline, coordinate and regulate research in crops and animal diseases; and
- c). Expedite equitable access to research information, resources and technology and promote the application of the research findings and technology in the field of agriculture.



## **Appointment of the Board**

The Board is appointed pursuant to the provisions of KALRO Act No 17 of 2013. The Chairman of the Board is appointed by the President of the Republic of Kenya. Members of the Board are appointed by the Cabinet Secretary, Ministry of Agriculture and Livestock Development on recommendation of various nominating institutions provided under the KALRO Act.

## **Board Organization and Structures**

The composition of the KALRO Board of Management consists of

- a) Chairperson appointed by the President;
- b) The Principal Secretary in the Ministry for the time being responsible for agriculture;
- c) The Principal Secretary in the Ministry for the time being responsible for finance;
- d) The Principal Secretary for the time being responsible for livestock;
- e) The Secretary to the Science Council appointed under paragraph 6 of the Second Schedule to the Science and Technology Act;
- f) Five persons appointed by the Cabinet Secretary, of whom
  - i) One represents the interests of farmers;
  - ii) One shall represent the interest of the general public;
  - iii) One shall be a representative of an institution of higher learning;
  - iv) Two persons co-opted by the Board, who may be non-citizen scientists in the field of agriculture and who possess such knowledge and experience as may be necessary for the better carrying out of the functions of the Board; and
  - v) The Director General appointed in accordance with Section 14.

## **Role of the Board of Management**

The Board provides organizational strategic direction and oversight to management as provided in the KALRO Act which states that the functions of the Board of Management of KALRO shall be:

- a) Carry out the objects and functions of the Organization;
- b) Advise the Cabinet Secretary on Matters of policy relating to agricultural research;
- c) Oversee the effective co-ordination of the operations of the Organization;
- d) Ensure that the activities of the Organization are consistent with the policy and objectives of the government, and the national priorities relating to agriculture and agricultural research;
- e) Approve, oversee and evaluate on a continuing basis the programs being implemented by the Organization;
- f) Direct strategic research and policy and prioritize and determine the research agenda;
- g) Co-operation with other lead agencies and organizations in carrying out agricultural research;
- h) Development of an economic, efficient and cost effective internal management structure, strategic Annual plan of the Organization;
- i) Implementation and fulfilment of the policies and agreed objectives, performance targets and service standards of the Organization;
- j) Provision of advice as required on all matters within the responsibility of the Organization; and



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- k) Perform such other functions as may be necessary for the exercise of its powers under the Act.

**Board Meetings**

The Board and its Committees' are required to meet not less than four times in any calendar year and not more than four months shall lapse between the date of one meeting and the date of the next meeting. In addition to the regular Board meetings, there may be other special meetings to deal with specific matters. During the financial year under review the KALRO BoM held meetings as per attendance report Table below;

Names of Members	Board Meetings		Board Committee Meetings			
			Research, Technical & Innovation	Finance & Administration		Audit, Risk & Governance
	Scheduled	Special	Scheduled	Scheduled	Special	Scheduled
	4	1	4	4	0	4
Hon. Peter W. Kinyua						
Mr. Wilfred C. Rotich	1	1		1		
Ms. Mary Mwambia	1	1	1			2
Ms. Clara W. Mwangi	1	1		1		
Dr. Samuel N. Mburu		1				2
Dr. Mukiri Wa Githendu	2		3			
Mr. Johana K. Cheruiyot						2
Mrs. Grace G. Kimaru	2	1	3			
Ms. Teresa Karanja	2	1	4	4		
Ms. Margaret Wamuyu	2	1		4		2
Prof. Walter O. Oyawa	2	1	3			
Mr. Isaac Odek		1	1	2		1
Mr. George Ombua	1					1
Dr. Eliud K. Kireger	2	1	2	1		

**Other Board information**

The KALRO Board of Management is answerable to the Government through the parent Ministry. The board signs a Performance Contract (PC) every financial year with the Government through the same Ministry outlining performance targets in line with the above stated functions. The signed PC is monitored and evaluated periodically and at the end on the contract term.

**Board Committees**

To effectively discharge its mandate, the Board established committees with specific terms of reference.



The Board appointed into committees, members with requisite skills and competence to discharge allocated responsibilities. In the event that a committee lacked specific skills within its membership, the Board, with the approval of the oversight body, co-opt skilled non-Board members to serve on the committee, provided that the chair of a committee shall not be a co-opted member or the Chairperson of the Board. The Board may, from time to time, rotate Board members between the Committees.

The Board remains collectively responsible for the decisions and actions taken by any committee. A committee may only perform the tasks delegated to it by the Board and may not exceed the authority or powers of the Board.

The Chairperson of each Committee, in consultation with the Board, determined the frequency of committee meetings as is necessary to fulfill the committee's functions. The Chairperson of each committee, in consultation with management, developed the committee's agenda. The Board however determined the procedure and process within which committees take independent professional advice at the organization's expense. The committees promptly reported to the Board any actions taken for ratification and any major developments that they become aware of. The Board as set out in the terms of reference of the respective committees, received reports of the committee's findings and actions.

The Board established the following standing committees: -

- i. Audit, Risk and Governance,
- ii. Finance and Administration,
- iii. Research, Technical and Innovation

The Organization may establish any other ad hoc committees to handle any special business. The above committees permit and facilitate more in-depth deliberations on issues that would otherwise, not be possible in a normal full Board Meetings. The Committees undertake preliminary discussions of the business of the board and prepare their resolutions for deliberations and adoption by the full Board Meetings. A decision of any of the Committees only becomes effective after it has been approved and confirmed by the full board.

### **Communication**

The Board receives management reports in advance of all scheduled meetings and in turn formally, communicates to staff through the Director General. Informal communication to staff may be made during Board meetings while in the Organization. Board members cannot commit the Board in any way when having informal communication with staff.



**VIII. MANAGEMENT DISCUSSION AND ANALYSIS**

**a) Operational performance**

During the Financial Year 2022/23, KALRO implemented various projects and programmes under the Crops and Livestock Research as discussed in detail in the report of the directors. The Programmes were mainly funded through Government grants, Development partners and internally generated funds.

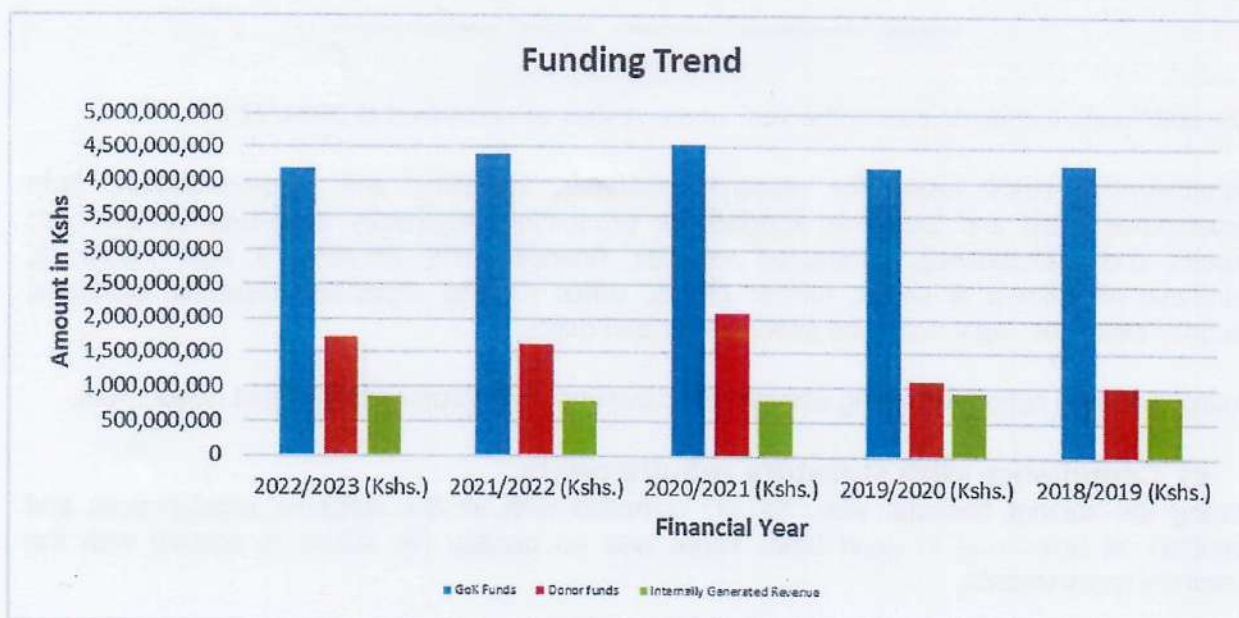
Government grants were mainly used for personnel emoluments, operations and maintenance. Donor funds were used for research technologies in line with partnership agreements. Internally generated funds were used to cater for utility bills and ploughed back to generate revenue

**b) Financial performance**

**i. Funding trends**

The following is a summary of the income organization received in the last five years;

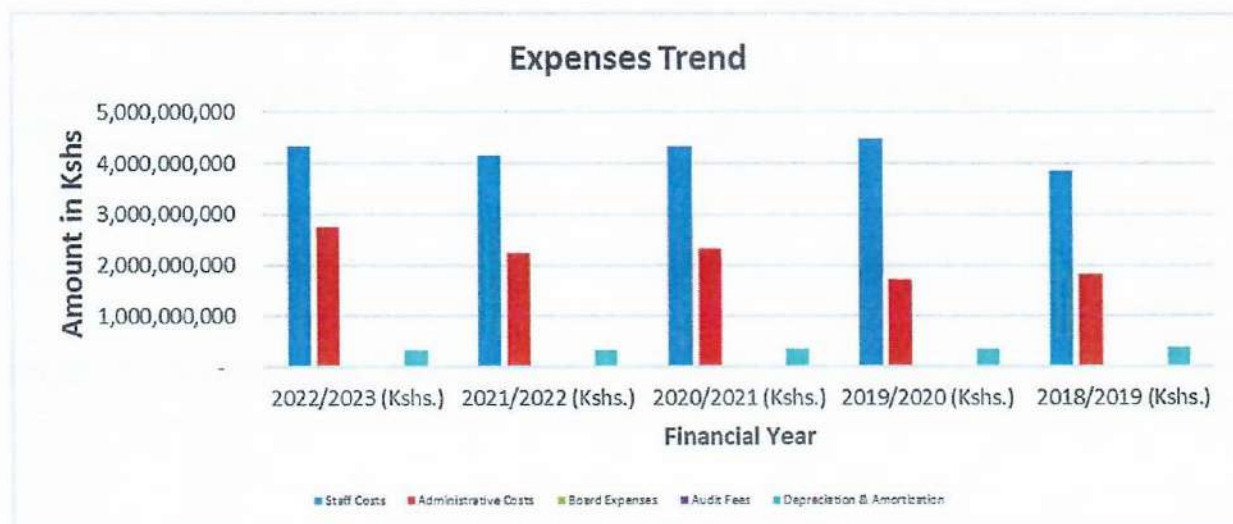
Source of Funds	2022/2023 (Kshs.)	2021/2022 (Kshs.)	2020/2021 (Kshs.)	2019/2020 (Kshs.)	2018/2019 (Kshs.)
GoK Funds	4,190,068,749	4,396,714,989	4,534,643,420	4,199,461,130	4,253,740,000
Donor funds	1,735,141,390	1,617,359,474	2,086,566,905	1,103,777,575	1,028,292,514
Internally Generated Revenue	848,930,544	797,953,098	818,259,466	938,341,409	888,673,027
<b>Total Revenue</b>	<b>6,774,140,683</b>	<b>6,812,027,561</b>	<b>7,439,469,791</b>	<b>6,241,580,114</b>	<b>6,170,705,541</b>



**ii. Expenditure trends**

The following is a summary of the expenditure in the last five years;

Expenses	2022/2023 (Kshs.)	2021/2022 (Kshs.)	2020/2021 (Kshs.)	2019/2020 (Kshs.)	2018/2019 (Kshs.)
Staff Costs	4,317,996,436	4,141,215,771	4,325,254,026	4,468,850,596	3,839,385,842
Administrative Costs	2,737,202,384	2,235,210,959	2,316,292,036	1,704,613,365	1,820,038,861
Board Expenses	3,842,209	12,582,898	5,962,481	13,408,978	5,827,027
Audit Fees	4,174,680	3,800,000	4,312,430	3,800,000	6,749,844
Depreciation & Amortization	326,566,564	319,960,553	352,557,374	360,221,967	369,254,021
<b>Total</b>	<b>7,389,782,273</b>	<b>6,712,770,181</b>	<b>7,004,378,347</b>	<b>6,550,894,906</b>	<b>6,041,255,595</b>



The staff costs increased during the year under review as compared to 2021/22 FY.

Administrative costs caters for research materials, travelling and accommodation, farm development, fuel and lubricants supplies for production, laboratory materials, utilities cost, repairs and maintenance, contracted services, finance costs, property & staff insurance, purchase of animals & seeds, farmer grants, office running expenses, cafeteria expenses, security expenses, legal dues and provision for bad debts.

Board expenses caters for sitting allowances, travelling and accommodation and honorarium.

**c) Compliance with statutory requirements**

During the current financial year, KALRO complied with all the statutory requirements and remitted all taxes due in good time. There was no penalty for failure to comply with the statutory requirements.



**d) Material arrears in statutory and other financial obligations**

KALRO is faced with liability relating to NSSF penalty for the period January 1998 to January 2008 which amounted to Ksh. 206.49million. KALRO continues to settle the obligation and the amount outstanding as at 30<sup>th</sup> June 2023 was Kshs.11.89 million. This is recognized in the financial statement as a liability.

