



Agro-Industrialization Programme

Annual Budget Monitoring Report

Financial Year 2022/23

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Budget Monitoring and Accountability Unit
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ABBREVIATIONS

ACDP	Agriculture Cluster Development Project
ACF	Agriculture Credit Facility
ADB	African Development Bank
AEG	Agricultural Extension Grant
AGPP	Agriculture Geo Portal Platform
AIC	Agricultural Insurance Consortium
AnGRC	Animal Genetic Resource Centre
AQUAMIS	Aquaculture Management Information System
ARMC	Agricultural Regional Mechanization Centres
AVCDS	Agricultural Value Chain Development Strategy
AVCP	Agriculture Value Chain Development Project
BCTB	Black Coffee Twig Borer
BMAU	Budget Monitoring and Accountability Unit
BMPS	Best Aquaculture Practices
Bn	Billion
BoQs	Bills of Quantities
BoU	Bank of Uganda
CAADP	Comprehensive Africa Agriculture Development Program
CABI	Centre for Agriculture and Bioscience International
CAO	Chief Administrative Officer
CBPP	Contagious Bovine Pleuro Pneumonia
CDO	Cotton Development Organization
CF	Community Facilitator
CGS	Competitive Grant Scheme
CI	Credit Institution
COVID-19	Corona Virus Disease- 2019
CPDCP	Crop Pests and Diseases Control projects
CRB	Credit Reference Bureau
CRBD	Coffee Red Blister Disease
CSR	Community Social Responsibility
CTC	Cut Tear and Curl
CWDR	Coffee Wilt Disease Resistant
DAES	Department of Agricultural Extension and Skills Management
DAIED	Department of Agricultural Investment and Enterprise Development
DAO	District Agricultural Officer
DAP	Di-ammonium Phosphate
DARST	District Adaptive Research Support Teams
DBC	District Business Clinics
DDA	Dairy Development Authority
DFCS	Dairy Farmers Cooperatives
DIT	Directorate of Industrial Training
DLG	District Local Government
DLP	Defects Liability Period
DPOs	District Production Officers

DRMS	Domestic Revenue Mobilization Strategy
DVO	District Veterinary Officers
EAC	East African Community
EBQC	Elementary Basic Quality Control
EDF	European Development Fund
EDTS	Entebbe Dairy Training School
EIA	Environmental Impact Assessment
ESIA	Environmental Social Impact Assessment
ESMP	Environmental and Social Management Plans
EU	European Union
EVMG	Electronic Voucher Management Agency
FAO	Food and Agricultural Organisation
FAQ	Fair Average Quantity
FAW	Fall Armyworm
FFB	Fresh Fruit Bunches
FFS	Farmer Field Schools
FGDs	Focus Group Discussions
FMD	Foot and Mouth Disease
FO	Fisheries Officer
FOs	Farmer Organizations
FY	Financial Year
GAPS	Good Agricultural Practices
GDP	Gross Domestic Product
GIS	Geographical Information System
GoU	Government of Uganda
GPS	Global Positioning System
GRP	Goat Roll-Out Project
Ha	Hectare
HH	Households
HRD	Human Resource Development
HVAC	Heating Ventilation and Air conditioning
ICT	Information and communications technology
IDA	International Development Association
IDB	Islamic Development Bank
IFAD	International Fund for Agricultural Development
IFMS	Integrated Financial Management System
IPM	Integrated Pest Management
ISO	Irrigation Systems Operator
ISTA	International Seed Testing Association
IT	Information Technology
IVF	Invitro-fertilization
IWUA	Irrigation Water User Association
JICA	Japanese International Cooperation Agency
KCCA	Kampala Capital City Authority
KENAS	Kenya Accreditation services
kg	Kilogram

Km	Kilometer
KOPGT	Kalangala Oil Palm Growers Trust
LEGSP	Local Economic Growth Support project
LES	Livestock Experimental Station
LG	Local Government
LLG	Lower Local Government
LSD	Lumpy Skin Disease
M&E	Monitoring and Evaluation
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MCAL	Mutuma Commercial Agencies Limited
MCC	Milk Collection Centre
MDALGS	Ministries, Departments, Agencies and Local Government
MDAs	Ministries, Departments and Agencies
MEMD	Ministry of Energy and Mineral Development
MESSP	Meat Export Support Services
MFI	Micro-finance Institutions
MFPED	Ministry of Finance, Planning and Economic Development
MIS	Management Information System
Mn	Million
MOBIP	Market-Oriented and Environmentally Sustainable Beef Industry
MGLSD	Ministry of Gender, Labor and Social Development
MoH	Ministry of Health
MoICT	Ministry of Information and Communication Technology
MoLG	Ministry of Local Government
MoPS	Ministry of Public Service
MoU	Memorandum of Understanding
MPS	Ministerial Policy Statement
MSCL	Microfinance Support Centre Ltd
MSME	Micro, Small and Medium Enterprises
MT	Metric Tonne
MoTIC	Ministry of Trade, Industry and Cooperatives
MWE	Ministry of Water and Environment
NAADS	National Agricultural Advisory Services
NaCORI	National Coffee Research Institute
NaCRRI	National Crops Resources Research Institute
NADDEC	National Animal Disease Diagnostics and Epidemiology Centre
NAEP	National Agricultural Extension Policy
NAES	National Agricultural Extension Strategy
NaFIRRI	National Fisheries Resources Research Institute
NaFORRI	National Forestry Resources Research Institute
NAGRC&DB	National Animal Genetic Resources Center and Data Bank
NaLiRRI	National Livestock Resources Research Institute
NARL	National Agricultural Research Laboratories
NARO	National Agriculture Research Organization
NAROSEC	National Agriculture Research Organization Secretariat
NASARRI	National Semi-Arid Resources Research Institute

NBC	National Biosafety Committee
NCD	Newcastle Disease Vaccine
NCS	National Council of Science
NDA	National Drug Authority
NDAL	National Dairy Analytical Laboratory
NDP	National Development Plan
NEC	National Enterprise Corporation
NEMA	National Environment Management Authority
NFASS	National Food and Agricultural Statistics System
NIRA	National Identification and Registration Authority
NITA-U	National Information Technology Authority- Uganda
NLI	National Leadership Institute
NLR	National Laboratories Research
NML	National Metrological Laboratory
NMS	National Medical Store
NOPP	National Oil Palm Project
NPA	National Planning Authority
NPT	National Performance Trial fields
NWSC	National Water and Sewerage Corporation
OAG	Office of the Auditor General
OPBL	Oil Palm Buvuma Limited
OPGs	Oil Palm Growers
OWC	Operation Wealth Creation
PAH	Polycyclic Aromatic Hydrocarbons
PBS	Programme Budgeting System
PDC	Parish Development Committee
PDM	Parish Development Model
PDMIS	Parish Development Management Information System
PFI	Participating Financial Institution
PFM	Public Financial Management
PIAP	Programme Implementation Action Plan
PAPs	Project Affected Persons
PMG	Production and Marketing Grant
PMU	Programme Implementation Unit
POs	Producer Organizations
PPC	Portland Pozzolanic Cement
PPDA	Public Procurement and Disposal of Assets Authority
PPE	Personal Protective Equipment
PPP	Public-Private Partnership
PPR	Peste des petits ruminants
PRELNOR	Project for Restoration of Livelihoods in the Northern Region
PSP	Public Stand Posts
PWD	Persons with disabilities
Q	Quarter
RAP	Resettlement Action Plan
RCEO	Regional Coffee Extension Officer

RFSC	Regional Farm Service Centre
SACCO	Savings and Credit Cooperative Organization
SAGIP	Strategic Intervention for Animal Genetic Improvement Project
SLM	Sustainable Land Management
SMEs	Small and Medium Enterprises
SOFTE	Soroti Fruit Factory
SOP	Standard Operating Procedure
SRS	System Requirements Specification
SSI	Small Scale Irrigation
TC	Town Council
ToTs	Training of Trainers
TRICOT	Triadic Comparison of Technologies
UAIS	Uganda Agricultural Insurance Scheme
UBA	United Bank of Africa
UBOS	Uganda Bureau of Statistics
UCDA	Uganda Coffee Development Authority
UCF	Uganda Coffee Federation
UDB	Uganda Development Bank
UDC	Uganda Development Corporation
UEPB	Uganda Export Promotions Board
UETCL	Uganda Electricity Transmission Company Limited
Ug shs	Uganda Shillings
UGCEA	Uganda Ginners and Cotton Exports Association
UGIFT	Uganda Intergovernmental Fiscal Transfer Program
UHT	Ultra-High Temperature
UMFSNP	Uganda Multi-Sectoral Food Security and Nutrition Project
UNBS	Uganda National Bureau of Standards
UNRA	Uganda National Road Authority
UPDF	Uganda People's Defense Forces
URA	Uganda Revenue Authority
URSB	Uganda Registration Services Bureau
USA	United States of America
USADAF	United States African Development Foundation
USAID	United States Agency for International Development
USD	US Dollars
UWRS	Uganda Warehouse Receipt System Uganda Export Promotions Board
VAT	Value Added Tax
VFM	Value for Money
VRC	Variety Release Committee
VSLAs	Village Savings and Loans Associations
VT	Valley Tank
WRS	Warehouse Receipt System Services
WUA	Water Users' Association
ZARDI	Zonal Agricultural Research Development Institute

FOREWORD

With a strategic focus on the theme for Financial Year 2022/23, “Full Monetization of the Ugandan Economy through Commercial Agriculture, Industrialization, Expanding and Broadening Services, Digital Transformation and Market Access,” the Government of Uganda has focused on the allocation of resources to strategic interventions which reflect a strong drive and dedication towards sustainable economic growth for the people of Uganda.

The findings from this year’s annual monitoring exercise reveal commendable strides in the programme operations, however, the challenges we face in the pursuit of economic transformation are evident. Limited resources demand service delivery efficiency, thus the urgent need for strategic reforms if we are to reap the development dividends of our investments.

A recent project review in some programmes revealed ineffective usage of loans and counterpart funding. This raises concerns about potential funding losses and increased costs. I urge all the implementing agencies to ensure that adjustments in planning, financial monitoring and analysis, coupled with prudent management are undertaken immediately. Let us seize this moment to build a more prosperous and sustainable Uganda for generations to come.



Ramathan Ggoobi

Permanent Secretary/Secretary to the Treasury

EXECUTIVE SUMMARY

Starting Financial Year (FY) 2021/22, the Budget Monitoring and Accountability Unit commenced Programme-Based Monitoring to assess performance against targets and outcomes in the Programme Implementation Action Plans (PIAPs) and Ministerial Policy Statements (MPSs). This report presents findings from monitoring the Agro-Industrialization Programme for the budget execution period from 1st July 2022 to 30th June 2023. The Agro-Industrialization Programme's goal is to increase the commercialization and competitiveness of agricultural production and agro-processing. The programme has five sub-programmes, namely: a) Agricultural Production and Productivity; b) Storage, Agro-Processing and Value Addition; c) Agricultural Market Access and Competitiveness; d) Agricultural Financing; and e) Institutional Strengthening and Coordination.

Overall Programme Performance

Financial performance

The approved budget for the Agro-Industrialization Programme for the FY 2022/23, inclusive of arrears and external financing, was Ug shs 1,450.026 billion (bn), of which Ug shs 1,143.001bn (78.8%) was warranted and Ug shs 1,039.710bn (91% of warrant) spent by 30th June 2023. This was a good release and expenditure performance. The programme's underperformance was mainly under the external financing component, with only 57.2% of the budget released (Ug shs 311.917bn) and 68.6% of the releases spent (Ug shs. 213.955bn).

The Storage, Agro-Processing and Value Addition Sub-programme had the highest budget share. This represents a fundamental shift in the Government's approach to financing the Agro-Industrialisation Programme compared to FY 2020/21 when more than 90% of the budget was allocated to the Agricultural Production and Productivity Sub-programme.

Performance highlights

Overall performance

The overall performance of the Agro-Industrialization Programme was good, rated at 82.6%. The good performance in commercializing agriculture was a result of: i) additional investments in the production of strategic commodities under the food and animal feed security program and the Parish Development Model (PDM), enhancing value addition and agro-processing and increasing farmers' access to water for production and agricultural financing; ii) completion and operationalization of multi-year investments, more especially the research and breeding infrastructure, iii) increased availability of external financing, off-budget support and collaborative effort with private sector players.

Outcome performance

The outcome performance of the programme was good, indicating that the multi-year and annual interventions that were implemented were relevant for achieving the goal of agro-industrialisation. There was increased export value of processed agricultural commodities,

especially coffee, tea, fish and maize; there was reduced imports of vegetable products, animal, beverages, fats and oils and the proportion of food-secure households increased. Consequently, the agricultural sector growth rate improved from 4.3% in 2020/21 to 5.0% in 2022/23.

Output performance

Agricultural Production and Productivity Sub-programme

The good progress under this sub-programme was attributable to the: innovative research technologies generated and disseminated under the National Agricultural Research Organisation (NARO); increased access to inputs under the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) Food and Animal Feed Security Programme, National Agricultural Advisory Services (NAADS) and the PDM; and increased access to water for production. Performance was positively facilitated by the increased research, breeding and administrative infrastructure at the NARO and the National Animal Genetic Resource Centre and Data Bank (NAGRC&DB).

Agricultural research, breeding and appropriate technology development

By 30th June 2023, good progress was made in generating and developing improved technologies and varieties for strategic commodities including coffee, cocoa, irish potato, banana tissue culture, anti-tick vaccines, purple tea, oil palm, maize, rice, capture fisheries, aquaculture, legumes and value-added products. However, research results were inconclusive in some cases due to drought, lack of appropriate agro-machinery and laboratories, inadequate vehicles and equipment, incomplete research infrastructure, migration of technical staff to universities, underfunding and repurposing of budgets to the food and animal feed security program. Most research work was funded through off-budget support and non-tax revenue.

The livestock breeding and multiplication performance on NAGRC&DB farms was low due to the following key challenges: repurposing of funds from planned activities to the food and animal feed production; inadequate access to improved animal breeds for breeding at NAGRC&DB farms and by farmers; land wrangles and encroachment; inadequate pastures and water for production; donations for socio-corporate responsibility and festive seasons and deaths due to pests and diseases and old age of animals.

Following the Cabinet's adoption of the (MAAIF proposal for strategic interventions to upscale food and animal feed production in the country, Ug shs 110.206bn was repurposed from the approved budgets of participating agencies and released to produce foundation seed. Production of maize, sorghum, soybean and silage increased. However, yields were poor due to high incidences of crop failure due to unreliable rains and the prevalence of pests and diseases. There were high post-harvest losses of the harvested crops (over 30%) due to lack of labour and machinery to harvest the crop in time, and no proper drying yards and storage space.

Agricultural extension system

Agricultural production was constrained by inadequate access by farmers to extension services. By 30th June 2023, staffing of extension workers at the national level was low at 4,310 (44.6%) compared to the approved staffing norms of 9,665 leaving 5,355 (55.4 %) positions vacant. On average, the extension worker-to-farmer ratio was one extension worker to 1,800 households (1: 1,800), higher than the recommended ratio of one extension worker to 500 households (1:500) in

Uganda. The investments under the PDM could not be monitored due to inadequate extension workers at all levels of Government. This posed a risk of misuse of funds by farmers due to the lack of a monitoring and supervision mechanism.

Implementation of the Parish Development Model

During the FY2022/23 Ug shs 1,061bn was budgeted for PDM activities for the financial inclusion pillar which was all released to the district local governments (DLGs) by 30th June 2023. A total of Ug shs 1,058.125bn was disbursed to 10,585 Savings and Credit Cooperatives (SACCOs). However, the disbursement to the SACCOS was below the release due to nine SACCOs that were reported to be none-existent.

All SACCOs had received at least Ug shs 100 million and disbursements to farmers were at varying stages. The pace of fund disbursement to farmers for enterprise development was low due to some constraints including: inadequate profiling of households by the Uganda Bureau of Statistics (UBOS) at an average of 30% of the total subsistence households in every parish; this affected the identification of poor households and slowed disbursement of funds.

Many cases of misuse of funds were reported due to a lack of supervision and follow-up of the programme. Most parishes and some districts lacked information and communication technology (ICT) gadgets to facilitate data entry and processing of loans on the system. There was a risk of inputting the wrong categories of beneficiaries in the Parish Development Management Information System (PDMIS) owing to the lack of transparency and proper reporting on the transactions and beneficiaries.

Mechanization, access and use of water for production

By 30th June 2023, good progress was registered in farm mechanization and farmers' access to water for production. The MAAIF acquired 724 tractors and matching implements, of which 450 were walking tractors and one complete set of heavy earth-moving equipment to support and increase the area under cultivation from the current 35% to 60%. Construction of the three regional mechanization centres at Buwama, Agwata and Bungokho was at 65%.

There was a significant expansion of small, medium and large-scale irrigation schemes including: civil works for the Acomai Irrigation Scheme (40%); the functionality of the Doho II Irrigation Scheme in Butaleja District was estimated at 95%, while the Ngenge Irrigation Scheme in Kween District was 100% operational; Wadelai Irrigation Scheme was at 90% completion, and Kabuyanda had just commenced mobilization. The main challenges were delayed payment of project-affected persons (PAPs) and securing the right of way (RoW), and lack of maintenance budgets for the schemes.

Storage, Agro-Processing and Value Addition Sub-programme

Significant progress was attained in the establishment of storage, processing and value-addition facilities by MAAIF, National Agricultural Advisory Services (NAADS), Uganda Coffee Development Authority (UCDA, Uganda Development Corporation (UDC), and the Ministry of Local Government (MoLG). However, the functionality of the established facilities had not been realized fully due to key constraints including lack of power connectivity, inadequate raw materials, cooperative managers and beneficiaries who lacked technical expertise of how to

operate the machines, poor planning for operationalisation of the facilities and missing parts in some of the facilities. The delays in the completion of the facilities was attributed to weak contract management; and low contractor capacity to undertake multiple contracts.

For example, NAADS procured 23 sets of milk coolers (3,000 litres) and matching diesel generators, however delivery and installation was not done. Under the Agri-led intervention, a total of 12 milk coolers and platforms established in FY2021/22 but some were not functional and/or operating at below installed capacity. Additionally, with funding from the Local Economic Growth Support (LEGS) project a total of six milk collection and bulking centres were under construction in the districts Gomba, Nakaseke, Kumi and Kyenjojo, however, the quality and progress of civil works for Nakaseke and Kyenjojo districts was found to be poor at the time of monitoring in August 2023.

A total of 358 value addition and storage facilities (68 storage, and 290 both storage and value addition) were planned to be completed during the FY2022/23 under the Agriculture Cluster Development Project (ACDP) through matching grants. Out of the planned 290 value addition and storage facilities, 139 (48%) were completed and operational; 75 (26%) were completed but not operational and 76 (26%) were under construction. The completed storage facilities provided a storage capacity of 54,579MT. The established facilities were for maize, beans, cassava, coffee and rice.

Agricultural Market Access and Competitiveness Sub-programme

Standards development and quality assurance

Fair progress was attained in the development of standards and quality assurance along the agricultural value chain. Civil works for the National Metrology Laboratory at the Uganda National Bureau of Standards (UNBS) headquarters were at 96% physical progress against a time progress of 100%. A total of 44 food and agriculture standards were developed and reviewed by the UNBS.

By 30th June 2023, the rehabilitation of the National Dairy Analytical Laboratory (NDAL) was completed and functional. The Dairy Development Authority (DDA) inspected a total of 965 milk handling premises, undertook 17 enforcement operations, analysed 1,776 milk and dairy product samples; conducted ten market surveillance activities, and registered 177 premises, equipment, exporters, and importers. The UCDA inspected and certified 6,292,004 bags (60 kgs) for export (Arabica – 905,161 bags and Robusta – 5,386,843 bags).

Market infrastructure improved

The intervention for improved market infrastructure performed fairly with most of the monitored projects still under construction. For example, at the Kyegegwa Business Centre in Kyegegwa Town Council, the 24-stall market was completed in May 2023 but was yet to be commissioned. Fencing of the cattle holding facility and construction of the loading bay in Rwensaasi Cattle Market in Kyegegwa District was ongoing at 80% physical progress, Agule Livestock Market in Kumi District was at 50% completion, Maddu Market Shed in Gomba District was at 2% construction. The progress of works for the Katalekamese Market Shed in Nakaseke District was estimated at 40%.

Civil works for the rehabilitation of the Sanga Slaughter Facility in Sanga Town Council, Kiruhura District was ongoing at 75% physical progress (phase I). Physical progress of the Phase two (bio-gas unit, incinerator, machinery workshop, sludge drier, constructed wetland) was at 20%.

The Market-Oriented and Environmentally Sustainable Beef Industry (MOBIP) provided small-scale beef batch processing equipment to Uganda Small Scale Industries Association (USSIA)–Mbarara and production of beef sausages, pancakes, and minced meat was underway but at a very low scale. The facility processed 90kg of beef and products were undergoing market testing and validation.

Agricultural Financing Sub-programme

Funds for private-sector investment

There was increased access to agricultural financing by farmers from the Agricultural Credit Facility (ACF), Agricultural Insurance Scheme and UDC, among other instruments. A total of 1,135 loan facilities were given out by participating financial institutions (PFIs) valued at Ug shs 123.024bn and the Government of Uganda (GoU) contribution was Ug shs 61.622bn. A total of 285 loan facilities valued at Ug shs 117.431bn were given to individual borrowers, whereas facilities to block allocations were 850, valued at Ug shs 5.476bn.

Analysis of the loans to individual borrowers indicated that 81.3% of the loan value was for the lower level of the agriculture value chain (on-farm activities and grain trade), whereas the higher components of the agriculture value chain (post-harvest management and agro-processing constituted 18.7%. The central and western regions had the highest share by value of the total loans disbursed to individuals at 74% and 18% respectively, whereas the northern region had the lowest share of the value of total loans disbursed at 3%. The uptake of the ACF was still low due to inadequate awareness about the product and banks not being readily accessible in rural areas.

The UDC invested in eight companies/entities involved in agro-processing and value addition. The total investment was Ug shs 326.306bn in the form of equity, shareholder loans and grants. A total of 298,488 farmers were enrolled on the Agriculture Insurance Scheme and agricultural property worth Ug shs 238.148bn was insured. The subsidy paid by the Government for participating farmers during FY2022/23 was Ug shs 9.264bn which was way above the annual budget of Ug shs 5.0bn. The scheme was largely embraced by small holder farmers and farmers in disaster-prone districts at 99.9% whereas commercial farmers were at 0.1%. By 30th June, 2023 Ug shs 2.085bn had been paid out as claims to various subscribers. The claims were paid on grounds of loss of crops and livestock due to diseases, drought, fire, excessive rain, floods, and hail storms among others.

Overall Challenges

1. Low preparedness to implement development projects and poor contract management thus leading to cost overruns and stalled projects.

2. Low achievement of planned outputs and targets due to re-purposing of funds to other priorities in the middle of the financial year, and lack of funds to compensate Project Affected Persons (PAPs) for infrastructure-related projects.
3. Limited coordination, supervision and poor planning between MAAIF and the Ministry of Water and Environment (MWE) to undertake the implementation of shared water for production interventions.
4. Poor implementation and supervision of the PDM and other agricultural interventions due to inadequate extension services.
5. Low functionality of established value addition facilities especially under the ACDP due to lack of three-phase power.

Overall Recommendations

1. The MFPED should not disburse funds to projects that are not investment-ready. The MAAIF should enhance the capacity of technical staff in contract management.
2. The Ministry of Finance, Planning and Economic Development (MFPED) should strengthen budget credibility to ensure that funds are disbursed against the approved work plans, and the multi-year plan for infrastructure projects, including compensation of PAPs.
3. The MAAIF and MWE should improve joint planning, coordination, supervision and implementation of water for production interventions.
4. The MFPED and MAAIF should prioritize recruitment and equipping extension workers to oversee PDM implementation; special attention should be given to newly created administrative units.
5. The MAAIF should strengthen inter-programme synergies with the Ministry of Energy and Mineral Development (MEMD) to ensure that planning for power investments is done at project inception.

CHAPTER 1: INTRODUCTION

1.1 Background

The mission of the Ministry of Finance, Planning and Economic Development is, “*To formulate sound economic policies, maximize revenue mobilisation, and ensure efficient allocation and accountability for public resources so as to achieve the most rapid and sustainable economic growth and development.*”

The MFPED through its Budget Monitoring and Accountability Unit (BMAU) tracks the implementation of programmes/projects by observing how values of different financial and physical indicators change over time against stated goals and indicators. The BMAU work is aligned with budget execution, accountability, and service delivery.

Commencing FY 2021/22, the BMAU began undertaking Programme-Based Monitoring to assess performance against targets and outcomes in the Programme Implementation Action Plans (PIAPs)/Ministerial Policy Statements. Semi-annual and annual field monitoring of Government programmes and projects was undertaken to verify receipt and expenditure of funds by the user entities and beneficiaries, the outputs and intermediate outcomes achieved, and the level of gender and equity compliance in the budget execution processes. The monitoring also reviewed the level of cohesion between sub-programmes and noted implementation challenges.

The monitoring covered the following Programmes: Agro-Industrialization; Community Mobilisation and Mindset Change; Digital Transformation; Human Capital Development; Innovation, Technology Development and Transfer; Integrated Transport Infrastructure and Services; Manufacturing; Mineral Development; Natural Resources, Environment, Climate Change, Land and Water Management; Public Sector Transformation; Private Sector Development; Sustainable Development of Petroleum Resources; and Sustainable Energy Development.

This Annual Monitoring Report presents findings from monitoring the Agro-Industrialization Programme for the budget execution period from 1st July 2022 to 30th June 2023.

1.2 Programme Goal and Objectives

The Goal of the Agro-Industrialization Programme is “*To increase commercialization and competitiveness of agricultural production and agro-processing*”.

The programme objectives are to:

- 1) Increase agricultural production and productivity;
- 2) Improve post-harvest handling and storage;
- 3) Improve agro-processing and value addition;
- 4) Increase market access and competitiveness of agricultural products in domestic and international markets;
- 5) Increase the mobilization and equitable access and utilization of agricultural finance; and
- 6) Strengthen the institutional coordination for improved service delivery.

The Government’s objectives and interventions aimed at achieving the theme for the Budget for FY 2022/2023, which was “*Full Monetization of Uganda’s Economy through Commercial Agriculture, Industrialization, Expanding and Broadening Services, Digital Transformation and Market Access*”. The Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) adopted the Agricultural Value Chain Development Strategy (AVCDS) as an implementation mechanism for commercializing agriculture.

1.3 Sub-programmes

The Agro-Industrialization Programme is implemented through five sub-programmes, namely:

- i) Agricultural Production and Productivity
- ii) Storage, Agro-processing and Value Addition
- iii) Agricultural Market Access and Competitiveness
- iv) Agricultural Financing
- v) Institutional Strengthening and Coordination

1.4 Programme Outcomes

The key results to be achieved over the five-year period (FY 2020/21 to FY 2024/25) are¹:

- i) Increased total export value of processed agricultural commodities; coffee, tea, fish, dairy, meat, and maize (and its products) from; USD 0.935bn to USD 2.7bn;
- ii) Reduced total value of imported cereals and cereal preparations, vegetable fats and oils, and sugar preparations from USD 931.1 million to USD 500 million;
- iii) Increased agricultural sector growth rate from 3.8 percent to 6.0 percent;
- iv) Increased labour productivity in the agro-industrial value chain (value added, USD per worker) from USD 2,212 to USD 3,114;
- v) Increased number of jobs created per annum in agro-industry along the value chain by 180,000;
- vi) Reduced percentage of households dependent on subsistence agriculture as a main source of livelihood from 68.9 percent to 55 percent; and
- vii) Increased proportion of households that are food secure from 60 percent to 90 percent.

¹ Third National Development Plan (NDPIII)

CHAPTER 2: METHODOLOGY

2.1 Scope

The monitoring report is based on selected interventions and projects in the Agro-Industrialisation Programme that were planned and funded during FY 2022/23. The interventions that were reviewed under each sub-programme are listed in (*ANNEX 1: Planned interventions in the PIAP that were monitored for FY 2022/23*) and summarized in Table 2.1. A total of 17 (77.3%) of the interventions in the Programme Implementation Action Plan (PIAP) were monitored. Three interventions were not assessed due to two key reasons: a) they were not planned and budgeted for implementation in 2022/23, and b) lack of credible data.

Table 2.1: Number of Interventions monitored during FY 2022/23

SN	Sub-programme	Total interventions in PIAP	No. of interventions PIAP monitored
1	Agricultural Production and Productivity	11	8
2	Storage, Agro-processing and Value Addition	4	3
3	Agricultural Market Access and Competitiveness	3	3
4	Agricultural Financing	3	2
5	Institutional Strengthening and Collaboration	1	1
	Total Interventions	22	17
	% of Total Interventions monitored		77.3%

The selection of projects and interventions to monitor was based on the following criteria:

1. Significant contribution to the programme objectives and national priorities.
2. Level of investment and interventions that had large volumes of funds allocated were prioritized.
3. Multiyear investments or rolled-over projects that were still under implementation in the current year.
4. Projects that were considered at risk, mostly due to low absorption of external financing.

2.2 Approach and Sampling Methods

Monitoring involved analysis and tracking of inputs, activities, processes, outputs and outcomes as reviewed in Budget Speech 2022/23, the PIAP, MPSs, and annual work plans, and performance reports of Ministries, Departments and Agencies (MDAs) and Local Governments (LGs).

Both qualitative and quantitative methods were used in the monitoring exercise. The physical performance of outputs and intermediate outcomes were assessed by monitoring a range of indicators. Purposive sampling was used in selecting outputs under the interventions from the PIAPs, MPS, and progress reports of the respective MDALGs for monitoring.

To aid in mapping PIAP interventions against annual planned targets stated in the Vote MPS and quarterly work plans, a multi-stage sampling was undertaken at four levels: i) Sub-programmes ii) Sub-sub-programmes iii) Local governments, and iv) Project beneficiaries. The selection of districts and facilities considered regional representativeness.

2.3 Data Collection and Analysis

Data collection

The MDAs and entities that were responsible for the realization of the agro-industrialization agenda were consulted and participated in the provision of data. These included the Bank of Uganda (BoU), the Ministry of Finance, Planning and Economic Development (MFPED), Cotton Development Organization (CDO), Dairy Development Authority (DDA), LGs and the MAAIF.

The others were: The Ministry of Local Government (MoLG), Uganda Development Corporation (UDC), Agro Consortium Ltd, Ministry of Water and Environment (MWE), National Agricultural Advisory Services (NAADS) Secretariat, National Animal Genetic Resource Centre and Data Bank (NAGRC&DB), National Agricultural Research Organization (NARO) and Uganda Coffee Development Authority (UCDA). Annex 2 provides details of the institutions and LGs that were sampled (

ANNEX 2: Districts and Entities monitored for Annual FY 2022-2023).

The monitoring team employed both primary and secondary data collection methods. Secondary data collection methods included:

- i) Literature review from key policy documents including, MPS FY 2022/23; National and Programme Budget Framework Papers; PIAPs, third National Development Plan (NDP III), quarterly progress reports and work plans for the respective implementing agencies, quarterly performance reports, Budget Speech, Public Investment Plans, Approved Estimates of Revenue and Expenditure, project reports, strategic plans, policy documents, aide memoires and evaluation reports for selected programmes/projects.
- ii) Review and analysis of data from the Integrated Financial Management System (IFMS); Programme Budgeting System (PBS); quarterly performance reports and bank statements from some implementing agencies.