## **IX. ENVIRONMENTAL AND SUSTAINABILITY REPORTING STATEMENT**

Demand of agricultural technologies and increased consumption of agricultural products obligates KALRO to provide demand-driven solutions to agricultural challenges locally, regionally and internationally through cutting-edge research. These is achieved through observation of the Organization's core values, namely; Customer focus, Professionalism, Integrity, Innovativeness, Collaboration and Environmental consciousness. Below is an outline of the Organization's policies and activities that promote sustainability:

### **i) Sustainability strategy and profile**

Being the premier agricultural and livestock research organization in Kenya, KALRO is obligated to provide demand-driven solutions to agricultural challenges locally, regionally and internationally through cutting-edge research. Thus, KALRO not only focuses on addressing the national challenges but also lead globally through partnerships, collaboration and networking to generate technology and innovations. KALRO is guided by its Vision "Excellence in agricultural and livestock research towards transformed livelihoods"; and Mission "To conduct agricultural research through application of science, technology and innovation to catalyse sustainable growth and development in agriculture and livestock product value chains".

### **ii) Environmental performance**

#### **a) Environment policy**

Sustainability is a guiding influence for all KALRO research programs. It is based on a simple principle: Everything that we need for our survival and well-being depends either directly or indirectly, on our natural environment. To pursue sustainability is to create and maintain the conditions under which the Kenyan communities can exist in productive harmony to support present and future generations.

The Organizations pursuit for Environmental Sustainability in anchored in law. We integrate environmental considerations in our operations to fulfil the requirement of a clean, healthy and sustainable environment for all as per article 42 of the Constitution and EMCA Cap 387. KALRO also has a draft Environment Policy domesticated from the 'National Environment Policy-2013', that guides its research activities to adopt and maintain good practices that contribute to the quality of environment on a long-term basis.

#### **b) Successes**

Institutionalization and mainstreaming of environment issues by creating an office that coordinates and oversees environment sustainability issues. This ensures that environmental issues are integrated in all research undertaken by KALRO.



KALRO established in 2021 an Annual KALRO Tree planting day where all staff in the headquarters, Institute and Centre's participate in tree planting. The 2023 KALRO Tree planting Day was observed on 21st April 2023. Similarly, KALRO collaborates with partners to participate in the World Environment Day (held every year on the 5th June), the World Day to Combat Drought and Desertification (held every year on 17th June) and the National Annual Tree planting day as called out by the Ministry of Environment, Climate Change and Forestry. During the 2022-23 FY over 236,390 assorted trees were planted by the staff and stakeholders during various events and tree planting days.

The Organization also maintains fruit and tree nurseries located in more than 30 Centres/Sub-centres which also serve in KALRO's CSR activities, e.g. Horticulture Research Institute (HRI), Tea Research Institute (TRI), Coffee Research Institute (CRI), Sugar Research Institute (SRI), Food Crops Research Institute (FCRI), Dairy Research Institute (DRI), Agricultural Mechanization Research Institute (AMRI), Non-Ruminant Research Institute (NRI), Apiculture and Beneficial Insects Research Institute (ABIRI), Industrial Crops Research Institute (ICRI), and their Centre's. The nurseries have a cumulative capacity of 2 million seedlings, which can be up-scaled based on demand.

For better land, soil and water health. KALRO collects and also receives soils, leaf, fertilizers, manures and water samples at its referral laboratories at KALRO Kabete, as well as in other Institute laboratories, e.g. TRI-Kericho, CRI-Ruiru, SRI-Kibos, NRI-Kakamega, FCRI-Muguga, FCRI-Embu, FCRI-Kisii, and FCRI Alupe. These laboratories make recommendations to farmers on the health status of the soils and management; recommended fertilizer use; crops suitability using leaf analysis; promotion of efficient drip irrigation for water conservation. The Land-use planning section of KALRO-Kabete also has a GIS laboratory that develops the soil and crop suitability digital maps when samples collected in the field contain GPS coordinates.

Soil conservation measures. KALRO has been upscaling several technologies aimed at managing soil erosion challenges. These include; terracing, in-situ and ex-situ water harvesting, conservation agriculture, mulching, etc

### **c) Shortcomings**

Whereas KALRO has vast research land in the various Centres, there are limited financial resources to scale up the environmental related activities.

### **d) Efforts to manage biodiversity**

KALRO through the Genetic Resources Research Institute (GERRI) has conserved various plant accessions that can be used in future. Other efforts to conserve biodiversity include; in-situ sites at TRI, CRI and SRI. Through its activities like field days, farmer demonstration and trainings, the organization also creates awareness to its stakeholders on the importance of biodiversity.



**e) Waste management policy**

The Organization promotes waste separation at source in the various Institutes and Centre's. Some of the waste is incinerated at source and some is taken to licensed incinerators. The KALRO Waste Disposal guidelines is as prescribed in the Environmental policy.

**f) Efforts to reduce environmental impact of the Organization's products.**

To reduce the environmental impact of the organizations products, Climate Smart Agricultural (CSA) practices and Good Agricultural Practices (GAP) are promoted in all the farming systems. These practices aim at optimizing production and at the same time conserving the environment. Environmental Impact Assessment (EIA) is done for all major projects and programs that may have an environmental impact. In many cases controlled trials are undertaken to minimize or reduce any negative environment externalities.

**iii) Employee welfare**

KALRO has a Human Resource Policy & Procedures Manual developed to support service delivery, commitments and obligations of the Kenya Agricultural & Livestock Research Organization (KALRO) to the targeted beneficiaries. The manual sets the guidelines on recruitment and selection of members of staff, management and development of human resource in the Organization. It is also the official means for the Organization to communicate its policies on human resource management related matters

**iv) Responsible Supply chain and supplier relations**

KALRO enhances responsible supply chain and supplier relations through;

- a. Making good use of government procurement policies and rules through adaptation and adherence to Public Procurement and Asset Disposal Act (PPADA) revised edition 2016 and its regulations of 2020 and any other circulars.
- b. Establishing a strong Procurement Management Framework through mapping out workflows, and building out Standard Operating Procedures (SOPs).
- c. Ensuring transparency in all organizational Procurement through managing and updating the approved supplier lists often, keeping contact information of reliable suppliers while staying on the lookout for new contacts and opportunities.
- d. Conducting audits frequently. This is done through subjecting suppliers to high standards and evaluating their performance (appraisals) regularly to ensure they're meeting organization demands at competitive rates
- e. Engaging Suppliers through Strategic supplier relationships. This is achieved by building a solid relationship, integrating with suppliers by ensuring vendors deliver reliable, high-quality goods and services on time and at the best rate.



Centre	Venue and intended beneficiary	Nature of CSR event (Environmental conservation, education, health, community welfare and staff welfare)	Remarks
		system, allowing the community to practice subsistence farming for one year.	households.
KALRO Kiboko	Makindu sub-county Jamhuri National Day Celebrations	Donated 12 cartons of Bottled drinking water	Support of the National Event

- f. By automating procurement processes and other cognate departmental procedures e.g. ERP (Enterprise Resource Planning). This ensures efficiency and timely settlements of supplier thus honoring their credit periods.

### **v) Corporate Social Responsibility / Community Engagements**

KALRO seeks to participate and contribute to the Social and Economic development of local communities we operate within through Corporate Social Responsibility (CSR) activities. The CSR activities assist in building relationships with local communities, internal and external stakeholders, and the society at large.

KALRO's CSR Policy is in with the strategic plan. It lays down guidelines and mechanisms for adoption by the organization to carry out all CSR Projects/ Programs. The Policy guides the implementation of KALRO's CSR activities intended to support local communities on various socially suitable activities to enable high impact and ensure measurable outcomes of the funds deployed towards such activities.

KALRO management, with the guidance of the strategic plan, sets aside funds for CSR activities. CSR Committees manage the planning and monitoring of expenditure of CSR activities at the secretariat and center level.

All CSR activities undertaken in the financial year, July 1, 2022, to June 30, 2023, were implemented through a focused approach towards target beneficiaries for generating maximum impact, with most of the activities being carried out in partnership with other credible stakeholders.

During this 2022/2023 financial year, the organization supported various activities in environment conservation, health, education, agriculture, staff, and community welfare.

<b>Centre</b>	<b>Venue and intended beneficiary</b>	<b>Nature of CSR event (Environmental conservation, education, health, community welfare and staff welfare)</b>	<b>Remarks</b>
KALRO Molo	Nyanda Primary School.	KALRO Molo has donated part of its land occupied by Nyanda Primary School.	This leads to an increased literacy level in the community. The current number of pupils is 300.
	Surrounding Community	Improve the community's livelihood through a shamba	There are 135 benefiting



## **XI. STATEMENT OF DIRECTOR'S RESPONSIBILITIES**

Section 81 of the Public Finance Management Act, 2012 and Section 14 of the State Corporations Act, require the Directors to prepare financial statements in respect of that organization, which give a true and fair view of the state of affairs of the organization at the end of the financial year/period and the operating results of the organization for that year/period. The Directors are also required to ensure that the organization keeps proper accounting records which disclose with reasonable accuracy the financial position of the organization. The Directors are also responsible for safeguarding the assets of the organization.

The Directors are responsible for the preparation and presentation of the organization's financial statements, which give a true and fair view of the state of affairs of the organization for and as at the end of the financial year (period) ended on June 30, 2023. This responsibility includes: (i) maintaining adequate financial management arrangements and ensuring that these continue to be effective throughout the reporting period; (ii) maintaining proper accounting records, which disclose with reasonable accuracy at any time the financial position of the organization; (iii) designing, implementing and maintaining internal controls relevant to the preparation and fair presentation of the financial statements, and ensuring that they are free from material misstatements, whether due to error or fraud; (iv) safeguarding the assets of the organization; (v) selecting and applying appropriate accounting policies; and (vi) making accounting estimates that are reasonable in the circumstances.

The Directors accept responsibility for the organization's financial statements, which have been prepared in accordance with International Public Sector Accounting Standards (IPSAS), and in the manner required by the PFM Act and the State Corporations Act. The Directors are of the opinion that the organization's financial statements give a true and fair view of the state of organization's transactions during the financial year ended June 30, 2023, and of the organization's financial position as at that date. The Directors further confirm the completeness of the accounting records maintained for the organization, which have been relied upon in the preparation of the organization's financial statements as well as the adequacy of the systems of internal financial control.

With effect from 1st July 2014, Kenya Agricultural Research Institute (KARI), Kenya Sugar Research Foundation (KESREF), Tea Research Foundation (TRF) and Coffee Research Foundation (CRF), were dissolved in pursuant to the Kenya Agricultural and Livestock Research Act, 2013. Its newly acquired name is Kenya Agricultural and Livestock Research Organization (KALRO). This will not affect the organization going concern for at least the next twelve months from the date of this statement.

### **Approval of the financial statements**

The KALRO financial statements were approved by the Board on 24/09/2023 and signed on its behalf by:



**Hon. Peter Weru Kinyua**  
**Chairman, KALRO BoM**



**Eliud K. Kireger (PhD, OGW)**  
**Director General**



## **X. REPORT OF THE DIRECTORS**

The Directors submit their report together with the audited financial statements for the year ended June 30, 2023, which show the state of the Kenya Agricultural and Livestock Research Organization (KALRO) affairs.

### **a) Principal activities**

The principal mandate of KALRO is to undertake, streamline, coordinate and regulate all aspects of research in agriculture and livestock development, and promote the application of the research findings, technologies and innovations

### **b) Results**

The results of the entity for the year ended June 30, 2023, are set out on page 1 to 6

### **c) Directors**

The members of the Board of Directors who served during the year are shown on page X-XII. During the financial year, Mr. Wilfred Rotich and Mrs. Mary Mwambia retired in October 2022, while Dr. Samuel Mburu was de-gazetted in August 2022 and in his place Dr. Mukiri Wa Githendu was appointed with effect from 3<sup>rd</sup> August 2022. Hon. Peter W. Kinyua was appointed as Board Chairman wef 30<sup>th</sup> June 2023 and Mr. Johana K. Cheruiyot on 22<sup>nd</sup> May 2023, replacing Mr. Rotich and Mrs. Mwambia respectively.

### **d) Surplus remission**

In accordance with Regulation 219 (2) of the Public Financial Management (National Government) Regulations, regulatory entities shall remit into Consolidated Fund, ninety per centum of its surplus funds reported in the audited financial statements after the end of each financial year. KALRO being a non regulatory entity hence no remittance to the Consolidated Fund

### **e) Auditors**

The Auditor General is responsible for the statutory audit of the KALRO in accordance with Article 229 of the Constitution of Kenya and the Public Audit Act 2015.

By Order of the Board

**Name:** E. K. Kireger (PhD, OGW) **Signature**  
Secretary to the Board



**Date** 29/09/2023



**REPORT OF THE AUDITOR-GENERAL ON KENYA AGRICULTURAL AND LIVESTOCK RESEARCH ORGANIZATION FOR THE YEAR ENDED 30 JUNE, 2023**

**PREAMBLE**

I draw your attention to the contents of my report which is in three parts:

- A. Report on the Financial Statements that considers whether the financial statements are fairly presented in accordance with the applicable financial reporting framework, accounting standards and the relevant laws and regulations that have a direct effect on the financial statements.
- B. Report on Lawfulness and Effectiveness in Use of Public Resources which considers compliance with applicable laws, regulations, policies, gazette notices, circulars, guidelines and manuals and whether public resources are applied in a prudent, efficient, economic, transparent and accountable manner to ensure Government achieves value for money and that such funds are applied for the intended purpose.
- C. Report on Effectiveness of Internal Controls, Risk Management and Governance which considers how the entity has instituted checks and balances to guide internal operations. This responds to the effectiveness of the governance structure, the risk management environment and the internal controls, developed and implemented by those charged with governance for orderly, efficient and effective operations of the entity.

An unmodified opinion does not necessarily mean that an entity has complied with all relevant laws and regulations and that its internal controls, risk management and governance systems are properly designed and were working effectively in the financial year under review.

The three parts of the report are aimed at addressing the statutory roles and responsibilities of the Auditor-General as provided by Article 229 of the Constitution, the Public Finance Management Act, 2012 and the Public Audit Act, 2015. The three parts of the report, when read together constitute the report of the Auditor-General.