Primary data collection methods on the other hand included:

- i) Consultations and key informant interviews with Institutional heads, project/intervention managers, household heads, and service beneficiaries at various implementation levels. focused group discussions (FGDs) were also held in instances of group beneficiaries.
- ii) Field visits to various districts, for primary data collection, observation and photography.
- iii) Call-backs in some cases were made to triangulate information.

2.4 Data Analysis

The data was analyzed using both qualitative and quantitative approaches. Qualitative data was examined and classified in terms of constructs, themes or patterns to explain events among the beneficiaries (interpretation analysis) and reflective analysis where the monitoring teams provided an objective interpretation of the field events. Quantitative data on the other hand was analyzed using advanced excel tools that aided interpretation.

Comparative analyses were done using percentages, averages, and cross-tabulations of the outputs/interventions; intermediate outcome indicators and the overall scores. The performance of outputs/interventions and intermediate outcome indicators was rated in percentages according to the level of achievement against the annual targets. The sub-programme score was determined as the weighted aggregate of the average percentage ratings for the output/intermediate outcomes in the ratio of 65%:35% respectively.

The overall programme performance is an average of individual sub-programme scores assessed. The performance of the programme and sub-programme was rated based on the criterion in Table 2.2. Based on the rating assigned, a BMAU colour-coded system was used to alert the policy makers and implementers on whether the interventions were achieved or had very good performance (green), or good performance (yellow), fair performance (light gold) and poor performance (red).

Table 2.2: Assessment guide to measure performance in FY 2022/23

Score	Performance Rating	Comment
-------	--------------------	---------

90% and above	Green	Very Good (Achieved at least 90% of outputs and outcomes)
70%-89%	Yellow	Good (Achieved at least 70% of outputs and outcomes)
50%- 69%	Light Gold	Fair (Achieved at least 50% of outputs and outcomes)
49% and below	Red	Poor (Achieved below 50% of outputs and outcomes)

Source: Author's Compilation

Ethical considerations

Entry meetings were undertaken with the Permanent Secretaries/and Accounting Officers or delegated officers upon commencement of the monitoring exercises. Consent was sought from all respondents including programme or project beneficiaries. All information obtained during the budget monitoring exercise was treated with a high degree of confidentiality and only used in policy making and improving service delivery.

Risk analysis

An attempt was made to qualitatively assess the risks to output delivery, issues that could result in financial loss and poor service delivery when the various projects are implemented.

2.4 Limitations

1. Change in the interventions and indicator framework in the Agro-Industrialization Programme PIAP in the middle of the financial year brought inconsistency in the monitoring processes and reporting in the year
2. Scaling down some planned areas of monitoring to accommodate urgent requests by MFPED Top Leadership to monitor comprehensively and report on specific problem projects.

2.5 Structure of the Report

The report is structured into four chapters. These are: Chapter 1 - Introduction; Chapter 2 - Methodology; Chapter 3 - Programme Performance, and Chapter 4 - Conclusion and Recommendations.

CHAPTER 3: PROGRAMME PERFORMANCE

3.1 Overall Programme Performance

3.1.1 Financial performance

Overall financial performance

The appropriated budget for the Agro-Industrialization Programme for the FY 2022/23, inclusive of arrears and external financing, was Ug shs 1,449.811 billion (bn). The revised programme budget was 1,492.130bn inclusive of a supplementary amounting to Ug shs 42.319bn. By 30th June 2023, Ug shs 1,183.967bn was warranted (79.3%) and Ug shs 1,080.363bn spent (91.2% of the warrant). The budget release and expenditure performance for the programme was good and very good, respectively. The lower warrant/disbursement was due to the low absorption of external financing.

External financing

External financing in the programme supports interventions in three votes: MAAIF, MoLG and MWE. The external financing budget for the programme was Ug shs 571.598bn representing 38.3% of the revised programme budget. By 30th June 2023, Ug shs 311.917bn was released and Ug shs 213.955bn spent (Table 3.1). The release for the external financing for both MAAIF and MWE was poor, whereas expenditure performance for MWE was poor. Key challenges were: delayed verification and compensation of project-affected persons (PAPs) for infrastructure-related projects, delayed completion of environment, and social impact assessments, detailed scheme designs, and procurement of contractors and consultants.

Table 3.1: Performance of External Financing for the Agro-Industrialization Programme as at 30th June 2023

Ministry	Budget (Ug shs bn)	Release (Ug shs bn)	Spent (Ug shs bn)	% of budget released	% of release spent
MAAIF	389.763	176.965	134.637	45.4	76.1
MoLG	60.625	75.411	73.191	124.4	97.1
MWE	121.21	59.541	6.127	49.1	10.3
Total	571.598	311.917	213.955	54.6	68.6

Source: Approved Budget FY22/23; PBS Q4 Reports

Financial performance by sub-programme

The analysis to assess the use of the appropriated budget by the five sub-programmes excluded external financing due to data unavailability. The Agro-Industrialization Programme budget excluding external financing inclusive of Ug shs 563.841bn from the Uganda Development Corporation (UDC), Agriculture Credit Facility (ACF), and Uganda Agriculture Insurance Scheme (UAIS) was Ug shs 1,436.291bn. By 30th June 2023, Ug shs 1,282.208bn (89.3%) was released and Ug shs 1,094.611bn (85.4% of the release) spent (Table 3.2).

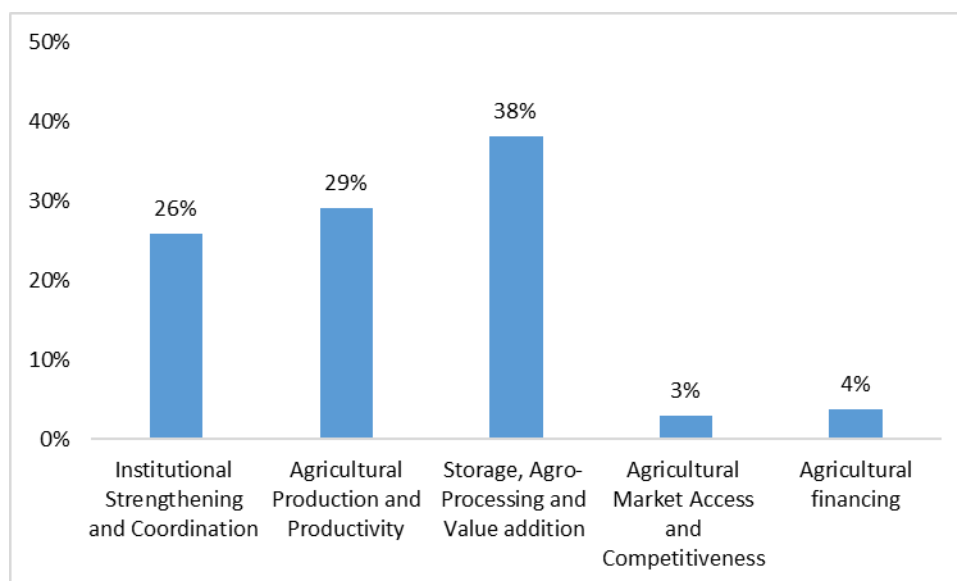
Table 3.2: Financial Performance of the Agro-Industrialization Programme as at 30th June 2023

Sub-programme	Budget (Ug shs bn)	Release (Ug shs bn)	Spent (Ug shs bn)	% of budget released	% of release spent
01 Institutional Strengthening and Coordination	371.79	353.213	296.172	95.0	83.9
02 Agricultural Production and Productivity	418.357	352.60	348.407	84.3	98.8
03 Storage, Agro-Processing and Value addition	549.128	486.988	367.318	88.7	75.4
04 Agricultural Market Access and Competitiveness	42.265	34.656	33.963	82.0	98.0
05 Agricultural Financing	54.750	54.75	48.75	100.0	89.0
Total	1,436.291	1,282.207	1,094.611	89.3	85.4

Source: IFMS, Approved Estimates of Revenue and Expenditure; Field Findings

The Storage, Agro-Processing and Value Addition Sub-programme had the highest budget share at 39%, whereas the Agricultural Market Access and Competitiveness Sub-programme had the lowest budget share (Figure 3.1). This represents a fundamental shift in the Government’s approach to financing the Agro-Industrialization Programme compared to FY 2020/21 when more than 90% of the budget was allocated to the Agricultural Production and Productivity Sub-programme. Increased production from strategic investments for commercialisation has necessitated the government to invest more in value addition and agro-processing to handle the increased volumes of produce.

Figure 3.1: Percentage share of Agro-Industrialization Programme budget excluding external financing



Source: Field Findings

For the full realization of the Agro-Industrialization Programme outcomes, there is a need for the government to continue prioritizing the upper levels of the agriculture value chain, more especially market access and competitiveness.

3.1.2 Outcome performance

The Government aims to enhance outcomes in seven key result areas that are outlined in the programme outcomes for the NDPIII period 2020/21 to 2024/25. Due to data availability and integrity issues, five out of the seven key result areas were analyzed:

1. Increased total export value of processed agricultural commodities; coffee, tea, fish, dairy, meat, and maize (and its products) from; USD 0.935bn (2020/21) to USD 2.7bn (2024/25);
2. Reduced total value of imported cereals and cereal preparations, vegetable fats and oils, and sugar preparations from USD 931.1 million to USD 500 million;
3. Increased agricultural sector growth rate from 3.8 percent to 6.0 percent;
4. Reduced percentage of households dependent on subsistence agriculture as a main source of livelihood from 68.9 percent to 55 percent; and
5. Increased proportion of households that are food secure from 60 percent to 90 percent.

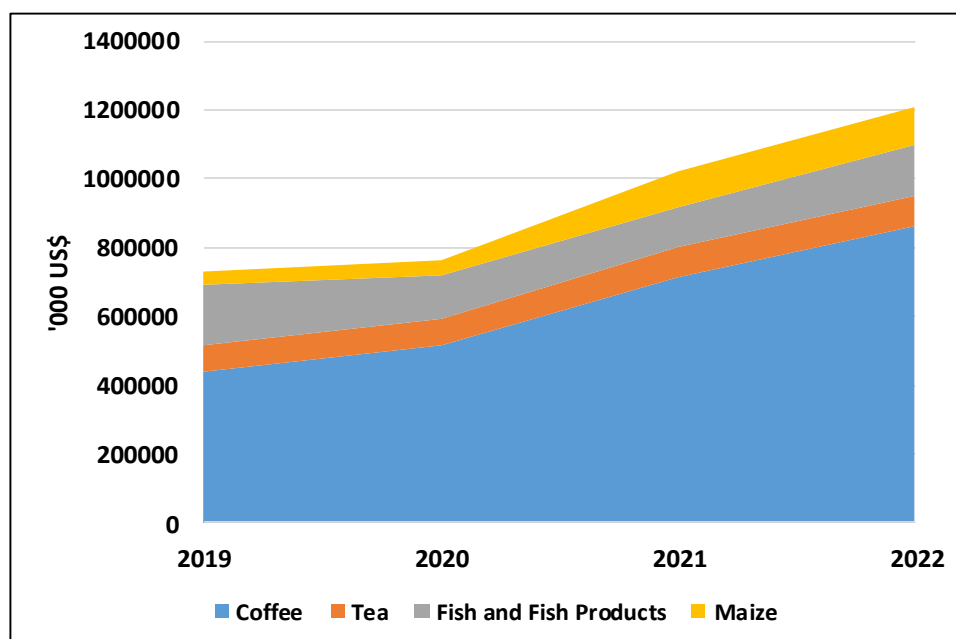
The performance of all the five outcome indicators was good, indicating that the interventions that were implemented during FY 2022/23 were relevant for achieving the goals and objectives of the Agro-Industrialization Programme. Detailed performance is given hereafter:

Increased total export value of processed agricultural commodities; coffee, tea, fish, dairy, meat, and maize (and its products)

There was very good progress in this outcome indicator with the export value of processed coffee, tea, fish and maize rising from USD 0.73bn in 2019 to USD 1.213 in 2022². The 2024/25 target is likely to be achieved after all the other commodities are factored in. Coffee was the most exported commodity (Figure 3.2), with its revenues increasing by 55.4% from USD 554.9 million in FY 2020/21 to USD 862.2 million in FY 2021/22. Coffee contributed 18.7% of the total export earnings in the first half of FY 2022/23 making Uganda to be among the top eight coffee exporting countries in the world.

² Uganda Bureau of Statistics, Bank of Uganda, MFPEP Background to the Budget 2023/24.

Figure 3.2: Export value of processed strategic commodities by 2022



*Source: Uganda Bureau of Statistics, Bank of Uganda, MFPED
Background to the Budget 2023/24*

Reduced total value of imported cereals and cereal preparations, vegetable fats and oils, and sugar preparations from USD 931.1 million to USD 500 million

The value of formal merchandise imports decreased by 15% from USD 8,324.39 million in FY 2020/21 to USD 7,083.96 million by 30th December 2022. Importation of vegetable products, animals, beverages, fats and oils reduced by 11.32% (Background to the Budget 2023/24).

Increased agricultural sector growth rate from 3.8 percent to 6.0 percent

The agricultural sector registered growth from 4.3% in 2020/21 to 5.0% in 2022/23, indicating a likelihood of achieving 6% growth by 2024/25. The fastest-growing sub-sectors were livestock and fishing while cash crops and Agricultural Support Services were the least-growing sub-sectors (Table 3.3).

Table 3.3: Real GDP Growth Rate for Agriculture during FY 2020/21 to FY 2022/23 (%)

	2020/21	2021/22	2022/23
GDP at market prices	3.5	4.6	5.3
Agriculture, Forestry and Fishing	4.3	4.2	5.0
Cash crops	12.5	5.7	2.1
Food crops	4.1	3.5	4.7
Livestock	7.8	8.3	8.9
Agricultural Support Services	2.1	4.5	2.2
Forestry	2.9	3.2	3.1
Fisheries	-8.8	0.3	7.7

Source: MFPED BTTB 2022/23

Growth in agriculture and associated services was mainly attributed to the Government initiatives to support farmers and the private sector to commercialize; increased regional trade; good weather conditions; removal of the ban on fishing in some parts of the country; enhanced investment in existing and emerging value chains such as dairy, coffee, tea, maize fish and beef; and the deliberate strategy to generate export revenue through production of 20 million 60kg bags by 2025³.

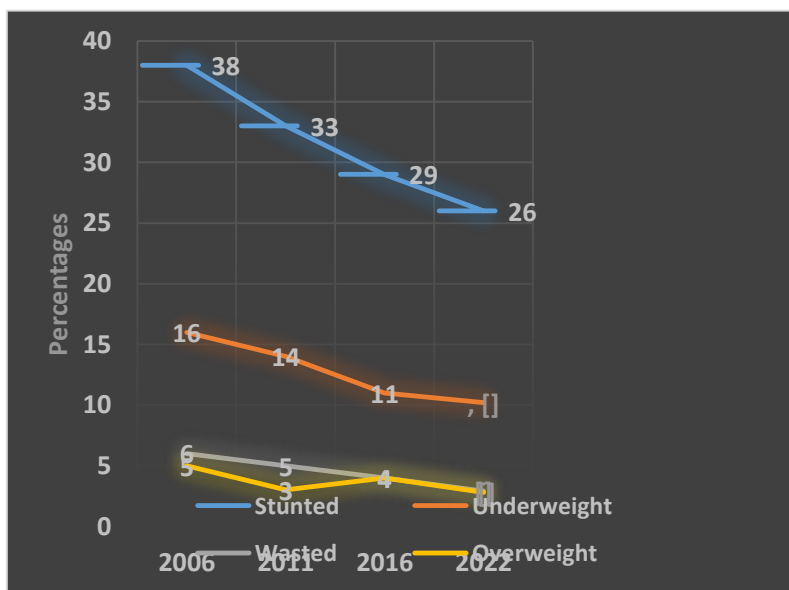
Reduced percentage of households dependent on subsistence agriculture as a main source of livelihood from 68.9 percent to 55 percent

Fair progress was made in reducing the proportion of subsistence households, although updated information was not available. According to the Annual Agricultural Survey 2020⁴, 75.9% of households were dependent on agriculture and 24.1% were engaged in off-farm income-generating activities. Based on data from the Uganda Bureau of Statistics (UBOS), about 39% of the households in agriculture operate on a subsistence level, consuming more than 50% of the food crops produced.