**REPORT ON THE FINANCIAL STATEMENTS**

**Qualified Opinion**

I have audited the accompanying financial statements of the Kenya Agricultural and Livestock Research Organization (KALRO) set out on pages 1 to 24, which comprise of the statement of financial position as at 30 June, 2023, and the statement of financial performance, statement of changes in net assets, statement of cash flows and statement



of comparison of budget and actual amounts for the year then ended, and a summary of significant accounting policies and other explanatory information in accordance with the provisions of Article 229 of the Constitution of Kenya and Section 35 of the Public Audit Act, 2015. I have obtained all the information and explanations which, to the best of my knowledge and belief, were necessary for the purpose of the audit.

In my opinion, except for the effect of the matters described in the Basis for Qualified Opinion section of my report, the financial statements present fairly, in all material respects, the financial position of Kenya Agricultural and Livestock Research Organization as at 30 June, 2023, and of its financial performance and its cash flows for the year then ended, in accordance with International Public Sector Accounting Standards (Accrual Basis) and comply with the Kenya Agricultural and Livestock Research Act, 2013 and the Public Finance Management Act, 2012.

## **Basis for Qualified Opinion**

### **1. Unaccounted for Cash and Cash Equivalents**

The statement of financial position reflects cash and cash equivalents balance of Kshs.641,977,000 and as disclosed in Note 22 to the financial statements. However, as previously reported, the cash and cash equivalents balance of Kshs.641,977,000 (2022 - Kshs.1,443,703,000) excludes cash withdrawals totalling Kshs.6,914,345 made in the financial year 2009/2010 in respect of the Sugar Research Institute against which the related supporting documents were not provided for audit. Although Management indicated that the missing documents were a subject of investigation by the Sugar Research Institute and other arms of Government, the amount remains unaccounted for, and the status of investigations was not disclosed.

In the circumstances, the accuracy and completeness of cash and cash equivalents balance of Kshs.641,977,000 could not be confirmed.

### **2. Long Outstanding Receivables from Exchange Transactions**

The statement of financial position reflects receivable from exchange transactions balance of Kshs.250,949,000 as disclosed in Note 23 to the financial statements. This balance includes amounts due from Kenya Seed Company, Bungoma Union, Mugama Co-op Union, unsupported prepayments, rent due and other receivables of Kshs.19,945,000, Kshs.745,531.85, Kshs.1,862,901, Kshs.1,171,000, Kshs.6,283,884 and Kshs.147,095,084 respectively all totalling to Kshs.177,103,580 that have remained outstanding more than two years.

In the circumstances, the accuracy and recoverability of the receivables from exchange transactions totalling Kshs.177,103,580,000 could not be confirmed.

### **3. Long Outstanding Receivables from Non-Exchange Transactions**

The statement of financial position reflects receivables from non-exchange transactions balance of Kshs.699,342,000 which includes commodity levy of Kshs.314,497,000 as disclosed in Note 24 to the financial statements. Included in the commodity levy are balances due from Nyambene Mills (in receivership), Coffee Board of Kenya and Kenya Planters Co-operative Union (KPCU) of Kshs.7,073,687, Kshs.23,445,000 and



Kshs.124,496,000 respectively. These balances have been outstanding for more than four (4) years. Although Management has made a full provision of Kshs.124,496,000 in respect of KPCU debt and forwarded a claim to the receiver Manager of Nyambene Mills (in receivership), no progress has been reported towards recovery of this debt and provision made for the other long outstanding debts appears inadequate.

Further, the balance includes outstanding staff advances and outstanding imprests of Kshs.1,499,026.95 and Kshs.76,873,163 out of which balances totalling Kshs.1,499,026 and Kshs.13,695,954 have been outstanding for more than three (3) years and one year respectively.

In the circumstances, the accuracy and recoverability of the receivables from non-exchange transactions balance of Kshs.699,342,000 could not be confirmed.

#### **4. Unresolved Land Matters**

The statement of financial position reflects property, plant and equipment balance of Kshs.24,106,637,000 which includes Kshs.18,208,626,000 in respect of land as disclosed in Note 28 to the financial statements. Review of records revealed that Management had not resolved previous years land issues as detailed below:

- i. As previously reported, land with a value of Kshs.400,000,000 and measuring 400 acres was allocated to the Kenya Agricultural Research Institute in 2011. However, Management did not provide for audit, ownership documents for the parcel of land.
- ii. As previously reported, included in the property, plant and equipment balance of Kshs.24,106,637,000 (2022 - Kshs.24,123,928,000) as at 30 June, 2023 was an amount of Kshs.2,932,785,960 in respect of six (6) parcels of land owned by the former Kenya Agricultural Research Institute which did not have ownership documents.
- iii. Further, part of the Organization's land and another parcel measuring approximately 100 hectares were illegally acquired by informal developers in the year 2000. Further, part of this land was used as a dumping site by a County Government and construction of a power station was also taking place on the same land.
- iv. In January, 2011, some individuals invaded the Organization's land in Naivasha, claiming ownership. The Organization filed a case in court to have them evicted, and a ruling in favor of the Organization was made on 29 March, 2012, revoking their title. However, the informal settlers had not vacated the land.
- v. As reported in the previous years, fifty (56) parcels of land all under the Sugar Research Institute did not have ownership documents.
- vi. The property, plant and equipment balance exclude undetermined value of parcels of land measuring 99 hectares and 127 hectares, which the Coffee Research Institute used for farming. The titles to the parcels of land were in the name of the Coffee Board of Kenya (CBK) which has since merged to form the Agricultural Food Authority.
- vii. The Agricultural Mechanization Services (AMS) - a department within the Ministry of Agriculture, Livestock, Fisheries and Co-operatives occupied a portion of the



Organization's land and had set up its own buildings. The Management clarified that the value of the constructions/improvements by the AMS was not included in the assets balance, and AMS was devolved from the National Government to the County Government. The County Government had however, neither signed any lease agreement nor paid any rent to the Kenya Agricultural and Livestock Research Organization.

- viii. The property, plant and equipment balance also exclude the value of twenty (20) acre piece of land developed by the Tea Research Institute with an estimated value of Kshs.8,430,634.
- ix. The property, plant and equipment balance include an amount of Kshs.81,650,080, being the value of buildings allocated to the Kenya Plant Health Inspectorate Service in 1998.
- x. The property, plant and equipment balance include the value of an office block completed in the year 2012/2013 at a cost of Kshs.663,772,203 for Sugar Research Institute. As previously reported, the valuation report amount was however, Kshs.447,992,751 resulting in an overstatement of Kshs.215,779,452. No explanation was provided on how the value of the new building dropped below the actual construction cost with such a high margin.
- xi. As reported in the previous year, the Organization's residential building at Kisii Sub-Centre of Coffee Research Institute was taken over by the Kisii County Government with no compensation to the Organization.
- xii. Included in the value of land balance as at 30 June, 2023 was an amount of Kshs.117,000,000 being the cost of land occupied by Coffee Research Institute. Although Management indicated that the title deed was misplaced, evidence of steps taken to replace the title deed was not provided.
- xiii. KALRO owns 142.06 hectares which has a title deed but which has been encroached by informal settlers making it impossible for the Organization to utilize the land for the purposes of agricultural research.
- xiv. Included in the balance of land of Kshs.18,208,626,000 is a beach plot valued at Kshs.56,734,160. However, the Organization did not have a title deed for the land. The Management explained that the land was illegally subdivided into five plots, but the Commissioner of Lands revoked the allotments. A private developer filed a suit in court to affirm ownership of the beach plots but the matter had not been determined as at 30 June, 2023 and ownership of the plots could not be confirmed.
- xv. The balance also excluded the value of a parcel of land on which five (5) buildings are located in Kitale and staff houses belonging to the Non-Ruminant Centre in Kakamega. The houses were constructed on twenty (20) acres of land that were left out during allotment of the land to the Organization.
- xvi. Further, included in the balance of land of Kshs.18,208,626,000 are 1418 hectares of land where a National Beef Research Centre is located. Records held at the Organization indicated that in 1984 a farmer surrendered two hundred and thirty (230) acres of his land to the Government, and it was agreed that he would be



compensated with an equivalent acreage of vacant land at the Beef Research Institute. The farmer was however allotted two hundred and seventy acres (270), an excess of forty (40) acres. Further, the farmer violated the conditions of the land exchange and occupied the developed part of the land leading to destruction of property belonging to KALRO. The said part of the land had since been subdivided into plots for sale to the public. In addition, records provided indicated that another farmer agreed to surrender three hundred and twenty (320) acres of his land in Nakuru but during exchange and transfer he irregularly acquired an extra one hundred and fifty-two (152) acres of KALRO's land. Additionally, informal settlers have been trying to encroach the land since year 2014. There is a high risk that the Organization may lose the disputed parts of its land.

xvii. The balance of land of Kshs. 18,208,626,000 does not include the value of the parcels of land situated in Msabaha in Kilifi, Njoro in Nakuru, five (5) parcels of land in Limuru, Kiambu and a parcel of land in Alupe Sub-Centre, Busia.

xviii. Examination of various documents at Beef Research Institute in Lanet, Nakuru County revealed that informal settlers have been encroaching the land. There is therefore a high risk that the Organization may lose parts this land in Lanet. Further, the County Government of Kisii had taken over part of the Organization land meant for food Crop Research Institute Kisii. The County Government was constructing the Governor's residence in approximately two acres of the grabbed land while a cancer centre was illegally being constructed in another parcel estimated at one acre.

In the circumstances, the ownership, completeness and accuracy of land balance of Kshs. 18,208,626,000 could not be confirmed.

The audit was conducted in accordance with International Standards of Supreme Audit Institutions (ISSAIs). I am independent of the Kenya Agricultural and Livestock Research Organization Management in accordance with ISSAI 130 on the Code of Ethics. I have fulfilled other ethical responsibilities in accordance with the ISSAI and in accordance with other ethical requirements applicable to performing audits of financial statements in Kenya. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my qualified opinion.

### **Key Audit Matters**

Key audit matters are those matters that, in my professional judgment, are of most significance in the audit of the financial statements. There were no key audit matters to report in the year under review.

### **Other Matter**

### **Unresolved Prior Year Matters**

In the audit report of the previous year, several issues were raised under the Report on Financial Statements, Report on Lawfulness and Effectiveness in Use of Public Resources and Report on Effectiveness of Internal Controls, Risk Management and Governance. However, Management has not resolved the issues or given any explanation for the failure to resolve them.



# REPORT ON LAWFULNESS AND EFFECTIVENESS IN USE OF PUBLIC RESOURCES

## Conclusion

As required by Article 229(6) of the Constitution, based on the audit procedures performed, except for the matters described in the Basis for Conclusion on Lawfulness and Effectiveness in Use of Public Resources section of my report, I confirm that, nothing else has come to my attention to cause me to believe that public resources have not been applied lawfully and in an effective way.

## Basis for Conclusion

### 1. Lack of Value for Money

As previously reported, property, plant and equipment balance of Kshs.24,106,637,000 includes value of Tea Research and Development Factory in Kericho. The Government spent an amount of Kshs.304,505,436 on the project to completion but the facility is yet to be commissioned and lies idle due to lack of funds to purchase machinery for operationalization of the venture.

In the circumstances, value for money was not obtained from the resources spent in the construction of the factory.

### 2. Non-Operationalization of Agricultural Research Fund

The statement of financial performance reflects amounts of Kshs.50,000,000, Kshs.1,120,706,000 and Kshs.614,436,000, being Government of Kenya, World Bank and other Donors development funding respectively, for research activities for the year ended 30 June, 2023. However, as previously reported, the Organization had not operationalized the Agricultural Research Fund which should be managed by trustees and support the operations of the organization, contrary to Section 39(1) of the Kenya Agricultural and Livestock Research Act, 2013. The Act provides for the establishment of a fund to be known as the Agricultural Research Fund.

Further, the Organization did not provide for audit, details of research grants obtained during the year under review and their respective agreements, outcomes of concluded research, distribution of the research outcomes and the custody over the research outcomes.

In the circumstances, Management was in breach of the law.

### 3. Anomalies in Kenya Agricultural and Livestock Research Act, 2013

As previously reported, the Kenya Agricultural and Livestock Research Act, 2013 had set 1 August, 2014 as the commencement date for the operation of the Organization. The Act repealed the Science and Technology Act, 250, Coffee Act (No.9 of 2001), Sugar Act, (2001) and the Tea Act, Cap 343 which had established the Kenya Agricultural Research Institute (KARI), the Coffee Research Foundation (CRF), the Kenya Sugar Research Foundation (KESREF) and the Tea Research Foundation (TRF), respectively. However, other than the Kenya Agricultural Research Institute, which was operating



under the Science and Technology Act Cap. 250 of the Laws of Kenya, the other parastatals were operating under the Companies Act, Cap 486 of the Laws of Kenya. According to Section 221(1) of the then Companies Act, Cap. 486, an application to the court for winding up of a Company shall be by petition presented, subject to the provisions of this section, either by the Company, by any creditor or creditors (including any contingent or prospective creditor or creditors), contributory or contributories, or by all or any of those parties, together or separately.

Management, however, did not provide evidence that this provision of the Companies Act, Cap 486 was complied with in the establishment of KALRO. Although Management stated that the entities were not wound up but merged, this explanation seems to be in contradiction with Section 56 of the Kenya Agricultural and Livestock Research Act, 2013 which states that, any reference to the former institution in any written law or in any contract, document or instrument of whatever nature shall, on the commencement of this Act, be read and construed as a reference to the Organization. In the absence of such evidence therefore, the Coffee Research Foundation (CRF), the Tea Research Foundation (TRF) and the Kenya Sugar Research Foundation (KESREF) are still legally in existence.

In the circumstances, Management was in breach of the law.

#### **4. Board not Fully Constituted**

The statement of financial performance reflects board expenses amounting to Kshs.3,842,000 and as disclosed in Note 16 to the financial statements. Review of Board payments and related records revealed that the Board had nine (9) members contrary to Section 6 (1) of the Kenya Agricultural and Livestock Research Act, 2013 which provides for twelve (12) members. No explanation was provided for the variance.

In the circumstances, Management was in breach of the law.

#### **5. Non-Maintenance of Staff Houses and Guest Rooms**

The property, plant and equipment balance of Kshs.24,106,637,000 includes buildings of Kshs.5,336,831,000. However, physical inspection of the houses and guest rooms in FCRC Embu, HRI Kandara, CRI Ruiru, AMRI Katumani, ICRI Mwea and NRI Kakamega, in the month of February, 2023 revealed that most houses are dilapidated due to poor maintenance. Revenue collected from the buildings is remitted to the headquarter in its entirety leaving no allocation for repair and maintenance of the buildings. The condemned houses occupy vast chunks of the organization's land leading to uneconomical use. This is contrary to Regulation 139 (2) of the Public Finance Management (National Government) Regulations, 2015 which states that the Accounting Officer of a national government entity shall take full responsibility and ensure that proper control systems exist for assets and that the Accounting Officer shall ensure that processes and procedures both electronic and manual are in place for the effective, efficient, economical and transparent use of the government entity's assets.

In the circumstances, Management was in breach of the law.



## **6. Sale of Assets without Assets Disposal Plan**

The Organization disposed various assets valued at Kshs.22,146,000 during the financial year ended 30 June, 2023. However, review of disposal documents provided for audit revealed that the entity did not have annual assets disposal plan contrary to Section 53(4) of the Public Procurement and Asset Disposal Act, 2015. The Act states that all asset disposals shall be planned by the Accounting Officer concerned through annual asset disposal plan in a format set out in the Regulations.

In the circumstances, Management was in breach of the law.

The audit was conducted in accordance with ISSAI 4000. The standard requires that I comply with ethical requirements and plan and perform the audit to obtain assurance about whether the activities, financial transactions and information reflected in the financial statements are in compliance, in all material respects, with the authorities that govern them. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my conclusion.

### **REPORT ON EFFECTIVENESS OF INTERNAL CONTROLS, RISK MANAGEMENT AND GOVERNANCE**

#### **Conclusion**

As required by Section 7(1)(a) of the Public Audit Act, 2015, based on the audit procedures performed, except for the matters described in the Basis for Conclusion on Effectiveness of Internal Controls, Risk Management and Governance section of my report, I confirm that, nothing else has come to my attention to cause me to believe that internal controls, risk management and overall governance were not effective.

#### **Basis for Conclusion**

##### **1. Ageing Workforce and Inadequate Staffing**

Review of human resource management records revealed that the Organization has 1,725 out of the authorized staff establishment of 3,612. An analysis of staff ages as at 30 June, 2023 revealed that 58% of the Organization's workforce was aged between fifty-one (51) and sixty-five (65) years. However, detailed succession strategies that the Organization had adopted to ensure retention of key skills in the Organization was not provided for audit.

In the circumstances, the Organization's succession strategies to ensure retention of key skills in the Organization could not be confirmed.

##### **2. Delayed Approval of Procurement Transactions from Centers and Institutes**

Review of KALRO Supply chain manual revealed that it does not conform to the Public Procurement and Asset Disposal Regulations, 2020. However, no clear explanations were availed as to why the research Organization has not amended its supply chain manual since the release of the regulations on 22<sup>nd</sup> April, 2020.



Further, Centers and Institutes experienced delays in approval of their submitted procurement documents to Institutes and Headquarters for up to maximum of 94 days.

In the circumstances, the delays may hamper operations and affect effective delivery of goods and services to the respective departments.

### **3. Lack of Policy Guidelines on Production and Sales of Seeds**

Review of KALRO AMRI, NRI Kakamega, and FCRC Mwea seed units revealed that the centers engage farmers for production of seeds where contracted farmers are issued with seeds during planting seasons and are expected to deliver specific quantities to the entity. However, examination of documents provided for audit revealed the following anomalies:

- i. Lack of binding contracts between KALRO AMRI, NRI Kakamega, and FCRC Mwea seed units and contracted farmers, exposing the Institute and centers to potential financial losses and litigation by farmers.
- ii. Lack of sales and credit policy for seeds making it difficult to establish whether credit sales are allowed by the institution and how the entity recovers overdue debts.

In the circumstances, the entity may not be getting value for money from the sale of seeds by the contracted farmers.

The audit was conducted in accordance with ISSAI 2315 and ISSAI 2330. The standards require that I plan and perform the audit to obtain assurance about whether processes and systems of internal controls, risk management and overall governance were operating effectively, in all material respects. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my conclusion.

### **Responsibilities of Management and the Board of Directors**

Management is responsible for the preparation and fair presentation of these financial statements in accordance with International Public Sector Accounting Standards (Accrual Basis) and for maintaining effective internal controls as Management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error and for its assessment of the effectiveness of internal controls, risk management and governance.

In preparing the financial statements, Management is responsible for assessing the Organization's ability to continue to sustain its services, disclosing, as applicable, matters related to sustainability of services and using the applicable basis of accounting unless Management is aware of the intention to terminate the Organization or to cease operations.

Management is also responsible for the submission of the financial statements to the Auditor-General in accordance with the provisions of Section 47 of the Public Audit Act, 2015.

In addition to the responsibility for the preparation and presentation of the financial statements described above, Management is also responsible for ensuring that the



activities, financial transactions and information reflected in the financial statements are in compliance with the authorities which govern them, and that public resources are applied in an effective way.

The Board of Management is responsible for overseeing the Organization's financial reporting process, reviewing the effectiveness of how Management monitors compliance with relevant legislative and regulatory requirements, ensuring that effective processes and systems are in place to address key roles and responsibilities in relation to governance and risk management, and ensuring the adequacy and effectiveness of the control environment.

### **Auditor-General's Responsibilities for the Audit**

The audit objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion in accordance with the provisions of Section 48 of the Public Audit Act, 2015 and submit the audit report in compliance with Article 229(7) of the Constitution. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISSAIs will always detect a material misstatement and weakness when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

In addition to the audit of the financial statements, a compliance audit is planned and performed to express a conclusion about whether, in all material respects, the activities, financial transactions and information reflected in the financial statements are in compliance with the authorities that govern them and that public resources are applied in an effective way, in accordance with the provisions of Article 229(6) of the Constitution and submit the audit report in compliance with Article 229(7) of the Constitution.

Further, in planning and performing the audit of the financial statements and review of compliance, I consider internal controls in order to give an assurance on the effectiveness of internal controls, risk management and overall governance processes and systems in accordance with the provisions of Section 7(1)(a) of the Public Audit Act, 2015 and submit the audit report in compliance with Article 229(7) of the Constitution. My consideration of the internal control would not necessarily disclose all matters in the internal control that might be material weaknesses under the ISSAIs. A material weakness is a condition in which the design or operation of one or more of the internal controls components does not reduce to a relatively low level the risk that misstatements caused by error or fraud in amounts that would be material in relation to the financial statements being audited may occur and not be detected within a timely period by employees in the normal course of performing their assigned functions.

Because of its inherent limitations, internal controls may not prevent or detect misstatements and instances of non-compliance. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies and procedures may deteriorate.




As part of an audit conducted in accordance with ISSAIs, I exercise professional judgement and maintain professional skepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Management.
- Conclude on the appropriateness of Management's use of the applicable basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Organization's ability to continue to sustain its services. If I conclude that a material uncertainty exists, I am required to draw attention in the auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my audit report. However, future events or conditions may cause the Organization to cease to continue to sustain its services.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information and business activities of the Organization to express an opinion on the financial statements.
- Perform such other procedures as I consider necessary in the circumstances.

I communicate with Management regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that are identified during the audit.

I also provide Management with a statement that I have complied with relevant ethical requirements regarding independence and communicate with them all relationships and other matters that may reasonably be thought to bear on my independence, and where applicable, related safeguards.

  
FCPA Nancy Gathungu, CBS  
AUDITOR-GENERAL

Nairobi

25 March, 2024

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*Report of the Auditor-General on Kenya Agricultural and Livestock Research Organization for the year ended 30 June, 2023*







**XI. STATEMENT OF FINANCIAL PERFORMANCE**

For the year ended 30 June 2023

	Notes	2022-2023	2021-2022
		Kshs'000	Kshs'000'
<b>Revenue from exchange transactions</b>			
Goods	6	544,506	421,091
Services	7	201,044	200,976
Interest Received	8	8,696	11,339
Other Receipts	9	94,685	164,548
		<b>848,931</b>	<b>797,953</b>
<b>Revenue from non-exchange transactions</b>			
GoK Recurrent	10	4,140,069	4,318,715
GoK Development	11	50,000	78,000
World Bank	12	1,120,706	966,718
Other Grants	13	614,436	650,641
		<b>5,925,210</b>	<b>6,014,074</b>
<b>Total Revenue</b>		<b>6,774,141</b>	<b>6,812,028</b>
<b>Expenses</b>			
Staff Costs	14	4,317,996	4,141,216
Administrative Costs	15	2,539,108	2,047,350
Board Expenses	16	3,842	12,583
Audit Fees	17	4,175	3,800
Depreciation & Amortization expense	18	326,567	319,961
Repairs and Maintenance	19	135,947	121,888
Contracted Services	20	47,604	55,200
Finance Cost	21	14,544	10,773
<b>Total Expenses</b>		<b>7,389,782</b>	<b>6,712,770</b>
<b>Surplus/(Deficit)</b>		<b>(615,642)</b>	<b>99,257</b>

The Financial Statements set out on pages 1 to 21 were signed on behalf of the Board of Directors by:



Hon. Peter Weru Kinyua  
Chairman, KALRO BoM

Date: 29/09/2023



Ms. Ebby Musimbi  
Ass. Director, Finance & Accounts  
ICPAK Member Number: 10936

Date: 29/09/2023



Dr. Eliud K. Kireger, OGW  
Director General

Date: 29/09/2023



**XII. STATEMENT OF FINANCIAL POSITION**  
**As at 30th June 2023**

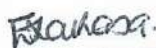
	Notes	2022-2023	2021-2022
		Kshs'000	Kshs'000'
<b>Assets</b>			
<b>Current Assets</b>			
Cash and Cash equivalents	22	641,977	1,443,703
Receivables from Exchange Transactions	23	250,949	491,084
Receivables from Non-exchange Transactions	24	699,342	412,954
Prepayments	25	102,269	90,739
Inventories	26	197,863	226,910
Deposits	27	2,585	2,585
<b>Total Current Assets</b>		<b>1,894,985</b>	<b>2,667,974</b>
<b>Non-Current Assets</b>			
Property, Plant and Equipment	28	24,106,637	24,123,928
Investments	31	724	682
Intangible Assets	29	72,104	49,005
Biological Assets	30	955,985	961,376
<b>Total Non- Current Assets</b>		<b>25,135,450</b>	<b>25,134,991</b>
<b>Total Assets</b>		<b>27,030,435</b>	<b>27,802,966</b>
<b>Liabilities</b>			
<b>Current liabilities</b>			
Bank overdraft	32	20	20
Trade & Other Payables	33	232,182	170,214
<b>Total Current Liabilities</b>		<b>232,201</b>	<b>170,234</b>
<b>Non-Current liabilities</b>			
Deferred Income	34	221,138	475,249
<b>Total Non- Current Liabilities</b>		<b>221,138</b>	<b>475,249</b>
<b>Total Liabilities</b>		<b>453,339</b>	<b>645,483</b>
<b>Net assets</b>		<b>26,577,096</b>	<b>27,157,483</b>
<b>Capital and Reserves</b>			
General Reserve	35	731,245	1,346,887
Capital Fund	36	5,980,474	5,945,219
Revaluation Reserve	38	19,865,377	19,865,377
<b>Total Capital and Reserves</b>		<b>26,577,096</b>	<b>27,157,483</b>

The Financial Statements set out on pages 1 to 21 were signed on behalf of the Board of Directors by:



Hon. Peter Weru Kinyua  
Chairman, KALRO BoM

Date: 29/09/2023



Ms. Ebby Musimbi  
Ass. Director, Finance & Accounts  
ICPAK Member Number: 10926

Date: 29/09/2023



Dr. Eliud K. Kireger, OGW  
Director General

Date: 29/09/2023



**XIII STATEMENT OF CHANGES IN NET ASSETS**

For the year ended 30 June 2023

	Notes	Capital Fund	Revaluation Reserve	General Reserve	Totals
		Kshs'000'	Kshs '000'	Kshs'000'	Kshs'000'
At 1st July 2021		5,926,912	19,865,377	1,247,629	27,039,918
Capital grants received during the period		18,307	-	-	18,307
Surplus/(Deficit) for the period		-	-	99,257	99,257
Prior year adjustments		-	-	-	-
At 30 June 2022		5,945,219	19,865,377	1,346,887	27,157,483
At 1st July 2022		5,945,219	19,865,377	1,346,887	27,157,483
Capital grants received during the period		35,255	-	-	35,255
Surplus/(Deficit) for the period		-	-	(615,642)	(615,642)
At 30 June 2023		5,980,474	19,865,377	731,245	26,577,096

The notes set out on pages 6 to 21 form an integral part of the financial statements.