Increased proportion of households that are food secure from 60 percent to 90 percent

The MAAIF outcome data shows that the percentage of food-secure households improved from 69% in 2018 to 87.4% by 30th June 2023. This information is collaborated by the 2022 Uganda Demographic Health Survey (UDHS) which indicated reducing trends for stunting, under-weight and wasted conditions among children aged 6 months to 59 months since 2006 (Figure 3.3).

Figure 3.3: Trends in nutritional status of children aged 6 to 59 months by 2022 (%)



Source: Uganda Demographic Health Survey 2022

³ The National Coffee Act 2021.

⁴ UBOS, 2022. Annual Agriculture Survey (AAS) 2020.

3.1.3 Overall performance

The performance of the Agro-Industrialisation Programme in FY 2022/23 was good at 82.6% attainment of the annual targets. Good progress was realized in monetizing and commercializing agriculture through increased production and productivity of strategic commodities, improved market access and compliance with quality standards; and enhanced access to agricultural financing. Even though several strides were made in the establishment of storage, value addition and agro-processing facilities most were incomplete, and non-operational due to a lack of electricity and a low supply of raw materials. Performance was enhanced by the strategic interventions to upscale food and animal feed production in the country; strengthened research and technology generation and dissemination; and availability of off-budget and external financing.

Performance was highest for the Agricultural Market Access and Competitiveness Sub-programme and lowest for the Institutional Strengthening and Coordination Sub-programme as shown in Table 3.4.

Table 3.4: Overall performance of the Agro-Industrialisation Programme by 30th June 2023

Sub-programme	Score (%)	Performance Rating	Remark
Agricultural Production and Productivity	79.5	Good	<p>Good progress in research and technology generation, infrastructure development for breeding and research, increased production due to the strategic intervention of upscaling food and animal feed by MAAIF, NARO and NAGRC&DB and access to agricultural financing under the PDM.</p> <p>Poor performance of animal breeding and multiplication due to inadequate access to improved animal breeds, land wrangles and encroachment, animal deaths due to delayed disposal of old animals, inadequate drugs</p> <p>Repurposing of the budget from planned activities to the food and animal feed intervention led to partial execution.</p>
Storage, Agro-Processing and Value Addition	74	Good	<p>Very good performance was registered on the intermediate outcome performance, however, output performance was fair. Most of the planned storage and value addition facilities were still under construction and those completed a good number were not operational.</p>
Agricultural Market Access and Competitiveness	992.5	Very Good	<p>Very good performance especially on value chain actors' registration, regulation and inspection by the UCDA, and DDA. The value of exports of key agricultural commodities also performed well.</p>
Agricultural Financing	84.4	Good	<p>There was good performance in terms of loan facilities extended to farmers under the ACF however regional inequalities still existed with the northern and eastern regions combined having less than 10% of the total loans disbursed. The UDC invested in eight agro-processing companies, however, the performance was poor.</p>

Institutional Strengthening and Coordination	-	Fair	The sub-programme was not assessed due to lack of sufficient data.
Average	82.6	Good	The Agricultural Market Access and Competitiveness Sub-programme performed better than other sub-programmes.

Source: Field Findings

Implementation of the PDM was affected by delayed issuance of execution guidelines, and multiple conflicting instructions from implementing MDAs. Access to agriculture markets both locally and internationally remained constrained by poor road networks amidst delayed completion of road networks under the different spending agencies and poor post-harvest handling.

3.2 Agricultural Production and Productivity Sub-programme

3.2.1 Introduction

The Government of Uganda (GoU) aims to commercialize agriculture through increased production and productivity of strategic commodities for export and food security. Key interventions focus on strengthening agricultural research and technology development; extension system; input markets and distribution systems; access and use of water for production, agricultural mechanization and digital technologies; farmer organizations and cooperatives; systems for management of pests, vectors and disease; and promoting sustainable land and environmental management practices.

Through the PDM, the Government is supporting farmers to engage in market-oriented agriculture by investing in different stages of the value chain including enterprise selection, profit-motivated farming, post-harvest handling; storage and marketing. The following sections present progress in the implementation of the various interventions. The overall performance of the Agricultural Production and Productivity Sub-programme was good, rated at 79.5% (

3.2.2 Agricultural research and technology development strengthened

Introduction

Eight outputs under the five sub-interventions were planned for implementation to strengthen agricultural research and technology development: a) Animal breeding stock multiplied and distributed to farmers; b) Animal breeding, production and administrative units and facilities constructed and equipped; c) Research and administrative infrastructure constructed, rehabilitated and maintained; d) Demand driven agriculture technologies developed; e) Research on bio-fortification and multiplication of nutrient-dense food staples upscaled; f) Research-extension farmer linkages developed and strengthened; g) Agricultural research IP and innovations commercialized; and h) Technology incubation centres established and operational.

Performance

i) Invest in new and rehabilitate old infrastructure for agricultural research

Three outputs were monitored under this sub-intervention: a) Animal breeding stock multiplied and distributed to farmers; b) Animal breeding, production and administrative units and facilities constructed and equipped; c) Research and administrative infrastructure constructed, rehabilitated and maintained

a) Animal breeding stock multiplied and distributed to farmers

The performance of the animal breeding and multiplication at the National Animal Genetic Resource Centre and Data Bank (NAGRC&DB) farms was poor due to persistent challenges: inadequate access to improved animal breeds for breeding, land wrangles and encroachment on pastures; lack of water for production, donation of animals for socio-corporate responsibility and festive seasons, and deaths due to pests and diseases and old age of animals. Animal drugs and vaccines were in short supply and works for breeding infrastructure had slowed or stalled as disbursed funds were re-purposed to food and animal feed production, following a Cabinet Directive.

The performance of the cattle and goat breeding stock, based on field data, is presented in Tables 3.5 and 3.6. The opening (1st July 2022) and closing stock (30th June 2023) of cattle for the NAGRC&DB monitored stations/farms had a negative growth of -576 animals, while the goats posted a positive growth of 53 animals. During the period under review, 575 cattle and 79 goats were reported as sold, dead, donated, transferred, slaughtered or aborted. However, the net change⁵ for cattle stock was still negative with one cattle unexplained whereas the stock net change for goats was positive at 132 goats net increment. The output performance for animal breeding stock multiplication was poor and thus a need to further investigate how animals are disposed-off at the monitored farms.

The NAGRC&DB, with support from the Agriculture Value Chain Project (AVCP), received 22 out of 25 procured bulls aged between six to nine months for semen collection for dairy breeding. Additionally, the NAGRC&DB received 20 bulls under the Market-Oriented and Environmentally Sustainable Beef Industry (MOBIP) to support beef breeding. The NAGRC&DB also trained 39 artificial insemination (AI) technicians and each was provided with a field semen delivery flask and AI kit. The NAGRC&DB procured 4,689 doses of sexed semen for dairy breeding and 257 kits of non-pregnancy test kits.

Table 3.5: Progress in multiplication of cattle breeding stock at selected NAGRC&DB farms by 30th June 2023

Farm	Opening Stock 1 st July 2022	Closing Stock 30 th June 2023	Net change	Remark/Challenges
Aswa Ranch Pader District	1751	1398	-353	A total of 18 animals died due to diseases and old age, attributed to late disposals; 39 animals were culled and sold off, and over 200 animals were

⁵ Net change: Is the difference between closing stock and opening stock plus sum of animals reported to have died, transferred, donated and aborted.

Farm	Opening Stock 1 st July 2022	Closing Stock 30 th June 2023	Net change	Remark/Challenges
				transferred to other farms.
Kasolwe Stock Farm Kamuli District	157	166	9	Modest growth of herd: Inadequate technical staff for the breeding program; Lack of EASHZ breeding bulls and Kasolwe brown bucks for the conservation mandate; shortage of farm machinery and equipment for pasture development; six animals were slaughtered.
Njeru Stock Farm Buikwe District	189	211	22	Modest growth of the herd. Nine animals died, five were slaughtered and 50 cows/calves were sold/donated.
Maruzi Ranch Apac District	986	774	-212	Decline: High mortality to East Coast Fever and Tick-borne diseases due to low supply of drugs and acaricides and ineffective hand spraying; 52 animals died between January and March 2023. A total of 21 animals aborted due to lack of vaccines and 18 animals were stolen in March 2023 due to lack of fencing.
*Lusenke AnGRC Kayunga District	295	280	-15	Negative herd growth: Reduced herd due to disposal, and external transfer.
*Ruhengyere Field Station Kiruhura District	405	431	26	Positive herd growth. Despite the net positive growth, the performance remained poor as the majority of additional herds were transferred from other farms.
*Rubona Stock Farm Bunyangabo District	451	431	-20	Negative herd growth: Reduced herd due to disposal, death occasioned by snake bites and diseases.
Nshaara Ranch Kiruhura District	3920	3,986	66	Positive herd growth: This poor performance was due to disposal, and external transfer.
Livestock Experimental Station Wakiso District	258	146	-112	Decline: 105 cattle were transferred, two were sold, 10 slaughtered and 40 died.
*Sanga Field Station Kiruhura District	361	346	-15	Negative herd growth: Reduced herd due to disposal, which was accelerated by the limited space at the field station having experienced massive encroachment (1.5 square miles of the 2.5 square miles of the field station) and the recent planting of nappier and maize under the seed for feed and food intervention.
*National Enterprise Corporation (NEC) farm Katonga	631	661	30	Positive herd growth. This was partly due to the restocking of the 79 bulls under the Meat Export Support Services Project (MESSP) in November 2022. The minimal positive growth was partly a result of the disposal off 69 cows due to Clostridial infection.
Total	9,404	8,830	-575	Negative herd growth

Source: Field Findings

Table 3.6: Progress in the multiplication of goat breeding stock at selected NAGRC&DB farms by 30th June 2023

Farm	Opening Stock 1 st July 2022	Closing Stock 30 th June 2023	Net change	Reasons/key challenges
Kasolwe Stock Farm <i>Kamuli District</i>	53	66	13	Modest positive growth: Three animals died and nine goats were slaughtered. The causes of death were unknown.
Maruzi Ranch <i>Apac District</i>	493	472	21	Decline: 67 goats including newborns were killed by pythons and foxes due to the large bushes and no fencing, and animal abortions were on the increase.
*Rubona Stock Farm <i>Bunyangabo District</i>	88	84	4	Positive growth was attributed to births.
*Nshaara Ranch <i>Kiruhura District</i>	305	305	0	Poor herd performance.
Sanga Field Station <i>Kiruhura District</i>	674	658	-16	<i>Negative growth:</i> The reduction was due to disposal, which was accelerated by the limited space at the field station having experienced massive encroachment (1.5 square miles of the 2.5 square miles of the field station) and the recent planting of nappier and maize under the seed for feed and food intervention
⁶*Ruhengyere Field Station <i>Kiruhura District</i>	1,224	1297	73	Positive growth was attributed to births.
Total	2,837	2882	53	Positive herd growth

Source: Field findings January, February, July and August 2023

⁶ * The stock data used on those stations was provided during the semi-annual monitoring and the station managers did not avail the information on request at annual monitoring.



The hay baller delivered to Aswa Ranch in Pader District was abandoned and overgrown by weeds owing to lack of the right technology to operationalize it; (left) Part of the goat breeding stock at Maruzi Ranch in Apac District

Community outreach programmes were implemented by Njeru Stock Farm in Buikwe District. A total of 7,838 litres of liquid nitrogen and 5,892 straws of semen were issued out to artificial insemination (AI) technicians and private sector players for community breeding. The nitrogen plant at the farm was operating below capacity due to power cuts, few customers and inadequate AI services. The farm had a high-performing pig breeding programme where the stock increased from 40 animals on 1st July 2022 to 146 animals by 30th July 2023, after selling 159 animals. Twenty-two piglets died due to crowding. The farm continued to suffer from land encroachment, especially by senior public figures.

b) Animal breeding, production and administrative units and facilities constructed and equipped

Good progress (70.28%) was made in the construction of animal breeding and administrative facilities, although a substantial number were not operational due to lack of breeding stock, equipment and furniture. Some construction works stalled as budgeted funds were repurposed for the food and feed project (Table 3.7). Most infrastructure was completed or in advanced stages of completion using the multi-year investments under the Strategic Intervention for Animal Genetics Improvement Project (SAGIP). A key challenge was the stalling of some of the projects due to the non-payment of contractors who consequently abandoned the sites and lack of budgets for maintenance and equipping the completed infrastructure.

Table 3.7: Progress in the Development of Breeding and Administrative Infrastructure at Selected NAGRC&DB farms by 30th June 2023

Farm	Infrastructure	Completion Progress (%)	Remark
Aswa Ranch <i>Arua District</i>	Senior staff quarters	45	<i>Stalled</i>
	Goat House	100	<i>Completed but not in use due to lack of goat stocks</i>
	Spray race	100	<i>Was functional</i>
	8km of road upgraded and 25km of road maintained	100	<i>The roads were functional However, the farm lacked maintenance funds</i>
	Cattle dip tank	100	<i>Completed but not operational due to lack of water</i>
	Hostel	40	<i>Construction stalled</i>
	Farm managers house	65	<i>Construction stalled</i>
	Junior staff quarters	50	<i>Stalled as the contractor abandoned the works in September 2020. The contractor had no financial guarantee after he failed to pay off his loans; the submitted certificates of completion had not been cleared.</i>
Silage bunkers	10	<i>Construction works were at the foundation level</i>	
GOT APWOYO Zonal Animal Disease Control Centre <i>Nwoya District</i>	Junior and Senior Staff quarters; Administrative block plus laboratory; cattle crush and spray race; pump house, and water tank installation	100	<i>All were completed but not operationalized due to lack of equipment, furniture and staff. The facility was overgrown with grass due to lack of maintenance funds</i>
	Three stance and Two stance toilets; foot and tyre wash	100	
	Barbed wire fencing	100	
Njeru Stock Farm <i>Buikwe District</i>	Hay barn, concentrate feed store	0	<i>No budget allocations</i>
	Cattle crushes	0	<i>No budget allocations</i>
	Pit latrines	80	<i>4 out of 5 stances were constructed</i>
	Dip tank renovation	10	<i>Minimal renovations were done</i>
Maruzi Ranch <i>Apac District</i>	Goat structures	50	<i>Works stalled as the contractor abandoned the site due to financial constraints; there were no funds allocated to continue the works in FY 2022/23.</i>
	Junior staff quarters	70	
	Senior staff quarters	75	
	Silage pits	31.25	<i>Five out of 16 targeted silage pits were completed. Work stalled; there were no crop materials to put in the silage pits.</i>
Sanga Field Station <i>Kiruhura District</i>	2 silage pits	100	<i>Two silage pits were dug and in use</i>
	Silage bankers	100	<i>Five silage bankers with a capacity of 1,000MT each were constructed and under a defects liability period.</i>
Nshara Ranch, <i>Kiruhura District</i>	Silage bankers	78	<i>10 silage bankers were completed as at 25/7/23 while five bankers were under construction. The completed bankers had not been commissioned and the contractor was addressing some snags</i>

Farm	Infrastructure	Completion Progress (%)	Remark
	Hay barn	100	One hay barn was completed and in use
	Access roads	100	8km of access roads were rehabilitated
Kasolwe Stock Farm <i>Kamuli District</i>	Hostel with 48 self-contained rooms	45	Inadequate funds thus work stalled
	Farmer learning centre	80	80% of phase I works were completed. The project was at a standstill due to the delay by the Ministry of Works and Transport (MoWT) to finalize the report after the structural integrity test.
	Hatchery	100	Not operational awaiting a modification to be done on the cold room and installation of a standby generator
	Goat unit	100	Completed and in use
	Hay barn	100	Completed and in use
	Cow shed. Milking parlour and calf pen	100	Completed and in use; 75 Jersey cows were delivered and were housed in the cattle shed
	Grain storage facility	100	
	9.5km of road constructed	100	Completed and in use
	Piggery Unit and Poultry Unit	100	Lack of clean water and breeding stock to fully operationalize the facilities
	Silage pits	27.58	29 pits were dug, 8 were functional
	Fish ponds	100	8 ponds were completed for brooding and nurseries
	Average	73.8	Good performance though these are rolled-over projects that have experienced time overruns. The new projects did not commence

Source: Field Findings



L-R: One of the completed silage pits at Maruzi Ranch in Apac District and construction of silage bunkers at Aswa Ranch in Pader District at foundation level

For example, in Aswa Ranch in Pader District, the construction of a honey testing laboratory and the processing plant, the goat house, and the cattle dip tank was completed in the previous FY but

were not in use due to a lack of equipment and goat stocks. A hay baller that was procured and delivered to Aswa Ranch in 2021 to help in pasture management was abandoned as it was hi-tech and required specialized tractors and accessories. A total of 8km of road were upgraded to ease connection to the farm and another 25km were maintained.