XIV STATEMENT OF CASHFLOW

As at 30th June 2023


	Notes	2022-2023 Kshs'000	2021-2022 Kshs'000
<b>Cash Flow from Operating Activities</b>			
Cash generated from/(used in) operations	37	(266,314)	243,471
<b>Net cash generated from/(used in) operating activities</b>		(266,314)	243,471
<b>Cash flow from Investing Activities</b>		5,391	(102,048)
Revaluation of Biological assets	28	(260,905)	(108,357)
Purchase of property, plant & equipment	29	(71,469)	(71,257)
Purchase of intangible assets		10,470	-
Proceeds from sale of Assets		(42)	(172)
Gain/(Loss) on Valuation of Investments		(316,555)	(281,834)
<b>Cash generated from/(used in) investing activities</b>			
<b>Cash flow from Financing Activities</b>		35,255	18,307
Capital Grant		(254,111)	(379,955)
Deferred Income(Capital )		(218,857)	(361,648)
<b>Cash generated from/(used in)Financing activities</b>			
Increase in Cash and Cash Equivalent for the Year		(801,726)	(400,011)
Cash and Cash Equivalent at the Start of the Year		1,443,703	1,843,713
<b>Cash and Cash Equivalent at the End of the Year</b>	22	<b>641,977</b>	<b>1,443,703</b>

The Financial Statements set out on pages 1 to 21 were signed on behalf of the Board of Directors by:



Hon. Peter Weru Kinyua  
Chairman, KALRO BoM

Date: 29/09/2023



Ms. Ebbay Musimbi  
Ass. Director, Finance & Accounts  
ICPAK Member Number: 10936

Date: 29/09/2023



Dr. Eliud K. Kireger, OGW  
Director General

Date: 29/09/2023



**XV. STATEMENT OF COMPARISON OF BUDGET AND ACTUAL AMOUNTS**

	Original budget	Adjustments	Final Budget	Actual on comparable basis	Performance difference	% of utilisation
	2022-2023	2022-2023	2022-2023	2022-2023	2022-2023	2022-2023
	Kshs'000	Kshs'000'	Kshs'000'	Kshs'000'	Kshs'000'	2022-2023
	A	B	C=(A+B)	D	E=(C-D)	F=D/C
<b>Revenue from exchange transactions</b>						
Goods	615,000	(40,000)	575,000	544,506	(30,494)	95%
Services	165,000	40,000	205,000	201,044	(3,956)	98%
Interest Received	10,000	-	10,000	8,696	(1,304)	87%
Other Receipts	90,000		90,000	94,685	4,685	105%
<b>Sub total</b>	<b>880,000</b>	<b>-</b>	<b>880,000</b>	<b>848,931</b>		<b>96%</b>
<b>Revenue from non-exchange transactions</b>						
GOK Personal Emoluments	4,315,000	(106,475)	4,208,525	4,140,069	(68,456)	98%
GOK Development	124,000	(74,000)	50,000	50,000	-	100%
World Bank	900,000	220,706	1,120,706	1,120,706	-	100%
Other Grants	592,000	-	592,000	614,436	22,436	104%
<b>Sub total</b>	<b>5,931,000</b>	<b>40,231</b>	<b>5,971,231</b>	<b>5,925,210</b>		<b>99%</b>
<b>Total Revenue</b>	<b>6,811,000</b>	<b>40,231</b>	<b>6,851,231</b>	<b>6,774,141</b>		<b>99%</b>
<b>Expenses</b>						
Staff Costs	4,089,197	300,000	4,389,197	4,317,996	71,200	98%
Administrative Costs	2,008,397	545,000	2,553,397	2,539,108	14,290	99%
Board Expenses	20,000		20,000	3,842	16,158	19%
Audit Fees	4,200		4,200	4,175	25	99%
Depreciation & Amortization	332,706		332,706	326,567	6,139	98%
Repairs and Maintenance	130,000	5,800	135,800	135,947	(147)	100%
Contracted Services	95,000	(43,000)	52,000	47,604	4,396	92%
Finance cost	7,500	7,100	14,600	14,544	56	100%
Capital Expenditure (Developm	124,000	(74,000)	50,000	50,000	-	100%
<b>Total Expenses</b>	<b>6,811,000</b>	<b>814,900</b>	<b>7,551,900</b>	<b>7,439,782</b>	<b>112,118</b>	<b>99%</b>
<b>Surplus/(Deficit)</b>	<b>-</b>	<b></b>	<b>(700,669)</b>	<b>(665,642)</b>		

The notes set out on pages 6 to 21 form an integral part of the financial statements.

**Budget notes**

1. Change between original and final budget is as a consequence of budget adjustment from Exchequer
2. The % increase on revenue received from other receipts is due to sale of bonded and obsolete items
3. The % decrease in revenue from interest received is due decrease in bank balances
4. The increase in revenue from other grants is as a result of increase in research collaborations resulting to realization of the grants from donors in the period
5. The % increase in staff cost is due to implementation of the succession strategies commenced with the recent appointment staff after approval to recruit was granted by the Public Service Commission.
6. The % increase in administrative Costs is as a result of TIMPs dissemination activities (backstopping of County Training of Trainers) and submission of accountabilities for advances issued to the collaborating Institutions for research work funded under the World Bank-Kenya Climate Smart Project (KCSAP). In addition increase in fuel cost contributed to increase in administrative cost.
7. Board expenses underutilization against the budget was a result of KALRO Borad not being fully constituted within the period
8. Repairs and maintainance increase was as a result take off of the refurbishing and/or Upgrading of Research Facilities and Infrastructure funded under the Kenya Climate Smart Project
9. The % increase in Bank charges (finance cost) is due to digitisation of payments for prompt settlement of expenditures
10. Contracted services decrease was as a result subssion of crops varieties KEPHIS for National Performance Trials (NPT) and Distinctness, Uniformity and Stability (DUNS)
11. The resulting deficit in the statement of financial performance is due to submission of accountabilities for advances issued to the collaborating Institutions for research work funded under the World Bank following the expiry of the collaborating grant award agreements in March 2023. This has resulted to reduction on other receivables



## XVI. NOTES TO THE FINANCIAL STATEMENTS

### 1. General Information

KALRO is established by and derives its authority and accountability from Kenya Agricultural and Livestock Research Act, No 17 of 2013. The organisation is wholly owned by the Government of Kenya and is domiciled in Kenya. The entity's principal activity is to undertake, streamline, coordinate and regulate all aspects of research in agriculture and livestock development, and promote the application of the research findings, technologies and innovations.

### 2. Statement of compliance and basis of preparation – IPSAS 1

The organization's financial statements have been prepared in accordance with the PFM Act, the State Corporations Act, and International Public Sector Accounting Standards (IPSAS). The financial statements are presented in Kenya shillings, which is the functional and reporting currency of the organization and all values are rounded to the nearest thousand (Kshs. 000). The accounting policies have been consistently applied to all the years presented.

The financial statements have been prepared on the basis of historical cost, unless stated otherwise. The cash flow statement is prepared using the direct method. The financial statements are prepared on accrual basis

### 3. Adoption of New and Revised Standards

#### i) New and amended standards and interpretations in issue effective in the year ended 30 June 2023.

Standard	Effective date and impact:
IPSAS 41: Financial Instruments	<p><b>Applicable: 1st January 2023:</b> The objective of IPSAS 41 is to establish principles for the financial reporting of financial assets and liabilities that will present relevant and useful information to users of financial statements for their assessment of the amounts, timing and uncertainty of an entity's future cash flows. IPSAS 41 provides users of financial statements with more useful information than IPSAS 29, by:</p> <ul style="list-style-type: none"> <li>• Applying a single classification and measurement model for financial assets that considers the characteristics of the asset's cash flows and the objective for which the asset is held;</li> <li>• Applying a single forward-looking expected credit loss model that is applicable to all financial instruments subject to impairment testing; and</li> <li>• Applying an improved hedge accounting model that broadens the hedging arrangements in scope of the guidance. The model develops a strong link between an entity's risk management strategies and the accounting treatment for instruments held as part of the risk management strategy.</li> </ul>
IPSAS 42: Social Benefits	<p><b>Applicable: 1st January 2023</b> The objective of this Standard is to improve the relevance, faithful representativeness and comparability of the information that a reporting entity provides in its financial statements about social benefits. The information provided should help users of the financial statements and general purpose financial reports assess:</p> <ul style="list-style-type: none"> <li>(a) The nature of such social benefits provided by the entity;</li> <li>(b) The key features of the operation of those social benefit schemes; and</li> <li>(c) The impact of such social benefits provided on the Entity's financial performance, financial position and cash flows.</li> </ul>



**NOTES TO THE FINANCIAL STATEMENTS (Continued)**

Amendments to Other IPSAS resulting from IPSAS 41, Financial Instruments	<p><b>Applicable: 1st January 2023:</b></p> <p>a) Amendments to IPSAS 5, to update the guidance related to the components of borrowing costs which were inadvertently omitted when IPSAS 41 was issued.</p> <p>b) Amendments to IPSAS 30, regarding illustrative examples on hedging and credit risk which were inadvertently omitted when IPSAS 41 was issued.</p> <p>c) Amendments to IPSAS 30, to update the guidance for accounting for financial guarantee contracts which were inadvertently omitted when IPSAS 41 was issued.</p> <p>Amendments to IPSAS 33, to update the guidance on classifying financial instruments on initial</p>
Other improvements to IPSAS	<p><b>Applicable 1st January 2023</b></p> <ul style="list-style-type: none"> <li>•IPSAS 22 Disclosure of Financial Information about the General Government Sector. Amendments to refer to the latest System of National Accounts (SNA 2008).</li> <li>•IPSAS 39: Employee Benefits</li> </ul> <p>Now deletes the term composite social security benefits as it is no longer defined in IPSAS.</p> <ul style="list-style-type: none"> <li>-IPSAS 29: Financial instruments: Recognition and Measurement</li> </ul> <p>Standard no longer included in the 2021 IPSAS handbook as it is now superseded by IPSAS 41 which is applicable from 1st January 2023.</p>
IPSAS 43	<p><b>Applicable 1st January 2025</b></p> <p>The standard sets out the principles for the recognition, measurement, presentation, and disclosure of leases. The objective is to ensure that lessees and lessors provide relevant information in a manner that faithfully represents those transactions. This information gives a basis for users of financial statements to assess the effect that leases have on the financial position, financial performance and cashflows of an Entity.</p> <p>The new standard requires entities to recognise, measure and present information on right of use assets and lease liabilities.</p>
IPSAS 43 IPSAS 44: Non-Current Assets Held for Sale and Discontinued Operations	<p><b>Applicable 1st January 2025</b></p> <p>The Standard requires,</p> <p>Assets that meet the criteria to be classified as held for sale to be measured at the lower of carrying amount and fair value less costs to sell and the depreciation of such assets to cease and:</p> <p>Assets that meet the criteria to be classified as held for sale to be presented separately in the statement of financial position and the results of discontinued operations to be presented separately in the statement of financial performance.</p>

**ii) New and amended standards and interpretations in issue but not yet effective in the year ended 30 June 2023**

Standard	Effective date and impact:
IPSAS 43	<p><b>Applicable 1st January 2025</b></p> <p>The standard sets out the principles for the recognition, measurement, presentation, and disclosure of leases. The objective is to ensure that lessees and lessors provide relevant information in a manner that faithfully represents those transactions. This information gives a basis for users of financial statements to assess the effect that leases have on the financial position, financial performance and cashflows of an Entity.</p> <p>The new standard requires entities to recognise, measure and present information on right of use assets and lease liabilities.</p>
IPSAS 44: Non- Current Assets Held for Sale and Discontinued Operations	<p><b>Applicable 1st January 2025</b></p> <p>The Standard requires;</p> <p>Assets that meet the criteria to be classified as held for sale to be measured at the lower of carrying amount and fair value less costs to sell and the depreciation of such assets to cease and:</p> <p>Assets that meet the criteria to be classified as held for sale to be presented separately in the statement of financial position and the results of discontinued operations to be presented separately in the statement of financial performance.</p>

**iii. Early adoption of standards**

The Entity did not early – adopt any new or amended standards in the financial year 2022/2023



**NOTES TO THE FINANCIAL STATEMENTS (Continued)**

**4. Summary of significant accounting policies**

**a) Revenue recognition**

**i) Revenue from non-exchange transactions - IPSAS 23**

**Transfers from other government entities**

Revenues from non-exchange transactions with other government entities are measured at fair value and recognized on obtaining control of the asset (cash, goods, services and property) if the transfer is free from conditions and it is probable that the economic benefits or service potential related to the asset will flow to the organization and can be measured reliably.

**ii) Revenue from exchange transactions – IPSAS 9**

**Rendering of services**

The organization recognizes revenue from rendering of services only when it is probable that the economic benefits or service potential associated with the transaction will flow to the organization. When the outcome of the transaction involving the rendering of services cannot be estimated reliably, revenue shall be recognized only to the extent of the expenses recognized that are recoverable.

**Sale of goods**

Revenue from the sale of goods is recognized when the significant risks and rewards of ownership have been transferred to the buyer, usually on delivery of the goods and when the amount of revenue can be measured reliably and it is probable that the economic benefits or service potential associated with the transaction will flow to the organization.

**Interest income**

Interest income is accrued using the effective yield method. The effective yield discounts estimated future cash receipts through the expected life of the financial asset to that asset's net carrying amount. The method applies this yield to the principal outstanding to determine interest income each period.

**Rental income**

Rental income arising from operating leases on investment properties is accounted for on a straight-line basis over the lease terms and included in revenue

**b) Budget information – IPSAS 24**

The annual budget is prepared on the accrual basis, that is, all planned costs and income are presented in a single statement to determine the needs of the organization. As a result of the adoption of the accrual basis for budgeting purposes, there are no basis, timing or organization differences that would require reconciliation between the actual comparable amounts and the amounts presented as a separate additional financial statement in the statement of comparison of budget and actual amounts. The period covered by the annual budget is the same as the period covered by the financial statements.

**c) Property, plant and equipment – IPSAS 17**

All property, plant and equipment are stated at cost less accumulated depreciation and impairment losses. Cost includes expenditure that is directly attributable to the acquisition of the items. All other repair and maintenance costs are recognized in surplus or deficit as incurred. Where an asset is acquired in a non-exchange transaction for nil or nominal consideration the asset is initially measured at its fair value.

Biological assets are measured on initial recognition and at the end of each reporting period at fair value less costs to sell in accordance with IPSAS 27.

Bearer plant are "a living plant that is used in the production or supply of agricultural produce, is expected to bear produce for more than one period has a remote likelihood of being sold as agricultural produce, except for incidental scrap sales. This includes Coffee and Tea plants .

Before maturity, bearer plants are measured at their accumulated cost. After the bearer plants matures, KALRO measures the bearer plants using either the cost model or the revaluation model.



**NOTES TO THE FINANCIAL STATEMENTS (Continued)**

Depreciation is calculated to write off the cost or valuation of fixed assets using the straight-line method at the following annual rates

Buildings	2.00%
Bearer Plants	2.00%
Motor vehicles and Motor cycles	25.00%
Tractors	12.50%
Plant and machinery	12.50%
Office equipment	12.50%
Computers & Electronics	33.33%
Furniture & fittings	12.50%
Laboratory equipment	12.50%
Infrastructural Assets	25.00%

Depreciation will be charged in the year of acquisition and not charged in the year of disposal of the asset.

**d) Intangible assets–IPSAS 31**

Intangible assets acquired separately are initially recognized at cost. The cost of intangible assets acquired in a non-exchange transaction is their fair value at the date of the exchange. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and accumulated impairment losses. Internally generated intangible assets, excluding capitalized development costs, are not capitalized and expenditure is reflected in surplus or deficit in the period in which the expenditure is incurred.

The useful life of the intangible assets is assessed as finite and amortised over the useful economic life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortisation period (a period of 3years) and the amortisation method for an intangible asset with a finite useful life is reviewed at least at the reporting date.

Intangible assets	33.33%
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**e) Research and development costs**

The organization expenses research costs as incurred. Development costs on an individual project are recognized as intangible assets when the organization can demonstrate:

- The technical feasibility of completing the asset so that the asset will be available for use or sale
- Its intention to complete and its ability to use or sell the asset
- How the asset will generate future economic benefits or service potential
- The availability of resources to complete the asset
- The ability to measure reliably the expenditure during development

Following initial recognition of an asset, the asset is carried at cost less any accumulated amortization and accumulated impairment losses. Amortization of the asset begins when development is complete and the asset is available for use. It is amortized over the period of expected future benefit. During the period of development, the asset is tested for impairment annually with any impairment losses recognized immediately in surplus or deficit.

**f) Inventories – IPSAS 12**

Inventory is measured at cost upon initial recognition. To the extent that inventory was received through non-exchange transactions (for no cost or for a nominal cost), the cost of the inventory is its fair value at the date of acquisition.

After initial recognition, inventory is measured at the lower of cost and net realizable value. However, to the extent that a class of inventory is distributed or deployed at no charge or for a nominal charge, that class of inventory is measured at the lower of cost and current replacement cost.

Net realizable value is the estimated selling price in the ordinary course of operations, less the estimated costs of completion and the estimated costs necessary to make the sale, exchange, or distribution.

Inventories are recognized as an expense when deployed for utilization or consumption in the ordinary course of operations of the Organization.

**g) Nature and purpose of reserves**

The organization creates and maintains reserves in terms of specific requirements. organization to state the reserves maintained and appropriate policies adopted.



**NOTES TO THE FINANCIAL STATEMENTS (Continued)**

**h) Employee benefits – IPSAS 25**

**Retirement benefit plans**

The organization provides retirement benefits for its employees. The retirement scheme is contributory with employee and employer contributing as below on the basis of the Basic Salary. The entity's obligation under the scheme is limited to employee and employer contributions

Employee	Employer
10%	20%

The entity also contributes to the statutory National Social Security Fund (NSSF). The entity's obligation under the scheme is limited to employee and employer contributions.

**i) Cash and cash equivalents**

Cash and cash equivalents comprise cash on hand and cash at bank. Bank account balances include amounts held at various commercial banks at the end of the financial year net of bank overdrafts. In the Statement of Financial Position, bank overdrafts are included as borrowings under current liabilities.

**j) Comparative figures**

Where necessary comparative figures for the previous financial year have been amended or reconfigured to conform to the required changes in presentation.

**k) Foreign currency transactions IPSAS 4.**

Transactions in foreign currencies are initially accounted for at the ruling rate of exchange on the date of the transaction. Trade creditors or debtors denominated in foreign currency are reported at the statement of financial position reporting date by applying the exchange rate on that date. Exchange differences arising from the settlement of creditors, or from the reporting of creditors at rates different from those at which they were initially recorded during the period, are recognized as income or expenses in the period in which they arise.

**l) Subsequent events – IPSAS 14**

There have been no events subsequent to the financial year end with a significant impact on the financial statements for the year ended June 30, 2023.

**m) Related Parties – IPSAS 20**

The Organisation regards a related party as a person or an entity with the ability to exert control individually or jointly, or to exercise significant influence over the Organisation, or vice versa. The Government of Kenya is the principal shareholder of the entity, holding 100% of the entity's equity interest. Other related parties include the Parent Ministry (Ministry of Agriculture and Livestock Development) and Board of Management. Members of key management are regarded as related parties and comprise senior managers. No related party contracts or dealings were exchanged during the year except for earnings as employees. Further, the key management do not hold any specific interests. Allowances to members of the Board of Management are as shown (see Note 16), while the three key management emoluments for the year were Kshs 19.567million. This is included in the staff costs.

**n) Taxes – IAS 12**

The Organisation is only liable to income tax payable on interest and dividends received which are payable at source. The organisation is exempt from paying corporation tax.

**o) Leases – IPSAS 13**

The determination of whether an arrangement is, or contains a lease is based on the substance of the arrangement and requires an assessment of whether the fulfillment of the arrangement is dependent on the use of a specific asset or assets and the arrangement conveys a right to use the asset.

Leases are classified as finance leases whenever the terms of the lease transfer substantially all risks and rewards of ownership to the Organization as the lessee. All other leases are classified as operating leases. Where the Organization is the lessee, the total payments made under operating leases are charged to the statement of financial performance on a straight line basis over the period of the lease.

**p) Changes in accounting policies and estimates – IPSAS 3**

The Organisation recognizes the effects of changes in accounting policy retrospectively. The effects of changes in accounting policy are applied prospectively if retrospective application is impractical.



**NOTES TO THE FINANCIAL STATEMENTS (Continued)**

**q) Financial Risk Management Objectives and Policies**

The Board has initiated and facilitated the process that will see the enhancement of risk management. The Board has an integrated risk management strategy. The Board's approach to risk management is based on risk governance structures, risk management policies, risk identification, measurement, monitoring and reporting. The risk management policies and systems are reviewed regularly to ensure that they are in tandem with the micro and macro environment, regulatory guidelines, industry practice, market conditions as well as the services offered. The Board recognizes the critical role the risk management will continue to play in its endeavor to carry out its business in a dynamic environment. The Board is committed to ensure that corporate governance and risk management are deeply entrenched in the Organisation and culture.

**i) Liquidity risk**

Liquidity risk is the risk that the Board will not have sufficient financial resources to meet its obligations when they fall due or will have to do so at excessive costs. This risk can arise from mismatches in the timing of cash flows from revenue and capital/operational outflows, assets and liabilities according to their maturity profiles and can occur where cash flow streams have been discontinued, etc. Funding risk arises when the necessary liquidity to fund illiquid asset positions cannot be met at expected terms and when required. The objective of the liquidity and funding management is to ensure that all foreseeable operational and capital commitment expenditure can be met under both normal and stressed conditions and the mismatch is controlled in line with allowable risk levels.

The table shows the undiscounted cash flows on the Organisation financial assets and liabilities on the earliest possible maturity date. The liquidity ratio in FY 2022/23 is 6.86(FY 2021/22:13.79)

Financial Assets	Note	2022-2023 Kshs '000	2021-2022 Kshs '000
Bank and Cash Balances			
Receivables	22	641,957	1,443,683
<b>Total Financial Assets</b>	<b>23 &amp; 24</b>	<b>950,291</b>	<b>904,038</b>
<b>Financial Liabilities</b>		<b>1,592,248</b>	<b>2,347,721</b>
Payables			
<b>Total Financial Liabilities</b>	<b>33</b>	<b>232,182</b>	<b>170,214</b>
<b>Net Liquidity</b>		<b>232,182</b>	<b>170,214</b>
<b>Liquidity Ratio</b>		<b>1,360,067</b>	<b>2,177,506</b>
		<b>6.86</b>	<b>13.79</b>

**ii) Currency Risk**

Currency risk arises primarily from purchasing and sales of goods and services from/to overseas or indirectly via local supplies. The currency risk is minimal as cash and cash equivalents held with banks are dominated in Kenya Shillings and there are minimal dealings in foreign currency.

**iii) Operational risk**

Operational risk is the risk of direct or indirect loss arising from a wide variety of causes associated with the Organisation's processes, personnel, technology and infrastructure and from external factors other than credit, market and liquidity risks such as legal and regulatory requirements and generally acceptable standards of corporate behavior. The Organisation seeks to ensure that key operational risks are managed in a timely and effective manner through a framework of policies, procedures and tools to identify, assess, monitor and report such risks. The Organisation's objective is to manage operational risk so as to balance the avoidance of financial losses and damage to the Organisation's reputation with overall cost effectiveness and to avoid control procedures that restrict initiative and creativity.

**iv) Compliance and Regulatory Risk**

Compliance and regulatory risk includes the risk of non-compliance with regulatory requirements. The Organisation has complied with all externally imposed requirements throughout the year.



**NOTES TO THE FINANCIAL STATEMENTS (Continued)**

**5) Significant judgments and sources of estimation uncertainty – IPSAS 1**

Estimates and judgments are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. Although these estimates are based on the directors' knowledge of current events and actions, actual results may differ from these estimates. The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised if the revision affects only that period or in the period of the revision and future periods if the revision affects both current and future periods. The key areas of judgments and sources of uncertainty in estimation are as set out below:

**i) Useful lives of Property, Plant and Equipment**

The Board make estimates in determining the depreciation rates for property and equipment. The rates used are set out in the accounting policy (c) above for property and equipment. The Board reviews the estimated useful lives of plant and equipment at the end of each reporting period. During the financial year, no changes to the useful lives were identified by the Board.

**ii) Contingent Liabilities**

As disclosed in these financial statements, the Board is exposed to various contingent liabilities in the normal course of business. The Board evaluate the status of these exposures on a regular basis to assess the probability of the Board incurring related liabilities. However, provisions are only made in the financial statements where, based on the Board's evaluation, a present obligation has been established.

**iii) Provision for Doubtful Debts**

The organization reviews its receivables portfolio to assess the likelihood of impairment. Provision for impairment of receivables is established when there is an objective evidence that the Board will not be able to collect all amounts due. Where necessary, an estimation of the amounts irrecoverable is made in that year at 5% of the portfolio. Provision for impairment shall be recognized upon approval by the Board of Management.

**iv) Other provisions**

Other provisions are recognized when the Board has legal or constructive obligation as a result of past events, for which it is probable that an outflow of economic benefits will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

6 Goods	2022-2023	2021-2022
	Kshs '000	Kshs '000
	3,921	3,110
Sheep & Goats	1,381	2,341
Pigs	69	76
Camels	38,229	26,778
Cows	101,150	108,386
Poultry	17,006	16,483
Maize	24,817	14,053
Sorghum & Millets	2,758	5,004
Rice	4,594	3,447
Root and Tuber	830	282
Vegetables	137	3,824
Herbs	45,244	84,534
Beans	1,947	1,181
Fruits	1,275	1,969
Bananas	8,500	3,867
Wheat	2,725	417
Cassava	94,837	48,759
Seeds	81,473	61,873
Seedlings	15,345	505
Trees and Plants	942	1,638
Manure	1,843	1,417
Firewood	85	124
Flowers	13	15
Pyrethrum	679	110
Cotton	16,846	43,333
Fodder	70	76
Beef		



**NOTES TO THE FINANCIAL STATEMENTS (Continued)**

Milk		
Eggs	26,055	28,675
Tomatoes	8,612	6,491
Hay	96	339
Water	17,738	10,452
Other Farm produce	5,953	3,492
Increase/Decrease in Stock	2,250	2,238
Sale of Scrap	(139,121)	(192,428)
Coffee, Milling Cane and Tea Sales	6,071	0
<b>Total</b>	<b>150,138</b>	<b>128,232</b>
	<b>544,506</b>	<b>421,091</b>

**7. Services**

	2022-2023	2021-2022
	Kshs '000	Kshs '000
Soil Analysis	15,433	16,840
Other Lab Services	5,097	5,082
Sale of Journals Periodicals	177	432
Hire-Ground/Conference Facilities	61,780	76,447
Royalties	10,833	9,513
Rent	65,358	61,628
Other services	42,364	31,034
<b>Total</b>	<b>201,044</b>	<b>200,976</b>

**8. Interest Received**

	2022-2023	2021-2022
	Kshs '000	Kshs '000
Interest Received	8,696	11,339
<b>Total</b>	<b>8,696</b>	<b>11,339</b>

**9. Other Receipts**

	2022-2023	2021-2022
	Kshs '000	Kshs '000
Cafeteria Income	43,947	48,320
Guest House Income	31,820	29,877
Bus Income	6,129	5,131
Utilities Income	9,868	7,405
Sale of Tender Documents	46	-
Grazing Fee	38	12
Gain/(Loss) on Foreign exchange	(135)	(28,418)
Gain/(Loss) on Biological assets	(7,539)	102,048
Gain/(Loss) on Sale of Fixed Assets	10,470	0
Gain/(Loss) on Valuation of Investments	42	172
<b>Total</b>	<b>94,685</b>	<b>164,548</b>

**10. GoK Personnel Emoluments**

This represents GoK funds received from the Government for payment of staff costs

	2022-2023	2021-2022
	Kshs '000	Kshs '000
Grants-Personnel Emoluments	4,140,069	4,318,715
<b>Total</b>	<b>4,140,069</b>	<b>4,318,715</b>



**NOTES TO THE FINANCIAL STATEMENTS (Continued)**

**11. GoK Development Funds**

This represents GoK funds received from the Government for development of research activities.