At Kasolwe Stock Farm in Kamuli District, several works were at various stages of completion while others were completed and operationalized. Construction of the Learning Centre was at 80% completion; the feed mill, hatchery, poultry unit and goat house were completed but not operationalized due to lack of equipment and/or stocks, the hostel was 75% complete, the eight fish ponds were completed and fully stocked and the dairy unit was established and fully operational.

c) Research and administrative infrastructure constructed, rehabilitated and maintained

Fair progress (63.4%) was made in the construction, rehabilitation and maintenance of research infrastructure under the NARO interventions by 30th June 2023 – Table 3.8.

Table 3.8: Performance of Research and Administrative Infrastructure Establishment at NARO Institutes and ZARDIs by 30th June 2023

Category of civil works	Infrastructure established	Status	Beneficiary Institution	Status/Remark
Residential	Residential staff houses and gravel access roads	100%	National Livestock and Resources Research Institute (NALIRRI Maruzi)	<i>Eight units were completed. The internal road network was completed but the culverts were poorly installed.</i>
	Abi guest house/hostel	0%	Abi ZARDI	<i>Funds were diverted to completing the administrative block.</i>
Non- Residential	Multi-purpose laboratory	0%	Abi ZARDI	<i>Funds were diverted to completion of the administration block.</i>
	Office block, laboratory renovated	90%	Abi ZARDI	<i>The cost of the building shot up by 120%. About 80% of the funds that had been disbursed for three facilities (office block, hostel and laboratory) were spent on this facility.</i>
	Zero Waste Management System	85%	NALIRRI	<i>The Unit was not functioning efficiently when completed; it was redesigned and renovations were ongoing for the second phase works.</i>
	Equipment for Alfasafe Facility procured	10%	NALIRRI	<i>At the bid evaluation stage.</i>
	Multi-purpose Vaccine Facility	90%	NALIRRI	<i>Equipment was procured but not fitted yet; the road to the facility was diverted</i>

Category of civil works	Infrastructure established	Status	Beneficiary Institution	Status/Remark
				<i>to another location to enhance biosafety. It was under construction.</i> <i>Lack of in-house technical expertise to operate and maintain the machines. Most installations were made by international expatriates.</i>
	Perimeter wall, incinerator and bio-security gate	10%	NALIRRI	<i>At the bid evaluation stage</i>
	Research bull stud	80%	NALIRRI	
	Aeroponics facility for supplementary feeds	100%	NALIRRI	<i>Crops such as maize are grown for 7 days and mixed with other feeds. Cow milk yield had almost doubled.</i>
	New calf barn	70%	NALIRRI	
	Kitchen and canteen	90%	Maruzi NALIRRI	
	One feed mill, two hatcheries and 40 fish ponds maintained	100%	Aquaculture Research Development Centre NAFIRRI	
	Goat house	60%	Maruzi NALIRRI	
	Multi-purpose laboratory	100%	NACORI	<i>Civil works were completed and the facility is not in use due to lack of equipment. Equipping and furnishing of the facility is expected in FY2023/24 to FY2024/25.</i>
Civil Works – Structures	Paddock fencing	40%	Maruzi NALIRRI	<i>Eight out of 27 planned paddocks were fully established; others were partially constructed</i>
	10 bunkers constructed	10%	Maruzi NALIRRI	
	Water reticulation	40%	Maruzi NALIRRI	
	Road network constructed	100%	Maruzi NALIRRI	<i>Eight roads were levelled and stabilized.</i>
	External civil works, laboratory, conference facility	100%	Rwebitaba ZARDI	<i>Completed but unusable due to lack of equipment.</i>
	Administration block	93%	National Agricultural Research Laboratories (NARL)	<i>Substantially complete. The pending works include external works in a few sections, final electrical and Private Automatic Branch Exchange</i>

Category of civil works	Infrastructure established	Status	Beneficiary Institution	Status/Remark
			Namalere	<i>installations and equipping.</i>
Average		63.4	All	<i>Fair performance</i>

Source: Field Findings



L-R: Eight staff accommodation units were completed at NaLIRRI Maruzi in Apac District and Administration block completed at ABI-ZARDI in Arua District

ii) Establish Climate Smart Technology demonstration and multiplication centres

Two outputs were monitored under this sub-intervention: demand-driven agriculture technologies developed; research on bio-fortification and multiplication of nutrient-dense food staples up-scaled.

a) Demand-driven agriculture technologies developed

By 30th June 2023, the generation and development of technologies and adaptive research by the National Agricultural Research Organisation (NARO) institutions continued as shown in Table 3.9 although most interventions were partially done and results were inconclusive. Performance was fair due to persistent challenges of drought, lack of appropriate agro-machinery and laboratories, inadequate vehicles and equipment, incomplete research infrastructure, migration of technical staff to universities, and underfunding and repurposing of budgets to the food and animal feed security program.

Most of the ongoing work was funded through off-budget support and non-tax revenue (NTR) sources. For example, the research on cotton, millet, vegetable oil, sorghum, cereals, legumes, peanuts, aflatoxin and climate technologies at NASARRI was funded using off-budget support. By 1st July 2022, NASARRI had an opening balancing for off-budget support at Ug shs 1.330bn. During the year, the institute received an additional Ug shs 3.531bn, disbursed Ug shs 3.970bn and had an outstanding balance of Ug shs 891.198 million by 30th June 2023. In comparison the approved GoU budget was Ug shs 1.633bn of which Ug shs 797.200 million was released and fully spent by the end of the FY.

For the Aquaculture Research Development Centre (ADRC) NAFIRRI located at Kajjansi in Wakiso District, the GoU approved budget was Ug shs 757.344 million, of which Ug shs 234.136 million (30.91%) was released and fully expended. The approved annual budget for off-budget projects was Ug shs 1.914bn, of which Ug shs 1.696bn (88.61%) was spent by 30th June 2023. At ABI-ZARDI in Arua District, Fish Multi-Stakeholder Innovation Platforms were established and Strengthened and the capacity of the leaders was built with help from the Private Sector Foundation Uganda, (PSFU). Two functional private partnership meetings were facilitated to strengthen Cassava value chains within Arua District with support from the district local government (DLG), World Food Programme (WFP), Arua Chamber of Commerce and Cassava and Allied Crops Cooperative (CACC).

Table 3.9: Selected technologies developed by NARO by 30th June 2023

Institution	Achievements
National Fisheries Resources Research Institute (NAFIRRI Jinja)	<p>Capture fisheries: Research in advanced stages on sustainable and environmentally friendly harvesting and reducing post-harvest losses of mukene; pollution levels of water bodies due to plastics; fish feeds</p> <p>A fish laboratory, aquarium facility and cage research facility were maintained and operationalized. Production and upscale multiplication of new high-value aquaculture fish species (Labeo and Barbus) for improved technology adoption were ongoing. A total of 100 (40%) fish farmers out of the targeted 250 farmers were trained in Best Aquaculture Practices (BMPs) of pond management, harvesting, postharvest and value addition. Two integrated rice-fish demonstrations were established and stocked with 2,500 fish seed</p> <p>Digital solutions: Electronic catch assessment survey (e-CAS) app for digitizing some of the fisheries work and freshwater biodiversity portal for sensitizing communities and policymakers about the fish species.</p>
Aquaculture Research Development Centre NAFIRRI Kajjansi	<p>Feeds: Research was advanced on substituting mukene in fish feeds with the Black Soldier Fly. Developed one Tilapia grower diet with 75% black soldier fly as a substitute for mukene.</p> <p>Rice: Two integrated rice-fish demonstrations were established with 2,500 fish seeds. 127 farmers were trained in integrated rice-fish farming.</p>
NGETTA-ZARDI	<p>Legumes: Adaptive research was undertaken on crop varieties of groundnuts, millet, soybean, sorghum, fall worm and pest and disease management in oranges and mangoes. A total of 21.6 tonnes of foundation seed for soybean (16 tonnes), groundnuts (3.1 tonnes) and maize (2.5 tonnes) were produced against a target of 15 tonnes.</p>
ABI-ZARDI	<p>Root crops and horticulture: Two newly released root crop varieties were introduced to uptake pathways in the West Nile region; 2,500 mango seedlings, 5,000 citrus seedlings and 1,250 avocado seedlings were disseminated to farmers.</p>
National Semi-Arid Resources Research Institute (NASSRI)	<p>Cotton: Demonstrations of 15 new cotton lines were maintained at the station and in Kasese, Packwach and Lira districts.</p> <p>Legumes: 94 Sesame and 94 Mungbean accessions were under evaluation.</p>

Institution	Achievements
National Crops Resources Research Institute (NACRRI)	<p>Beans: Variety release applications documents for two bean varieties submitted to MAAIF, NPT trials established for 5 promising lines and data collected. A second NPT is being conducted in 4 locations for 7 promising large-seeded drought-tolerant bean lines along with 3 local checks.</p> <p>Candidate pathogen isolates (<i>S.rolfsii</i>) for screening germplasm were identified and screening trials were ongoing in the screen house at NaCRRRI. 3100 kg of bean seeds of NAROBAN 1, 6 all iron-rich were supplied under the SCM to Male and female farmers in the districts of Mayuge, Isingiro and Kasanda. 20 tons of Longe 5 seed, 1.27 tons of Narobean 1 and 0.618 tons of Narobean 2 handed and 0.6 tons of Nabe15 of early generation seed bulked.</p> <p>Rice: One hybrid rice variety WDR 73 was released and one variety KF20039 was allowed to be presented to the variety release committee (MAAIF) in Q1 FY23/24. NaCRRRI produced 1.594kg of nucleus seed from nine varieties (NamChe-1,2,3,4, & 6 and NARORICE-1,2,3, &4). Another nine varieties were planted in Q4 and harvesting is expected in Q1 FY23/24. A total of 885kg of breeder seed was produced from 15 rice varieties (NamChe1-6; NARORICE 1-4; NERICA 1,4,10,6; and WITA-9. 5,200kg of seed were produced from 63 season-long demonstration plots at NaCRRRI, Doho, Olweny, Kibimba and Kween. 4,780kg of foundation seed was produced from six acres. A total of 48 farmers in Kween were provided with 25kg of seed each for the varieties NARORICE 1&2. However, the rice yields were at 2.5MT/Ha against the targeted 3.0MT/Ha. Low volumes of rice were attributed to the erratic rain patterns that affected the germination of seeds.</p> <p>Root crops: One acre of seed multiplication trials for candidate variety (UG120193) is being maintained; Nine elite clones are being multiplied for use in TRICOT trails. 10 acres of multiplication of white fly-resistant cassava variety, Mkumba, were maintained in Ngetta and Kigumba awaiting official release by MAAIF. Actual field visits by the commissioner of crop inspection (MAAIF) were held in the districts of Dokolo, Apac and Kwania. A meeting was held with the National Seed certification committee at NARL (Kawanda), in preparation for possible release.</p> <p>Maize: The three candidate hybrids namely PVAUG-1, PVAUG-2 and 0501-2Str were submitted for release by the National Variety Release Committee (NVRC). A total of 26 kg of Nucleus seed of six parental lines namely CML297, CML300, CLHP00286, CLHP0005, E11, and CLHP00476 of pre-released provitamin A (PVA) maize hybrids; and <i>Striga</i>-resistant parental lines namely 01001-Str, 01002-Str, 01003-Str, 01004-Str, 01005-Str, and 01007-Str was produced during season 2022B. this was below the annual target of 66kg, however, this was attributed to the delayed release of funds for planting in season 23A and the maize was still in the field and harvesting was expected in August 2023. 300kg of breeder seed (parental lines) for some of the popular commercial hybrids namely: Longe 7H, WEMA2115, WEMA3106, UH5355, and Longe 10H was produced from season 2022B. there was no foundation seed produced during FY22/23, though maize planted in 2023A at NaCRRRI and NaSARRI was yet to be harvested.</p> <p>Oil palm: Eight adaptive trials established in West Nile and mid-northern Uganda were maintained for five varieties with resistance to drought and diseases. Four best management practices for oil palm plots in Kalangala were maintained. Five (5) varieties exhibiting <i>Fusarium</i> wilt resistance, Ganoderma tolerance, short growth and drought tolerance traits were under trial in Kalangala.</p>
Rwebitaba ZARDI	<p>Tea: Evaluation of purple tea was due to commence on station for suitability before rolling the technology to the different agro-ecological zones to ascertain performance. Tea oil product</p>