	2022-2023	2021-2022
	Kshs '000	Kshs '000
Development Grant -GoK	50,000	78,000
<b>Sub-Total</b>	<b>50,000</b>	<b>78,000</b>

**10 & 11. Transfers from Ministries**

Name of the Entity sending the grant	Amount recognized to Statement of Comprehensive Income Kshs '000	Amount deferred Kshs '000	Amount recognised in capital fund Kshs '000	Total grant income during the year Kshs '000	2022-2023	2021-2022
Ministry of Agriculture and Livestock Development	4,140,069	-	-	4,140,069	4,140,069	4,318,715
Ministry of Agriculture and Livestock Development	50,000	-	-	50,000	50,000	78,000
<b>Total</b>	<b>4,190,069</b>	<b>-</b>	<b>-</b>	<b>4,190,069</b>	<b>4,190,069</b>	<b>4,396,715</b>

**12. World Bank**

	2022-2023	2021-2022
	Kshs '000	Kshs '000
Development Fund - KCSAP	1,120,706	966,718
<b>Total</b>	<b>1,120,706</b>	<b>966,718</b>

**13. Development Funds - Other Donors**

These represent grants received from various donors for research activities.

	2022-2023	2021-2022
	Kshs '000	Kshs '000
Development Grant - EU	112,612	219,796
Development Grant - USAID	7,370	2,346
Development Grant - CIP	-	1,536
Development Grant - CIAT	20,815	3,682
Development Grant - ICRAF	-	2,780
Development Grant - FAO	8,259	2,933
Development Grant - ILRI	32,456	26,877
Development Grant - ICRISAT	-	687
Development Grant - CIMMYT	49,850	50,966
Development Grant - NRF	5,110	5,031
Development Grant - IDRC	30,800	16,027
Development Grant - AGRA	-	8,260
Development Grant - KCEP	-	3,175
Development Grants -CORNEL UNI	12,050	11,074
Development Grant - Other Grants	335,115	295,471
<b>Total</b>	<b>614,436</b>	<b>650,641</b>

**14. Staff Costs**

	2022-2023	2021-2022
	Kshs '000	Kshs '000
Basic Salary	2,194,538	2,031,961
House Allowance	547,637	561,638
Other Personal Allowance	86,816	93,086



**NOTES TO THE FINANCIAL STATEMENTS (Continued)**

Commuter Allowance	150,677	152,422
Transfer Allowance	4,020	4,003
Passage & Leave Expenses	9,396	11,042
Gratuity & Pension Contribution	461,754	426,375
Medical Expenses	296,169	278,093
Contractual Employee	195,195	201,132
Casual Labour	371,795	381,463
<b>Total</b>	<b>4,317,996</b>	<b>4,141,216</b>

**15. Administrative Costs**

	2022-2023	2021-2022
	Kshs '000	Kshs '000
Fuels, Oils and Lubricants	138,292	78,936
Vehicle Insurance	11,909	25,801
Road Tax & Licenses	7,634	1,104
Hire of Transport	11,949	9,950
Freight, Clearing & Shipping	1,863	451
Purchase of Supplies Production	96,026	83,920
Purchase of Drugs	4,247	3,984
Purchase of Sierra & Vaccines	592	1,602
Farm Development	15,768	23,882
Purchase of Fungi Insecticide & Sprays	3,970	3,253
Purchase of Farm Input	32,887	54,911
Purchase of Laboratory Stores	26,310	27,204
Research Materials	18,621	26,620
Purchase of Animals	3,640	20,069
Purchase of Dressing & Non Pharmaceutical	73	90
Purchase of Consumables Stores	10,847	15,038
Food and Ration	19,408	19,745
Hire Machinery & Equipment's	1,308	1,759
Purchase of Workshop Tools, Spares & Equipment	4,416	4,544
Farmer Grants (CIGs/CBOs)	388,979	138,555
Purchase of seed	86,622	15,520
Office Stationery	14,267	15,402
Computer Expenses	1,066	463
Printing and Publishing	11,688	6,472
Advertising and Publicity	8,096	5,821
Library Expenses	65	134
Farmers Training, Field day, Show Expenses	248,209	126,646
Cafeteria Expenses	66,848	15,126
Official Entertainment	3,771	6,150
Conference and Seminars	63,908	61,165
Rent and Rates	691	613
Commission and Honoraria	12,791	8,191
Security Expenses	131,110	130,018
Insurance - Property	19,414	23,571
Uniforms and Clothing	3,458	2,221
Subscriptions to Newspapers	632	600
Insurance - GPA & GL	50,734	42,539
Daily Subsistence Allowance	768,658	740,472
External Travels and Per Diem	52,788	31,978
Travel Costs (Air & Bus) Mileage	19,674	20,811
Training	13,062	27,338
Water Expenses	3,934	4,445
Electricity Supplies	102,822	97,670
Gas Expenses	1,710	1,980
Telephone Expenses	13,364	17,033
Postage and Courier Expenses	2,860	3,173



**NOTES TO THE FINANCIAL STATEMENTS (Continued)**

Provision for bad debts	(12,898)	4,155
Internet Connections	32,887	40,206
Membership Fees & Subscription	4,145	27,550
Legal Dues, Arbitration & Compensation	13,993	28,468
<b>Total</b>	<b>2,539,108</b>	<b>2,047,350</b>

**16. Board Expenses**

Board	2022-2023	2021-2022
	Kshs '000	Kshs '000
Sitting Allowance	2,080	4,711
Travelling and Accomodation	1,226	3,361
Telephone Allowance	28	84
Mileage Expenses	119	280
Honoraria	320	960
Training	70	3,187
<b>Total</b>	<b>3,842</b>	<b>12,583</b>

**17. Audit Fees**

These are fees incurred by the Institute during external audits.

	2022-2023	2021-2022
	Kshs '000	Kshs '000
Audit Fees	4,175	3,800
<b>Total</b>	<b>4,175</b>	<b>3,800</b>

**18. Depreciation & Amortization Expense**

	2022-2023	2021-2022
	Kshs '000	Kshs '000
Buildings	136,144	135,909
Plant and Machinery	16,395	9,892
Motor Vehicles	11,529	42,120
Motor Cycles & Bicycles	62	62
Lab & Scientific Equipment	30,939	26,840
Office & Computer Equip.	46,019	40,002
Office Furniture & Fittings	14,219	17,053
Infrastructure (G/hses, fences, streetlighting)	18,586	19,227
Amortization -Bearer Plants	4,304	4,304
Amortization-Software	48,371	24,552
<b>Total</b>	<b>326,567</b>	<b>319,961</b>

**19. Repairs and maintenance**

These refers to repairs and maintenance on the various assets of the organisation

	2022-2023	2021-2022
	Kshs '000	Kshs '000
Repairs & Maintenance of Vehicles	36,282	38,647
Repairs & Maintenance of Motor Cycles	340	753
Repair & Maintenance of Buildings & Stations	76,416	59,887
Repair & Maintenance of Water Supplies and Pumps	7,014	6,036
Repair & Maintenance of Office Equipment	2,271	2,395
Repairs & Maintenance Laboratory Equipment	3,570	2,424
Repairs & Maintenance Furniture	224	356
Maintenance of Plant and Machinery	7,884	10,562
Maintenance of Roads	537	267
Minor Alteration & Maintenance of Works	1,410	761
<b>Total</b>	<b>135,947</b>	<b>121,888</b>

**20. Contracted Professional Services**

	2022-2023	2021-2022
	Kshs '000	Kshs '000
Contracted Professional Services	47,604	55,200
<b>Total</b>	<b>47,604</b>	<b>55,200</b>

**21 Finance cost**

	2022-2023	2021-2022
	Kshs '000	Kshs '000
Bank Charges	14,544	10,773
<b>Total</b>	<b>14,544</b>	<b>10,773</b>



**NOTES TO THE FINANCIAL STATEMENTS (Continued)**  
**22 Cash and cash equivalent**

	2022-2023	2021-2022
	Kshs '000	Kshs '000
Bank Balances	641,977	1,443,703
Bank overdraft (Note 32)	(20)	(20)
<b>Total</b>	<b>641,957</b>	<b>1,443,683</b>

Cash and cash equivalent are held in various banks as per below summary:

	2022-2023	2021-2022
	Kshs '000	Kshs '000
Kenya Commercial Bank	574,054	1,305,697
NCBA Bank	9,987	4,000
ABSA Bank Kenya	4,700	7,387
National Bank of Kenya	16,532	82,407
Cooperative Bank of Kenya	26,696	34,318
Stanbic Bank Kenya	10,001	9,800
MPESA	7	92
Cash	0	1
<b>Total</b>	<b>641,977</b>	<b>1,443,703</b>

**23 Receivables from Exchange Transactions**

	2022-2023	2021-2022
	Kshs '000	Kshs '000
Trade Debtors		
Kenya Seed	86,991	62,244
Prepayments	19,945	19,945
Rent dues	1,171	1,171
Bungoma Union	6,284	6,861
Mugama Co-op Union	746	746
Other Receivables	1,863	1,863
Provision for Doubtful Debts	147,095	424,039
<b>Total</b>	<b>(13,146)</b>	<b>(25,765)</b>
	<b>250,949</b>	<b>491,084</b>

**24 Receivables from Non-exchange Transactions**

	2022-2023	2021-2022
	Kshs '000	Kshs '000
GoK recurrent	300,000	-
Commodity Levy	314,497	314,497
Staff Imprest	76,873	90,569
Staff advances	1,499	1,674
Coffee Board of Kenya	23,445	23,445
KPCU	124,496	124,496
Provision for Doubtful Debts	(141,468)	(141,727)
<b>Total</b>	<b>699,342</b>	<b>412,954</b>

**25 Prepayments**

These are prepayments on insurance covers taken by KALRO with commencement date of 1st October 2022 and 1st January 2023 and expiring on 30th September 2023

	2022-2023	2021-2022
	Kshs '000	Kshs '000
Insurance Premium	102,269	90,739
<b>Total</b>	<b>102,269</b>	<b>90,739</b>

**26 Inventories**

	2022-2023	2021-2022
	Kshs '000	Kshs '000
Consumables	92,364	83,608
Crop	105,840	143,643
Provision for obsolete stock	(341)	(341)
<b>Total</b>	<b>197,863</b>	<b>226,910</b>

**27 Deposits**

	2022-2023	2021-2022
	Kshs '000	Kshs '000
Deposits	2,585	2,585
<b>Total</b>	<b>2,585</b>	<b>2,585</b>



NOTES TO THE FINANCIAL STATEMENTS (Continued)  
28. Property, plant and Equipment

	LAND	BEARER PLANTS	BUILDINGS	MOTOR VEHICLES	PLANT & MACHINERY	OFFICE EQUIP.	FURNITURE & FITTINGS	LAB EQUIPMENT	MOTOR CYCLES & BICYCLES	INFRASTRUCTURE (e.g. fences, streetlighting)	WORK IN PROGRESS	TOTAL
	Kshs'000'	Kshs'000'	Kshs'000'	Kshs'000'	Kshs'000'	Kshs'000'	Kshs'000'	Kshs'000'	Kshs'000'	Kshs'000'	Kshs'000'	Kshs'000'
Cost	18,208,626	215,195	6,795,458	746,244	276,169	597,628	304,693	901,127	7,995	176,700	7,478	28,239,313
As at 1 <sup>st</sup> July 2021												
Addition for the period	-	-	581	19,770	25,483	44,265	1,633	4,139	-	11,938	547	108,357
Disposal for the period												
Transfer from WIP												
At 30 <sup>th</sup> June 2022	18,208,626	215,195	6,796,040	766,014	301,652	641,894	306,326	905,266	7,995	190,639	8,025	28,347,671
Addition for the period	-	-	11,741	26,344	55,269	32,118	5,857	61,456	-	12,347	55,774	260,905
Transfer from NIP												
Reclassification of assets categories												
Transfer from Biological assets												
Disposal for the period				(22,146)								(22,146)
At 30 <sup>th</sup> June 2023	18,208,626	215,195	6,807,781	770,212	356,921	674,013	312,182	966,722	7,995	202,985	63,799	28,566,430
Depreciations												
At 1 <sup>st</sup> July 2021		18,488	1,198,897	709,130	247,991	551,279	246,658	798,451	7,809	149,631	-	3,928,333
Charge for the period		4,304	135,909	42,120	9,892	40,002	17,053	26,840	62	19,227	-	295,409
Accumulated depreciation on disposal												
At 30 <sup>th</sup> June 2022		22,792	1,334,806	751,250	257,883	591,282	263,711	825,291	7,871	168,858	-	4,223,742
Charge for the period		4,304	136,144	11,529	16,395	46,019	14,219	30,939	62	18,566	-	278,196
Accumulated depreciation on disposal				(22,146)								(22,146)
Depreciation on reclassification												
At 30 <sup>th</sup> June 2023		27,095	1,470,950	740,632	274,278	637,301	277,930	856,230	7,933	187,443	-	4,479,792
Net book values	18,208,626	185,099	5,336,831	29,580	82,643	36,712	34,252	110,492	62	15,542	63,799	24,106,637
At 30 <sup>th</sup> June 2023		192,403	5,461,234	14,764	43,769	50,613	42,614	79,975	124	21,781	8,025	24,123,928
At 30 <sup>th</sup> June 2022												

Motor vehicles and motorcycles with a gross carrying amount of Ksh. 426,814,800 and Ksh. 6,606,660 respectively, had been fully depreciated during the year ending 30th June 2023 and are still in use



**NOTES TO THE FINANCIAL STATEMENTS (Continued)**

**29 Intangible Assets**

	2022-2023	2021-2022
	Kshs '000	Kshs '000
<b>Cost</b>		
At beginning of the year		
Addition	336,410	265,154
<b>At end of the year</b>	<b>71,469</b>	<b>71,257</b>
<b>Amortization</b>	<b>407,880</b>	<b>336,410</b>
At beginning of the year		
Amortization	287,405	262,854
At end of the year	48,371	24,552
<b>Net Book Value</b>	<b>335,776</b>	<b>287,405</b>
	<b>72,104</b>	<b>49,005</b>

**30 Biological Assets**

	2022-2023	2021-2022
	Kshs '000	Kshs '000
As at 1st July		
Gain in Value during the year	961,376	859,328
As at 30th June	(5,391)	102,048
<b>Total</b>	<b>955,985</b>	<b>961,376</b>
	<b>955,985</b>	<b>961,376</b>

**31 Investments**

	2022-2023	2021-2022
	Kshs '000	Kshs '000
<b>Quoted Investments:</b>		
1,672 B A T Kenya PLC shares-	724	682
<b>Other Investments:</b>		
KPCU Unsecured Loan Stock		
KPCU Redeemable Ordinary shares	-	-
Fairvalue is Kshs 0 (2021/2022 Kshs 0)	-	-
<b>Total</b>	<b>724</b>	<b>682</b>

The Kenya Planters Co-operative Union unsecured loan stock and redeemable ordinary shares are unquoted investments classified as available for sale and measured at cost. The fair value of KPCU is estimated at zero as the Government has liquidated KPCU.