Institution	Achievements
	<p>prototype produced. Collection and profiling of tea clones was undertaken and this revealed two tea clones for high green tea production. 5 tea clones characterized for biochemical attributes for the best green and black tea.</p> <p>A total of 4,000 clonal plantlets of selected tea clones were multiplied against the targeted 5,000 as at December 2022. Ninety-four (94) tea accessions genotyped using DART technology for diversity and genomic selection purposes. Data sets on individual selection based on (Yield, recovery from prune, and drought).</p>
NALIRRI	<p>Vaccines: The anti-tick vaccines were ready and under trial for one year in five locations in Mbarara, Ibanda, Masindi, Apac, and Nabuin stations. Each site had 144 animals for the trials. The first set of trials would have results in October 2023. However, the trials were constrained by a lack of funding to maintain the animal stocks and collect data regularly. Work continued to test Foot and Mouth Disease (FMD) and African Swine Fever candidate vaccines.</p> <p>Livestock: A herd of 200 Ankole cattle, 20 Zebu cattle and three exotic bulls were undergoing trials and conservation; 28 Kalahari goats were imported and had multiplied to 40 animals.</p>
National Laboratories Research (NARL)	<p>Biotechnology: Tissue culture of planting materials for bamboo, medical plants, ginger, lemon grass, sugar cane, turmeric and medical plants such as Warbugia Ugandensis (COVID-19 treatment plant) were raised to increase their rate of production.</p>
Kachwekano ZARDI	<p>Irish potato: Two seed potato varieties were submitted to the Variety Release Committee for approval; 763,640 potato mini tubers and 40 tonnes of potato basic seed were produced. A total of 2.5 hectares of potato were planted for seed production; 2,040 apple rootstock were potted and grafted; and advanced innovations of growing rooted cuttings in screen houses (Aeroponics) to multiply the min-tubers for commercial production stalled due to a disease epidemic.</p>
National Coffee Research Institute	<p>Coffee: 300 rooted clones of the three promising candidate Arabica varieties were weaned; 30 F1 hybrids were generated and 32,602 stem cuttings of the same varieties were initiated for rooting. Experimental results of the three candidate Arabica varieties in the four trial sites of Bugusege, Buginyanya, Kabale and Zombo showed high yield, short, and superior cup quality in comparison to the grown Arabica varieties. However, the varieties were not presented to the national variety release committee as planned. Four composite crosses were made to combine coffee leaf rust and coffee blister disease resistance. 46 parent lines of coffee wilt disease resistant (CWD-r), ivory coast, zoka and Budongo forests, clonal, and liberica tree were selected and maintained at NaCORI for use in hybridization. F1 robusta coffee seeds from 19 crosses were nurtured.</p> <p>Two protocols for isolation of <i>Trichoderma ssp</i> and <i>B. bassiana</i> for management of the black coffee twig borer (BCTB). A total of 234,232 rooted cuttings of CWD-r were availed to farmers. Hybrid solar dryer trials were established in three districts: Luwero, Nakaseke and Nakasongola. Eight coffee producer organizations were trained in postharvest handling and three local artisans were trained in the fabrication of hybrid solar dryers.</p> <p>Samples of cocoa body lotion and coffee yoghurt were submitted to the Uganda National Bureau of Standards (UNBS) and passed the required quality parameters. Quality and nutritional profiling of two coffee yoghurt products was done. Shelf life stability studies for coffee scrubs, lotions and creams were done. An evaluation of the antioxidant potential of the scrub was also carried out. A coffee byproduct formulation (facial and body scrub) was submitted to the Uganda Registration Services Bureau (URSB) for registration and protection.</p>

Source: Field Findings; NARO Reports



L-R Black Soldier Fly rearing in cages and in basins as substitute for Mukene in fish feeds at Kajjansi Aquaculture Research Development Centre

iii) Establish and strengthen linkages between agricultural research institutions and BTVET institutions

One output was monitored under this sub-intervention: Research-extension farmer linkages developed and strengthened.

a) Research-extension farmer linkages developed and strengthened

The research-extension farmer linkages were strengthened through collaborative work between MAAIF, NARO, NAGRC&DB and the Uganda Peoples Defence Forces (UPDF) implementing strategic interventions to upscale food and animal feed production in the country. A total of Ug shs 110.206bn was repurposed from the approved budgets of participating agencies and released to produce foundation seed. The repurposing of the budget for food and animal feed production was as follows; Ug shs 9.58bn by Uganda Prisons Services, Ug shs 15.53bn by NARO, Ug shs 46.54bn by NAGRC&DB and Ug shs 30.03bn by UPDF, National Executive Committee (NEC) and Veterans.

The funds were repurposed from disbursed budgets on condition that reimbursements would be made to participating agencies through supplementary budgets. The reimbursements had not been made by 30th June 2023 which led to poor implementation of planned interventions and outputs and challenges in managing service providers and contractors.

A total of 712.3 tonnes (maize 297.1 tons, sorghum 32.2 tonnes, soybean 304.2 tonnes and beans 78.8 tonnes) were produced by NARO in Season 2022B. The NAGRC&DB produced 61,147 tonnes (corn silage 51,692 tonnes, maize grain 9,263 tonnes and soybean 192 tonnes) in Season 2022B. Yields were poor due to unreliable rains and the prevalence of pests and diseases. There were high post-harvest losses of the harvested crops (over 30%) due to lack of labour and machinery to harvest the crop in time, and no proper drying yards and storage space. Due to the inadequate cash limit, 1,244.5 acres (25%) out of the targeted 4,958 acres of the crop were planted by NARO and 2,735 acres (25%) were planted by NAGRC&DB against the targeted 11,054 acres in Season 2023A and by 30th June 2023 harvesting had not been completed.

Most grain produced under this intervention was transported to Kasolwe Stock Farm in Kasolwe Parish, Kamuli District for storage, processing and dissemination to farmers and NAGRC&DB and NARO farms. A total of 152,176kg of processed feeds was produced from the maize produce that was delivered from other farms, of which 83,457kgs were poultry feeds, 63,491kgs were pig feeds, 4,250kgs were breeding bull supplements and 978kgs were used for staff welfare. A total of 6,759kgs of threshed soybean was received at the farm and was still in storage.

A total of 650 acres (100%) of maize were established at Kasolwe Stock Farm, against a target of 620 acres from which 700 tonnes of silage were produced, and 100 acres of soya bean were established as per target. The key challenge was the delayed release of funding leading to late planting. Crop mortality was 60% due to adverse climate and the high prevalence of pests and diseases.



Grain warehouse (left) and silos (right) were under construction at Kasolwe Stock Farm in Kamuli District

At Aswa Ranch in Pader District, 804 acres (33.5%) out of the planned 2,400 acres of soybean and 200 acres (16.66%) out of the planned 1,200 acres of maize were planted by 30th June 2023. The low performance in production was due to a lack of machinery and funds to open and maintain large acreage. The seeds were delivered late when the season was advanced and about 5,000kgs of soybean seed was not planted. The seed would have lost viability by the next season, hence it was left in stores for auditors to record the wastage. Harvesting of soybeans had commenced but there was a lack of proper storage space. The honey processing plant space was temporarily used to warehouse the produce. Works had commenced on the construction of 10 bunkers but work had

stalled as there was an issue to be resolved between the contractor and NAGRC&DB concerning the quantity of materials to be used.

Similar challenges were noted at Maruzi Ranch in Apac District where 450 acres (23.68%) out of the targeted 1,900 acres of maize were planted but yields were low due to late planting; seeds and fertilizers were delivered late in the middle of the season. Fifty tonnes of the expected yield was lost to drought and monkeys. About 1,200kgs of maize seed was spoiled by rains due to poor storage facilities.



Maize grain wasted by rains stored in the crib awaiting auditor inspection at Maruzi Ranch in Apac District; (left) and soybean seeds wasted due to late delivery when the season was advanced at Aswa Ranch in Pader District, under the food and animal feed production intervention

At the National Semi-Arid Resources Research Institute (NASARRI) in Serere District, 460 acres of sorghum were planted during the two seasons. A total of 79 tonnes of sorghum seed was produced and harvesting was continuing for the second season. High crop mortality estimated at 60% due to late receipt of funds and materials and effects of drought and high pest and disease infestation as a result of late planting.



The harvested sorghum seed at NASARRI in Serere District was dried and stored in the mechanical workshop space with high losses due to rains

The institute lacked funds for harvesting, post-harvest management and storage for the crop. Hence about Ug shs 20 million was borrowed from off-budget projects and some contracts were committed with service providers but not paid amounting to Ug shs 64.90 million. Some

service providers were threatening to sue the Government if payments were delayed further. Due to a lack of storage space, the harvested crop was kept in the mechanical workshop yard where post-harvest losses were high due to rains.

Technology promotion through platforms that linked farmers to markets and post-harvest services was low due to inadequate budgets to facilitate stakeholder trainings and engagements. In Ngetta ZARDI, there were continuous engagements towards the development of agricultural technology and Research extension interface services.

iv) Upscale research and bio-fortification and multiplication of nutrient-dense staple foods

Two outputs were monitored under this sub-intervention: Agricultural research IP and innovations commercialized, and technology incubation centres established and operational

Technology incubation centres established and operational

Technology incubation centres were established to develop value-added products for eight strategic commodities: coffee, cocoa, milk, maize, rice, soybean, pumpkin and tea. Research continued as outlined below:

- i) Development of coffee and cocoa value-added products were at different stages of completion for instance;
 - Samples of cocoa body lotion and coffee yoghurt were submitted to the Uganda National Bureau of Standards (UNBS) and passed the required quality parameters.
 - Coffee facial scrub was ready for commercialization and a request for an Expression of Interest to commercialize was put up in the press upon completion of registration with the Uganda Registration Services Bureau (URSB) including patenting and issuance of the certificate of analysis from UNBS.
 - Research on antifungal cream development from coffee was ongoing.
- ii) The other seven (7) products were undergoing market testing to determine their commercial potential. These included composite bean flour which was market tested by Equator Commercial Production Company, and AuroNutro maize product which was undergoing market testing by Banotu Uganda Limited. Other near-end products for market testing included high protein concentrate from soybean and puff-extruded bean snacks.
- iii) A number of value-added tea prototypes of ready-to-drink bottled healthy teas and cosmetics were formulated. These included skin-care soaps; lotions and quality Cut Tear and Curl (CTC) black teas which were at the level of packaging, labelling and branding for commercialization.
- iv) Value-addition nutraceutical products (milk products), which are safe and stable milk-based with anti-ulcer, anti-diabetes and anti-cancer properties were under development. A protocol for extraction of anti-diabetic milk-based nutraceutical products was developed. Fortified yoghurt formulations were developed.
- v) NARO under the appropriate technology issued 50 units of two-wheel tractors (walking tractors) to the Acholi sub-region and Adjumani District by August 2022 with funding from the

PRELNOR project. Six units of NARO-CAS-CHIP-1 cassava chippers were delivered to business hire service providers in Abim District.

- vi) Achieved 80% in terms of commercialization of NARO PAH-safe fish smoking kiln for controlling polycyclic aromatic hydrocarbons (PAH) in smoked fish and improving market competitiveness of Uganda's smoked fish.
- vii) Achieved 40% in terms of developing wet coffee processing technologies compared to the targeted 60%. Specifically, the second prototype of food grade motorised coffee pulper, the prototype of a hybrid solar drier for coffee, fruits and vegetables, and high energy content briquette formulae from crop residues and forest wastes done
- viii) Achieved 45% in terms of developing implements for improving the labour productivity of smallholder farmers. Specifically, the animal-drawn weeder and power tiller weeders were each at the second prototype, while the low-horse power hand-held motorized multi-crop weeder was at the prototype generation stage.

Overall Challenges

1. Most planned research and technology generation activities and infrastructure development were partially implemented and inconclusive due to inadequate funds as resources were re-purposed to the food and feed programme.
2. Arrears, contractors not paid and high post-harvest losses incurred in the food and animal feed production project due to poor planning, late delivery of inputs and seeds, lack of storage facilities and poor post-harvest handling practices.
3. Poor performance of animal breeding programme due to loss of animals to different causes and inadequate funds for animal health maintenance.

Recommendations

1. The MFPED and implementing agencies should improve budget planning and prioritization to enhance budget credibility.
2. The MAAIF and agencies should improve planning, inter-agency coordination and implementation of the food and animal feed production project.
3. The investigative arms of the Government should take a census of NAGRC&DB animals and do a forensic audit of how the farms are operated and animal herds maintained.

3.2.3 Agricultural Extension System Strengthened

Introduction

This intervention has four sub-interventions namely; i) Operationalise agricultural extension system; ii) Develop and operationalise an ICT-enabled agricultural extension system; iii) Develop and equip youth with knowledge, skills and facilities for access and utilization of modern extension services and iv) Strengthen the research-extension-farmer linkages. These actions were intended to mobilize and organize farmers so that they benefit from agricultural advisory services and improved technologies. *Sub-intervention iv) Strengthen the research-extension-farmer linkages is reported upon above, under intervention 3.2.2 f).*

Performance

Overall, the performance of the agricultural extension system in DLGs and other implementing MDAs was low. Extension services received by farmers included training on good agronomic practices, pest and disease control and postharvest handling among others. The model farmers in the various sub-counties provided an avenue for knowledge transfer to the other farmers. Detailed performance of the monitored outputs is discussed hereafter:

i) Operationalise the agricultural extension system

By 30th June 2023, staffing of extension workers at the national level was low with 4,310 filled positions (44.6%) compared to the approved staffing norms of 9,665, thus leaving a gap of 5,355 (55.4 %) positions. On average, the extension worker to farmer ratio was one extension worker to 1,800 households (1:1800), higher than the recommended ratio of one extension worker to 500 households (1:500) in Uganda.

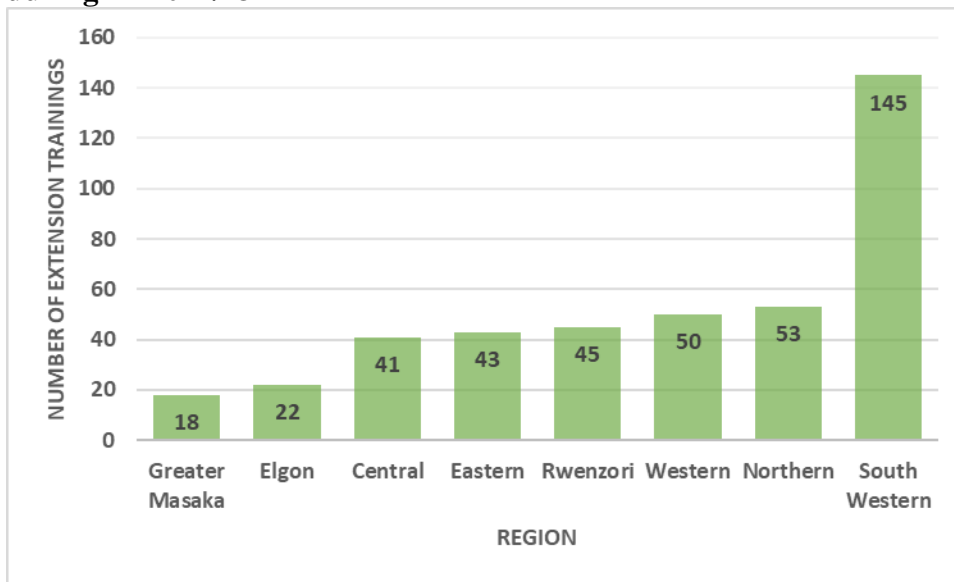
The outreach of extension services to farmers in LGs was consequently low due to inadequate staffing and transport; repurposing of funds from planned extension activities to operationalization of the PDM; inadequate facilitation of extension workers and impassable roads in hard-to-reach areas as shown in the examples below.

For instance, in Mityana DLG, the extension staff-to-farmer ratio was (1:5,000) instead of the recommended 1:500, these numbers were overwhelming given the poor means of transportation. Similarly, in Kyegegwa DLG extension staff-to-farmers ratio was 1:2,300 which was too high. In Hoima DLG, there was limited access to extension and advisory services by most farming households mainly in the sub-counties of Ahandilro, Kitholu, Mbunga, and Kyondo due to bad roads that restricted outreach to these remote areas. Across all the DLGs, more trainings were mainly focused on PDM enterprise selection and development activities. PDM activities were prioritized in quarters three and four of the FY2022/23 over routine extension activities to help farmers adopt enterprise development approaches.

In the same way, the UCDA had a high coffee farmer-to-extension staff ratio; for instance, in the Southwestern region, only 45% of the coffee farmers received extension services, leading to limited contact and dissemination of coffee-specific knowledge and information. In many areas, one coffee extension worker coordinated more than two districts in a region, this resulted in limited coverage of the intended coffee farmers.

The UCDA conducted trainings for value chain actors on several aspects including: sustainable and speciality coffee traceability systems in agro-ecological zones, GAPS in pest and disease management, renovation/rehabilitation, sustainable land management, good post-harvest handling practices, trade dynamics and market surveillance to develop competence in analysing and assessing market and trade dynamics in the coffee and cocoa value chains. A total of 417 farmer trainings reaching 9,520 coffee farmers in the different coffee regions were undertaken in collaboration with stakeholders across the country (Figure 3.4).

Figure 3.4: Number of coffee farmer extension trainings and support provided by UCDA during FY2022/23



Source: Field Findings

The Cotton Development Organization (CDO) in collaboration with the Uganda Ginners and Cotton Exports Association (UGCEA) mobilized, sensitized, registered about 135,000 cotton farmers and established 4,960 demonstration plots which were used to train farmers. A total of 209 UGCEA and 180 LG extension workers trained farmers on cotton production technologies; of whom 19 extension workers were deployed in 10 hard-to-reach districts. As a way of creating awareness about this service, extension messages on post-harvest field management and farmer registration were broadcasted on local radios in districts of Busoga, Bukedi, Bugisu, Teso, Lango, Acholi, West Nile, Mid-West & Central and Kazinga Channel Regions.

However, there was a low outreach to cotton farmers due to the understaffed area coordinators/ extension staff, for instance in the mid-western region, only one extension staff was covering two districts of which each district had about six sub-counties.

The National Oil Palm Project (NOPP) planned to train and support 23,922 households in income-generating activities/ production practices and technologies across all the hubs. However, by 30th June 2023, only 2,841 farming households were supported and trained in alternative livelihood economic opportunities, low performance was mainly attributed to limited and delayed release of funds to the project.

ii) Develop and operationalise an ICT-enabled agricultural extension system

The MAAIF through the Department of Agricultural Extension and Skills Management (DAESM) rolled-out and operationalized an ICT and Agricultural Extension Supervision System (E-Extension). A total of 440 extension officers were trained in the use of the e-extension system in the districts of: Rubirizi, Sheema, Mitooma, Lyantonde, Lwengo, Buhweju, Kiruhura, Gomba, Sembabule, Bukomasimbi, Butambala, Adjuman, Moyo, Obongi, Kitgum, Pader and Lamwo, Mbarara, Ibanda, Rwampara, Bulambuli, Sironko and Kween. The planned mass training was constrained by inadequate funding.

The ACDP operationalized the routine of the agriculture administrative data system in 11 out of the planned 57 districts. A total of 123 staff from MAAIF departments, MAAIF agencies, UBOS, MoLG, and the Ministry of Gender, Labour and Social Development (MGLSD) were trained in nine data collection tools and e-extension system. The MAAIF procured 2,000 tablet computers to support data collection by Parish Chiefs under the National Food and Agricultural Statistics System (NFASS).

The ACDP supported the development and establishment of ICT platforms for the collection, storage and dissemination of agriculture-related data to agriculture sector stakeholders. Four ICT platforms were completely deployed and under maintenance, these included the e-voucher system, NFASS, mobile soil testing application and e-extension system. The e-markets platform was under development at the user acceptance testing stage.

iii) Develop and equip youth with knowledge, skills and facilities for access and utilization of modern extension services

The MAAIF through the NOPP supported 2,841 households in alternative livelihood economic opportunities. A total of 126 youths were organized into five labour gangs in Kalangala and Buvuma districts. Additionally, the NOPP trained staff 20 extension staff in the oil palm hubs of Buvuma and Kalangala hubs. The NOPP trained 122 youth beneficiaries through vocational skilling, these were assessed by the Directorate of Industrial Training (DIT) and graduated in 2023 (Table 3.10).

Table 3.10: Vocational skills categories and respective beneficiaries by 30th June 2023

Vocational Skill	Total number beneficiaries	o/w Females	o/w Males
Catering	10	08	02
Carpentry and Joinery	23	0	23
Driving	07	0	07
Building and Concrete practice	28	01	27
Hairdressing	26	26	0
Tailoring	28	26	02
Total	122	61	61

Source: Field Findings

Challenges

1. Inadequate access to extension services due to understaffing and limited transport means for the available staff.
2. Lack of coordination between DAES and other sister departments like NAADS-OWC affected the effectiveness of extension service delivery
3. Budget cuts and late disbursements to the Department of Agriculture Extension and Skills Management led to limited implementation of some planned activities.
4. Lack of field operational tools and equipment such as Global Positioning System (GPS) and weather forecast tools for work in LGs.

Recommendations

1. The MFPED, MoPS, MAAIF and LGs should prioritize recruitment and equipping more extension workers. The MAAIF and other agencies should further strengthen and support extension services and farmer group cohesion.
2. The MAAIF should strengthen internal collaboration between its associated agencies to improve extension delivery at the LG level.
3. The MFPED and MAAIF should review and revise the budget ceiling for extension services to cater for increased staff recruitment and operational expenses at the LG level.

3.2.4 Agricultural input markets and distribution systems strengthened to adhere to quality standards and guidelines

Introduction

This intervention has six focus areas and aims to; i) enforce pre-export verification for all agricultural inputs at the source of origin; ii) establish and equip nine regional mechanization centres to increase uptake of agricultural mechanization and labour-saving technologies; iii) reform the current input subsidy program including: scaling up the e-voucher model of inputs distribution; iv) setup and equip farm service centres within the public service e-service centres for bulk input procurement, storage and distribution; v) strengthen licensing procedures, inspection, certification, import processing; and vi) regulation for improved inputs and new seed varieties.

The development of the value chains for key commodities remained fragmented with most interventions still concentrated at the production level and not fully translated through the value chain stages up to marketing. Value chain development was achieved for some commodities and not for many others. The commodities with the most advanced value chains were coffee, cotton, dairy, fruits, maize, rice, tea and oil palm. The value chains that were largely underdeveloped included poultry, fish, piggery, bananas, cassava, Irish potatoes, millet, Hass avocado, macadamia, beans, soya bean, sorghum and cashew nuts.

Performance

i) Enhanced efficiency in inputs distribution

a) Inputs procured, generated, distributed and accessed

The UCDA distributed a total of 12,185,055 coffee wilt disease resistant (CWD_r) cuttings; 29,049,768 Arabica seedlings and 6,000,130 Elite Robusta seedlings to coffee farmers in 6 regions of Rwenzori, South–Western, and Central, Greater Masaka, Eastern, and Western. The distribution of coffee plantlets was under the cabinet directive to nursery operators to supply on credit. Coffee farming inputs for emergency control of Coffee Red Blister Disease (CRBD) in Robusta growing regions were distributed and these included 165 litres of fertilizer enhancers, 1,000 kilograms of copper-based fungicides and 167 litres of tebuconazole).

A total of 2,449 Mt of delinted and graded seed were distributed by CDO to farmers in 72 cotton growing districts. A total of 115,975 bales of lint were produced, of which 76,523 bales were

exported; plus 9,384 bales and 5,600 bales were supplied to Southern Range Nyanza Limited and Fine Spinners respectively as buffer stock.

The target of achieving 80% of the produced cotton in the top three grades was relatively achieved at 71%. Furthermore, cotton inputs such as pumps (2,519) and pesticides (239,766 units) were procured and delivered to farmers. However, cotton farmers faced challenges of; a) late delivery of pesticides to all the regions, farmers had lost most of the crop to pests; b) low seed germination in the June-July season due to dry spells, districts of Pakwach, Nebbi, Gulu and Kasese among others were greatly affected; c) inadequacy of extension staff; and c) fluctuating cotton prices, among others.

Through MAAIF, the Agriculture Value Chain Development Project (AVCP) released two (2) maize hybrid varieties. A total of 1,326MT of maize seed was produced by NACRRI. A total of 49,682 farmers received maize inputs (seed 284.4MT, fertilizer 800MT and pesticides 6,500litres) in the 28 maize project districts. The rice production yields were currently at 2.5 MT/ ha and an aggregate of 30MT of rice foundation seed was produced, and 44 farmers were provided with 50kg of rice seed in Kween District. One rice hybrid variety was released in December 2022 and submitted to the variety release committee in July 2023. A total of 13,516 rice farmers received inputs and established demonstration gardens in the project districts hence increasing rice yields at the adaptive trial sites.

Under ACDP, M-cash (e-voucher Management Agency) was operational across the 12 project clusters by 15th June 2022. There was continued mass sensitization and mobilization of farmers to enroll and participate in the e-voucher system through radio talks, CBFs, and LG leadership. This resulted in increased enrolment on the system. A total of 633,996 farmers were enrolled on the e-vouchers, of whom 411,872 (91.5%) redeemed e-vouchers for inputs worth Ug shs 148.96bn (farmer contribution – Ug shs 43.8bn and project contribution – Ug shs 105.17bn hence bringing the total of inputs to Ug shs 148.96bn. Up to 10,244 farmers transitioned to cycles 2 and 3 (Table 3.11).

Table 3.11: Value (Ug shs) of agro-inputs redeemed by project beneficiaries by input type as at 30th June 2023

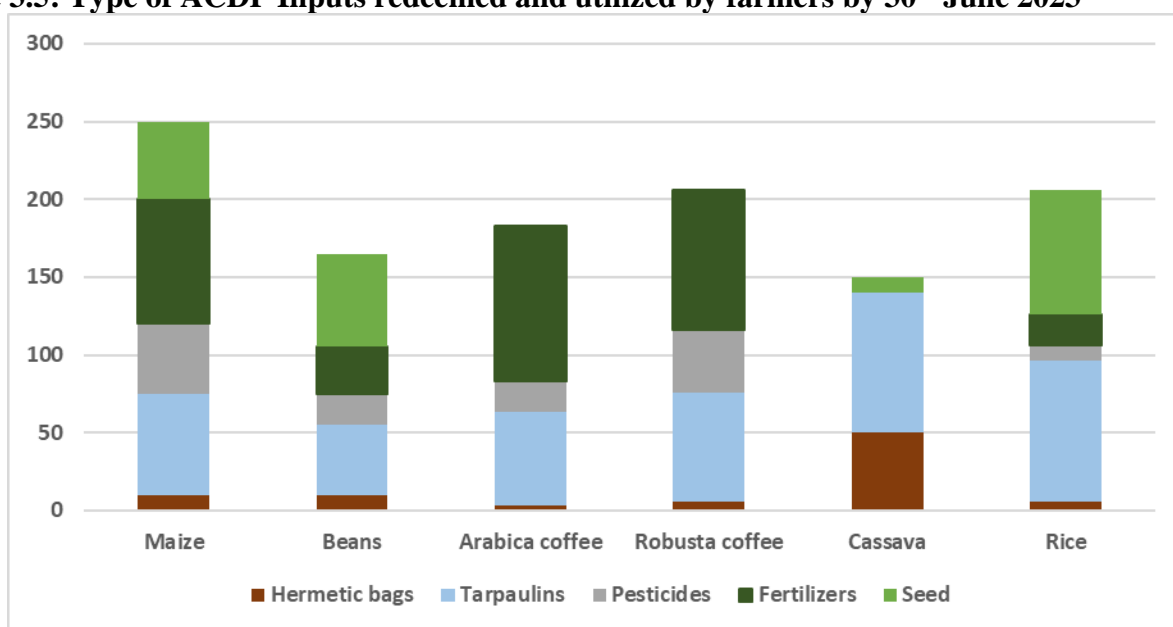
Cluster	Farmers Contribution	Government Subsidy	Total Cost
Cluster 1	5,928,048,733	11,513,613,837	17,441,657,322
Cluster 2	3,354,058,181	6,657,118,108	10,011,175,776
Cluster 3	2,166,317,396	4,241,044,268	6,407,361,504
Cluster 4	3,654,258,116	7,370,743,717	11,024,999,775
Cluster 5	1,277,974,884	2,584,714,561	3,862,688,740
Cluster 6	756,962,552	1,536,371,425	2,293,333,950
Cluster 7	1,652,137,698	3,335,039,829	4,987,177,150
Cluster 8	5,719,982,554	11,307,401,209	17,027,379,668
Cluster 9	8,493,443,930	17,098,397,744	25,591,838,413
Cluster 10	3,188,239,402	6,431,667,717	9,619,906,343

Cluster 11	7,321,919,265	14,302,240,447	21,624,153,203
Cluster 12	278,641,413	558,518,088	837,159,501
Manual Redemptions		18,233,688,412	18,233,688,412
Total	43,791,984,124	105,170,559,362	148,962,519,757

Source: MAAIF Report, 2023; Field Findings

Farmers were increasingly provided with improved agricultural inputs and the increment of redemption (Figure 3.5) was attributed to: i) continued sensitization and mobilization through community-based facilitators and local leaders, ii) visible benefits from the use of critical inputs such as seeds, fertilizers and tarpaulins, iii) confidence by farmers in the e-voucher system since it offers a cashless transaction (a farmers deposits his/ her contribution on a mobile money account and then transfers it to the e-wallet at redemption), iv) visible storage facilities and machinery through matching grants activities, v) increased knowledge on system use for redemption among others.

Figure 3.5: Type of ACDP Inputs redeemed and utilized by farmers by 30th June 2023



Source: MAAIF, ACDP Report 2023, Field Findings

By 30th June 2023, out of the planned 350,000 Macadamia and 833,333 Hass avocado seedlings, NAADS had delivered and distributed 137,031 seedlings of Macadamia to establish 1,370 acres for out growers/associations in 53 DLGs and 432,106 Hass avocado seedlings to establish 2,700 acres for out-grower farmers/associations in 90 DLGs. This was under the Nucleus Farmer Partnership Strategy for promotion and scaling up Macadamia and Hass avocado. However, fewer seedlings were distributed as funds were partially refocused on the procurement of seeds for the emergency food security intervention in the Karamoja sub-region and the Regional Farm Service Centre in Nakaseke District. The secured and delivered seed included; cowpeas (30,845kgs to 1,234 acres), simsim (13,995kgs to 4,665 acres), terperly beans (30,99kgs to 1,033 acres), green gram (34,275kgs

to 1, 714 acres), sorghum (72,531kgs to 24,177 acres), and a total of 1,496,500kgs of maize seed delivered to the respective constituencies.

Correspondingly, out of the planned 100,000kg of sunflower and soya seed, NAADS surpassed the target and distributed 74,971kgs of sunflower seed targeting eight large-scale farmers, and 29 farmer cooperatives also delivered 499,588kgs of soya bean seed for the establishment of 20,816 acres for 24 large-scale farmers and 19 farmer cooperatives in the districts of Acholi and Lango sub-region, reasonably less sunflower seed was procured compared to soya bean seed, this was due to increased farmer demand in the region. Outstanding arrears amounting to Ug shs 12,000,000,000 on tea seedlings for 703 nursery operators were settled from the nine districts of Kisoro, Kabale, Rubanda, Rukiga, Kanungu, Rukungiri, Ntungamo, Rwampara, and Mitooma.

Examples of inputs distributed to the farmers under the different interventions including NAADS/OWC, CDO, and UCDA among the monitored districts.

By 30th June 2023, the overall distribution of priority and strategic agricultural inputs to farmers and farmer groups across the country was undertaken by various programmes including NAADS, NOPP, CDO and UCDA. Examples of inputs accessed by farmers are presented in Table 3.12. Key constraints encountered included: a prolonged dry spell that affected germination of the seedlings; untimely delivery of inputs; inadequate quantities received than allocated especially for food security items; climate change with unpredictable weather patterns; distribution cycle for agricultural inputs to farmers in various parts of the country and reluctance of some targeted beneficiary farmers to contribute/ co-fund 30% (NAADS) of the seed cost for the seed and seedlings provided for sunflower, soybean, macadamia and Hass avocado.