For investments in equity share listed under note 31 above, the equity investments is under the following categories:

Name of entity where investment is held	No of shares			Nominal value of shares	Fair value of shares Current year	Fair value of shares Prior year
	Direct shareholding	Indirect shareholding	Effective shareholding			
	%	%	%			
British American Tobacco Kenya PLC	0.0000167	-	0.0000167	Kshs '000 17	Kshs '000 724	Kshs '000 682
	0.0000167	-	0.0000167	17	724	682

The fair value of BAT shares is determined by reference to published price quotation in the active market (NSE). On 30th June 2023, the shares traded at Kshs. 432.75 (2021/2022:Kshs.407.75) per share.

**32 Bank Overdraft**

	2022-2023	2021-2022
	Kshs '000	Kshs '000
Bank overdraft		
<b>Total</b>	<b>20</b>	<b>20</b>
	<b>20</b>	<b>20</b>



**NOTES TO THE FINANCIAL STATEMENTS (Continued)**

**33 Trade and Other Payables**

	2022-2023	2021-2022
	Kshs '000	Kshs '000
	156,128	116,950
Trade Creditors	11,894	26,294
Statutory Deductions	63,356	26,166
Other Creditors	804	804
Rent Deposits	232,182	170,214
<b>Total</b>		

**34 Deferred income**

Grants received from donors for specific projects are classified as non-current liabilities. They are carried at amortized cost of which amortization is recorded as other grants in proportion to expenditure incurred on the project over the life of the project.

Description	2022-2023	2021-2022
	Kshs '000	Kshs '000
National Government	221,138	475,249
International funders	-	-
Prior Year Adjustments-International funders	-	-
Public contributions and donations	221,138	475,249
<b>Total deferred income</b>		

The deferred income movement is as follows:

	National Government	International funders	Public contribution s and donations	Total	Total
	Kshs '000	Kshs '000	Kshs '000	Kshs '000	Kshs '000
Balance brought forward	-	199,607	275,642	475,249	855,204
Prior year adjustment*				-	-
Additions		133,899		133,899	296,009
Transfers to Capital fund				-	-
Transfers to income statement		(112,284)	(275,642)	(387,926)	(675,964)
Other transfers		(84)		(84)	-
<b>Balance carried forward</b>	<b>-</b>	<b>221,138</b>	<b>-</b>	<b>221,138</b>	<b>475,249</b>

**35 General reserve**

	2022-2023	2021-2022
	Kshs '000	Kshs '000
Balance Brought Forward as at 1 July	1,346,887	1,247,629
Surplus/(Deficit) for the Year	(615,642)	99,257
<b>Balance Carried Forward as at 30 June</b>	<b>731,245</b>	<b>1,346,887</b>



**NOTES TO THE FINANCIAL STATEMENTS (Continued)**

**36 Capital fund**

	2022-2023	2021-2022
	Kshs '000	Kshs '000
Capital Funds Brought Forward as at 1st July	5,945,219	5,926,912
Capital Funds received during the year	35,255	18,307
<b>Balance Carried Forward as at 30th June</b>	<b>5,980,474</b>	<b>5,945,219</b>

**37 Reconciliation of operating profit/(loss) to cash generated from/(used in) operations**

	2022-2023	2021-2022
	Kshs '000	Kshs '000
<b>Cash Flow from Operating Activities</b>		
Surplus/(Deficit)	(615,642)	99,257
<b>Adjustment for;</b>		
Depreciation and Amortisation	326,567	319,961
Gain on Sale of Fixed Assets	(10,470)	-
<b>Operating profit/(loss) before working capital changes</b>	<b>(299,545)</b>	<b>419,218</b>
<b>Working Capital adjustments</b>		
Decrease /(Increase) in Inventories	29,047	(23,663)
Decrease /(Increase) in Receivables-Exchange	240,135	(79,027)
Decrease /(Increase) in Receivables-Non-Exchange	(286,388)	5,328
Decrease /(Increase) in Prepayments	(11,530)	5,777
Increase/(Decrease) in Current liabilities	61,967	(84,162)
<b>Net changes in Working Capital</b>	<b>33,230</b>	<b>(175,747)</b>
<b>Cash generated from/(used in) operations</b>	<b>(266,314)</b>	<b>243,471</b>

**38 Revaluation reserve**

	2022-2023	2021-2022
	Kshs '000	Kshs '000
Balance Brought Forward as a 1st July	19,865,377	19,865,377
<b>Balance Carried Forward as at 30th June</b>	<b>19,865,377</b>	<b>19,865,377</b>

**39 Provisions for contingent liabilities**

(i) During the financial year under review, liability relating to actual deficit as per the report on actuarial valuation of the Kenya Agricultural and Livestock Research Organization Staff retirement benefits Scheme indicated a valuation figure of Kshs.274.653million as at 31st December 2020. It is worth noting that this figure keep on changing every year and could not be disclosed under trade payables as it would materially affect the working capital of the Institute.

**40 Events after the reporting period**

There were no material adjusting and non- adjusting events after the reporting period.

**41 Ultimate and holding entity**

KALRO is a Semi- Autonomous Government Agency under the Ministry of Agriculture and Livestock Development. Its ultimate parent is the Government of Kenya.

**42 Currency**

The financial statements are presented in Kenya Shillings (Kshs).




### APPENDIX I.PROGRESS ON FOLLOW UP OF AUDITOR RECOMMENDATIONS

The following is the summary of issues raised by the external auditor, and management comments that were provided to the auditor. We have nominated focal persons to resolve the various issues as shown below with the associated time frame within which we expect the issues to be resolved.


Reference No. on the external audit Report	Issue / Observations from Auditor	Management comments	Focal Point person to resolve the issue	Status: (Resolved / Not Resolved)	Timeframe:(Put a date when you expect the issue to be resolved)
1.1	Unaccounted for Cash	The concerned Officers were dismissed from service on 2nd February 2011 .To seek authority for write off	H-Finance	Partially Resolved	Dec-23
1.2	Dormant Accounts	KALRO obtained National Treasury Approval for closure of all dormant accounts and closed them	H-Finance	Resolved	Resolved
2	Receivables from exchange Transactions	To seek authority for write off.	H-Finance	Partially Resolved	Dec-23
3	Receivables from non-exchange Transactions	To seek authority for write off.	H-Finance	Partially Resolved	Dec-23
4.1	Unsupported Property Plant & Equipment without Title Deed	Follow up on acquisition of ownership documents ongoing	DG	Partially Resolved	Continuous
4.2	Inaccurate Depreciation and Amortisation charge	Re-calculation of the depreciation charged and amended the Financial Statements.	H-Finance	Resolved	Resolved
4.3	Unresolved land Matters	Follow up on acquisition of ownership documents ongoing	DG	Partially Resolved	Continuous
6	Unsupported trade and other payables balance	Details schedules detailing the make up provided	H-Finance	Resolved	Sep-23
7	Idle assets due to lack of funds	National Treasury engagement through the Parent Ministry for funding of the completion of Tea Research Factory through the Medium Term Sector Framework process continues	H-Finance	Partly Resolved	Continuous
8	Non operationalisation of ERP System	Continuous capacity building and retooling the staff is being conducted on day to day basis	H-Finance	Resolved	Continuous



Reference No. on the external audit Report	Issue / Observations from Auditor	Management comments	Focal Point person to resolve the issue	Status: (Resolved / Not Resolved)	Timeframe:(Put a date when you expect the issue to be resolved)
9	Non operationalisation of Agricultural Research Fund	KALRO undertook the development of the regulations for approval by the Ministry before being Gazetted	DG	Partly Resolved	Continuous
10	Anomalies in KALRO Act, 2013	The professional opinion from the Registrar of Companies is still being followed up	H-Legal	Not Resolved	Continuous
11	Ageing workforce and inadequate staffing	Implementation of the succession strategies commenced with the recent appointment of 224 new staff after approval to recruit was granted by the Public Service Commission.	H-Human Resources Management & Administration	Not Resolved	Continuous

  
Hon. Peter Werru Kinyua  
Chairman, KALRO BOM

Date: 21/09/2023

  
Dr. Eliud K. Kireger, OGW  
Director General

Date: 29/09/2023



## APPENDIX II: PROJECTS IMPLEMENTED BY KALRO

### Projects

Major projects implemented by KALRO and funded by development partners

Project title	Project Number	Donor	Period/ duration	Donor commitment (Kshs'000')	Separate donor reporting required as per the donor agreement (Yes/No)	Consolidated in these financial statements(Yes/No)
1 Kenya Climate-Smart Agriculture Project (KCSAP)	Project I.D. P154784	World Bank	60months	3,923,880	YES	YES
2 AGRIFI- Climate Smart Agricultural Productivity Project (CS-APP)	FED/2018/398-876	EU	60months	567,780	YES	YES
3 National Agricultural Value Chain Development Project (NAVCDP)	Project I.D. 176758	World Bank	60months	4,900,000	YES	YES

### Status of Projects completion

Project	Total project Cost'(Kshs'000')	Total expended to date (Kshs'000')	Completion % to date	Budget (Kshs'000')	Actual (Kshs'000')	Sources of funds
1 Kenya Climate-Smart Agriculture Project (KCSAP)	3,923,880	3,860,080	98%	952,980	1,056,906	WORLD BANK
2 AGRIFI- Climate Smart Agricultural Productivity Project (CS-APP)	738,115	479,704	65%	137,000	112,612	EU
3 National Agricultural Value Chain Development Project (NAVCDP)	4,900,000	63,800	1%	63,800	63,800	WORLD BANK

1. The project total cost is the total financing for both the Donor and counterpart(GoK)



**APPENDIX III: INTER-ENTITY TRANSFERS (Ksh'000')**

ENTITY NAME:		KALRO		
Break down of transfers from the State Department for Crop Development and Agricultural Research				
FY 2022/23				
a. Recurrent Grants				
		Bank Statement Date	Amount (Kshs'000')	FY to which the amounts relate
		Aug-22	359,583,333	2022/23
		Sep-22	359,583,333	2022/23
		Sep-22	359,583,333	2022/23
		Nov-22	359,583,333	2022/23
		Dec-22	359,583,333	2022/23
		Jan-23	359,583,333	2022/23
		Feb-23	359,583,333	2022/23
		Mar-23	341,837,500	2022/23
		Apr-23	270,854,166	2022/23
		Jun-23	341,837,500	2022/23
		Jun-23	368,456,250	2022/23
		<b>Total</b>	<b>3,840,068,749</b>	
b. Development Grants				
		Oct-22	8,500	2022/23
		Oct-22	10,000	2022/23
		Oct-22	2,500	2022/23
		Oct-22	10,000	2022/23
		Jun-23	2,500	2022/23
		Jun-23	10,000	2022/23
		Jun-23	5,000	2022/23
		Jun-23	1,500	2022/23
		<b>Total</b>	<b>50,000</b>	
c. Grants from EU				
		Nov-22	70,099	2022/23
			<b>70,099</b>	
		<b>Total</b>	<b>3,840,188,848</b>	

The above amounts have been communicated to and reconciled with the Parent Ministry



**APPENDIX IV: RECORDING OF TRANSFERS FROM OTHER GOVERNMENT ENTITIES (Ksh'000')**

Name of the MDA Transferring the funds	Date received as per bank statement	Nature	Total Amount	Statement of Financial Performance	Where Recorded/recognized				Total Transfers during the Year
					Capital Fund	Deferred Income	Receivables	Others	
Ministry of Agriculture and Livestock Development	Appendix III	Recurrent	4,140,069	3,840,069	-	-	300,000	-	3,840,069
	Appendix III	Development	50,000	50,000	-	-	-	-	50,000
	Appendix III	Grants	70,099	70,099	-	-	-	-	70,099
	Dec-22	Research Funds	5,094	5,094	-	-	-	-	5,094
Ministry of Education-National Research Fund(NRF)									
Agricultural Development Corporation (ADC)	Mar-23	Royalties	300	300	-	-	-	-	300
Kenya Seed Company	Aug-22	Royalties	1,089	1,089	-	-	-	-	1,089
Kenya Climate Smart Agriculture Project (KCSAP)	Apr-23	Royalties	4,750	4,750	-	-	-	-	4,750
	Apr-23	Royalties	1,513	1,513	-	-	-	-	1,513
	Sep-22	Research Funds	259,861	259,861	-	-	-	-	259,861
	Oct-22	Research Funds	99,999	99,999	-	-	-	-	99,999
	Oct-22	Research Funds	171,183	171,183	-	-	-	-	171,183
	Jan-23	Research Funds	256,926	256,926	-	-	-	-	256,926
	Apr-23	Research Funds	55,000	55,000	-	-	-	-	55,000
	Jun-23	Research Funds	2,094	2,094	-	-	-	-	2,094
National Agricultural Value Chain Development Project (NAVCDP)	Mar-23	Research Funds	275,642	275,642	-	275,642	-	-	63,800
	Jun-23	Research Funds	63,800		-	63,800	-	-	63,800
<b>Total</b>			<b>5,457,420</b>	<b>5,093,620</b>	<b>-</b>	<b>339,442</b>	<b>300,000</b>	<b>-</b>	<b>4,881,778</b>