Table 3.12: Access to agricultural inputs by farmers as at 30th June 2023

Beneficiary	Location	Intervention	Input accessed	Remark/Challenges
Okello Emma	Village: Barongen Sub-county: Railway District: Lira City: Lira City East	CDO	Cotton seed: 20bags Pesticides: 100 units Spray pumps: 3	<i>Lower production was attributed to the late delivery of inputs (seed, pesticides) by CDO. The pesticides were not effective thus he had to incur an extra cost to acquire more from the market. The spray pumps received required manual spraying of the entire garden which was expensive and frustrating.</i>
Ayesiga Wycliff	Village: Bugana Parish: Kasingo Sub-county: Busiisi District: Buliisa	CDO	Cotton seed: 25bags Pesticides: 50 units	<i>Pesticides were delivered during a dry spell thus he could not use them, and this was likely to affect his expected harvest.</i>
Nalubujje Immaculate	Village: Bugana Parish: Kawoko Sub-county: Butenga District:	UCDA	Pesticides: 101sachets Pruning saw	<i>She was selected as a coffee demo host in the parish where other farmers trained from her demo garden of 4 acres. She harvested 12 coffee bags from one acre</i>

Beneficiary	Location	Intervention	Input accessed	Remark/Challenges
	Bukomansimbi			<i>in the main season which was considered profitable.</i>
Onesimus Masiko	Village: Kisenyi Parish: Nyakitojo Ward Town Council: Kyarusozi District: Kyenjojo	NAADS	Hass Avocado: 2,800 seedlings	<i>The seedlings distributed were of good quality with no defects. However, 20% loss was attributed to drought. His main challenge was the uncertainty of the readily available market.</i>
Mrs Justine Babirye	Village: Buyongo Parish: Nsala Sub-county: Rwamata District: Kiboga	NAADS	Macadamia: 750 seedlings	<i>Seedlings were received late when the rains had stopped. Her main challenge was watering the seedlings until they were due for transfer to the main garden.</i>
Namwande Judith	Village: Twoje Parish: Namugombe Sub-county: Nairambi District: Buvuma	NOPP	Farming input seedlings: Cabbage, Tomatoes Eggplant Carrots, Onions	<i>Her garden was doing very well except for cabbages that dried due to pests (black lot). This farming helped her with food security and other domestic needs after selling her produce.</i>
Nanteza Yvonne	Village: Twoje Parish: Namugombe Sub-county: Nairambi District: Buvuma	NOPP	Farming input seedlings: Cabbage, Tomatoes Eggplant Carrots	<i>The inputs received were of good quality. She had started harvesting at the time of monitoring, this assisted her in maintaining food security in her home and also sold the rest at a local market.</i>

Source: Field Findings



Hass ovacado nursery under MUSUBI Farm in Bukoto Parish, Bukaboli Sub-county, Mayuge District

b) Oil palm seedling nursery established and planted

The NOPP mobilised 7,450.4ha, of which 1,442ha and 1,370.3ha of smallholder oil palm plantations (OP) had been cumulatively planted in Buvuma and Kalangala districts respectively. A total of 1,944.91 ha of nucleus estate OP plantation were established in Buvuma, including 1,119,373 seedlings on 14.68 ha of nursery. Three Oil Palm Growers (OPG) were established and supported in Kalangala, Buvuma and Mayuge districts, although 2425.5ha mobilized for palm planting in the hubs of Mayuge, Bugiri and Masaka had not been established. Impartial performance was as a result of the prolonged delay in reimbursement of land clearing and maintenance funds to farmers which affected more pledges of farmland and off-take of seedlings from the nursery.

In addition, 72.6ha of degraded area had been replanted with trees of which 30.6ha in Buvuma Hub and 42ha in Kalangala Hub. The establishment of a tree nursery was ongoing at Namunyolo Local Forest Reserve. The NOPP supported oil palm farmers with 538.9MT of various fertilisers for proper management of the orchards (Table 3.13). Environmental and Social Impact Assessments (ESIAs) for Mayuge and Masaka hubs were completed and submitted to the National Environment Management Authority (NEMA) for approval.

Table 3.13: Summary inputs distributed to farmers by NOPP from June 2021 - June 2023

Agro-chemicals (fertilisers and pesticides) Application						
Input	2021	2022	2023		Totals	
	Jan - Dec	Jan - Dec	Jan - March	Apr-Jun		
Rock phosphate (Kg)	60,724	72,997	13,277	20,652	167,650	
NPK (Kg)	22,577	149,288	31,863	57,480	261,208	
Dolomite (Kg)	5,490	68,137	6,923	10,242	90,792	
Kieserite (Kg)				17,980	17,980	
NK3 (Kg)				1,272	1,272	
Chloropyriphos (L)		876	200	100	1,176	

Source: MAAIF, NOPP Report, 2023; Field Findings

The MAAIF undertook four field inspections of livestock inputs in the central region. Border, zonal and abattoir inspectors were facilitated to undertake verification and inspection of animals, animal products, veterinary supplies and feeds at the 10 ports of entry/exit, five zones and four export abattoirs. Enforcement of animal movement control regulations along 13 national stock routes was carried out; supervision of inspection and certification activities at 10 point of entry/exit was conducted.

In addition, a total of 2,300 acres of certified rice seed fields at different stages were inspected for compliance with the certification standards which increased the access to certified rice seed amongst farmers in Kasese, Butaleja, Nwoya, Lira, Nakaseke, Amuru, Bulambuli, Hoima, kakumiro, Kibale, Bugiri, Tororo, Budaka, Bukedea and Dokolo. Correspondingly, a total of 1,350 acres of rice seed in Kasese, Bukedea, Amuru, Nwoya, Budaka, Bugiri, Nakaseke, Tororo and Butaleja were inspected. Activities of Uganda Veterinary Board of Licensing 500 veterinary

professionals, inspection and certification of 10 veterinary establishments across the country were supported by MAAIF.

c) Enforce pre-export verification for all agricultural inputs at source of origin

By 30th June 2023, UCDA conducted a stock verification at the exporter level where stocks stood at 800,001 bags (Robusta-597,918 & Arabica 202,083 bags). The fair average quantity (FAQ) out-turn ranged from 72-85%. However, constraints at the exporter level included: a) Smaller margin between local prices and international /export prices; b) High cost of doing business by exporters; c) War in Russia & Ukraine affected fuel prices & hence transport costs; d) Lack of empty containers for export; e) Price volatility & continued drop in the international coffee markets; f) Low screen retention (smaller percentage of screen 18).

The National Dairy Analytical Laboratory at Lugogo was recognized by UNBS for ISO 17025:217 Laboratory Quality Management System for three (3) years. The sub-sector registered exports to the tune of Ug shs 117.8bn with UHT milk, casein, butter, and milk powder as major products and Kenya, the United States of America, and South Sudan as major export destination countries. However, the poor release of all development funds caused a delay in the implementation of critical planned economic investments in the dairy industry, mostly rehabilitation projects and the acquisition of equipment. This created huge variances in the attainment of planned key outputs and related targets.

Challenges

1. Delays with the operationalization of the e-payment gateway limiting end-to-end connection in the M-Cash System. As a result, there were delays in the automatic transfers of funds from the project account to the farmer's e-wallet as per the project design.
2. Most people and farming communities are not aware of the recent NAADS interventions and inputs such as Macadamia and Hass avocado among others.
3. Inadequate quantity of planting materials/inputs supplied to the beneficiary farmers affected production, household incomes and food security. Most were delivered late and without advance notification to farmers leading to wastages.

Recommendations

1. The MAAIF and NITA-U should do E-Voucher System testing for sustainability and adaptability before use and fast-track operationalization of the e-payment gateway
2. The MFPED, MAAIF and programme agencies should re-purpose the funds for free inputs to the interventions under the PDM.

3.2.5 Access and use of water for agricultural production increased

Introduction

The Government planned to construct/develop and where applicable operationalize and manage irrigation systems to increase access to water for production for large and small-scale farmers. The intervention aimed to increase water for production storage and utilization as a driver for socio-economic development, and modernized agriculture as well as mitigate the effects of climate change. The prioritized sub-interventions focused on infrastructure development, and the establishment of sustainable management institutions aimed at ensuring the optimal use of the

newly developed infrastructure. This intervention is jointly implemented by the Ministry of Water and Environment (MWE), MAAIF and the DLGs.

The key annual planned interventions were:

- i) New large, medium, and small-scale solar-powered irrigation schemes constructed
- ii) Dams and valley tanks for livestock watering constructed
- iii) Sustainable Management Institutions for effective utilization of WfP facilities established

Performance

Good progress was made in the establishment of water for production facilities in the various parts of the country. Some of the established systems such as Ngenge and DohoII were already operational while many others such as Acomai and solar-powered irrigation systems were still under construction or establishment. There was equitable distribution of valley tanks and dams by MAAIF in the four regions of the country, with the most established volume being in the North/Karamoja region.

The establishment and use of the schemes were constrained by especially delayed payments of PAPs, and securing right of way (RoW); low functionality of some schemes due to lack of maintenance budgets and weak governance structures; poor planning; low readiness of institutions to implement public-private partnerships (PPPs) and poor coordination between MAAF and MWE. The detailed performance of the different water for production facilities is further discussed hereafter:

i) New large, medium and small scale solar powered irrigation schemes constructed

Large (Over 1,000ha), and Medium (100-1,000ha) scale irrigation schemes

Monitoring was undertaken for Acomai, Ngenge, Doho I and Doho II, Wadelai, Rwengaju and other MWE facilities. The performance of construction, rehabilitation and maintenance of large and medium-scale schemes was fair with some of the facilities already under use for commercial production. The main challenges were: lack of operational funds to maintain the schemes; low access to water by farmers in drought seasons; poor functioning cooperatives that had limited experience and resources to manage the schemes; lack of extension services and post-harvest handling facilities for the increased harvests; and the delayed or non-payment of staff managing the schemes.

Acomai Irrigation Scheme

By 19th July 2023, civil works for the Acomai Irrigation Scheme in Bukedea and Bulambuli districts were at 40% progress against a time progress of 67% and 90% of the PAPs were compensated. Progress of works was as follows: two out of six secondary canals were at 100% and 50%, respectively; Head works at foundation level (29%); 8.4km of scheme roads (100%); storage building (42%); residential buildings (69%); drop structures (66%); flood protection works (89%); storage tank (excavation 88% and embankment filling and compaction 16%) and office buildings (72%).

The project contract period is October 2021 to October 2023. It was noted by the joint supervision mission that the project would not be completed in time and the contractual period was extended to August 2024. The project financing was drawn from the AVCP in MAAIF and the contractor was

DOTT Services Ltd and Coil Limited JV and the Consultant was Yerer Engineering PLC in association with ACES Consulting Group Ltd.



L-R: Ongoing construction of the head works and completed secondary canal at Acomai Irrigation Scheme in Bukedea District

The delays in physical works were due to: i) delayed compensation of the PAPs ii) heavy rains and flooding that brought works to a standstill iii) Delayed clearance and payment of certificates of completion by MAAIF by about five months. Community meetings were held by the DLGs to appeal to the PAPs to desist from destroying project works due to delayed compensation.

Ngenge Irrigation Scheme

Ngenge Irrigation Scheme in Ngenge Sub-county, Kween District was rehabilitated on 16th October 2017 and 15th November 2020 at a value of Ug shs 39.906bn by MWE. The scheme covers 880 hectares of which 780 hectares are irrigable. The scheme was operationalized in April 2020, occupied by 1,052 farmers, managed by the Irrigation System Operator (ISO) from Rein Technical Services Ltd, Ngenge Growers Cooperative Society and the Irrigation Water User Association (IWUA). The scheme was monitored to assess its functionality post-construction.



A demonstration host farmer Kiplagat Sharif managing one acre of rice in Ngenge Irrigation Scheme in Kween District. His main challenges were inadequate water in some months due to inefficient management of the scheme; and lack of extension workers to share information on improved agronomic practices

The main crops grown in the scheme were maize (50%), rice (25%), sunflower (15%) and horticulture (10%). Crop production and productivity and profitability were relatively lower due to the use of local seeds, limited use

of fertilizers and pesticides and poor post-harvest handling.

Despite these challenges, crop productivity in the scheme increased over the years due to farmers' access to water for production: un-milled rice rose from 1,500kg per acre before irrigation to 2,500kg per acre after access to irrigation services. Similarly, maize yields increased from 500kg per acre to 2,000kg; production of horticultural crops such as onions and watermelon increased from as low as 1,000kg per acre to an average of 3,500kg per acre.

The functionality of the scheme was estimated at an average of 50% with variations in the rainy season (100%) and dry season (10%). There were fluctuations in water flow in various parts of the farm due to deforestation uphill; system design constraints of inadequate reservoirs and night storage capacity; more than 80 acres were flooded as the dykes had broken down, about 200 acres could not access water as their fields were not levelled and cattle keepers from Sebei and Karamoja regions that grazed the canal areas causing siltation.

Other key operational challenges were: broken slabs in some parts of the scheme and silted canals due to lack of maintenance budgets and failure by farmers to desilt the tertiary canals to their farmlands; lack of safety on roads near canals as there were no protection rails; only 20 (1.9%) of the farmers paid water user fees; and lack of drying yards to handle the increased production.



L-R: broken slabs were common in many parts of the scheme structures and silted auxiliary spillway at Ngenge river head works

There was a lack of clarity on the contractual arrangements between Rein Technical Services Ltd and MWE for the operations, maintenance and management of the scheme. The company had a six months' expired contract (April to October 2020) where MWE was paying Ug shs 17 m per month to the service provider for operations and maintenance of the scheme. At the end of the contract, MWE informally (as documents were not available) asked the company to continue managing the scheme. The company continued overseeing operations for 33 months to date without payments. The company wrote to MWE asking for a renewal of the contract and payment of outstanding areas. The risk is that this company was physically in charge of all Government assets on the scheme, staying in the managers' houses and offices without a contract. The scheme assets may be lost as the company tries to recover its debts.

Doho II Irrigation Scheme

Located in Kangalaba Parish, Himutu Sub-county, Butaleja District, Doho II Irrigation Scheme was operational with 3,011 farmers (965 females, 2,046 males) occupying 2,781 acres of land by 30th June 2023. The scheme was managed by Himutu Sub-county Doho II Rice Farmers Cooperative Society Ltd with 250 registered members (8.30% of total farmers), indicating the low reach of the Cooperative in terms of services to the farming community in the scheme.

Gender dimensions in access to water for production in the Doho II Irrigation Scheme

There were gender disparities in access to irrigation services in the Doho II Irrigation Scheme. More males (70%) were operating in the scheme than females (30%) for the following reasons: Most land in the scheme was owned or rented by men arising from two constraints: a) In Butaleja District, women traditionally did not own land, all land belonged to men. Women were apportioned land to grow maize and other crops for household food security while men had large acreages for growing rice for commercial purposes, b) few women had income sources to buy or rent land; those who owned land were widows or those employed elsewhere.

The women recommended that they should be offered training in financial literacy, supported through affirmative action with low-cost loans to enable them to hire land; and provided with improved seeds, fertilisers and extension services for high-income generating enterprises such as watermelon, cabbages and rice.

Source: Focus group discussion with 13 leaders in Doho Irrigation Scheme, Butaleja District

The charges for water use were raised from Ug shs 50,000 to Ug shs 100,000 per acre per year. Farmers' willingness to pay these charges for purposes of maintaining the scheme infrastructure was still low. By the end of the FY, payments were made for 35% of the acreage (973.35 acres) equivalent to Ug shs 97.335 million collected. Information was not available on accountability of how this money was used.

The scheme functionality was estimated at 75%, as 25% of the farmland could not be serviced with water as it was on high elevation and unevenly levelled while other sections were flooded. With the irrigation, farmer yields improved from 700kg per acre to 1,400kg per acre. The yields remained low as only 10% of the farmers used improved seed varieties and fertilisers which were highly priced. It was estimated that a total of 2,781 metric tonnes of rice were produced annually from the scheme.

Butaleja DLG received automated rice planters, harvesters and accessories that were donated from the MAAIF China South-to-South Project to the Doho II Rice Farmers Cooperative Society. The machines were not yet in use as the district and cooperative did not have the requisite capacity, resources and manpower to operationalize the equipment. They were still waiting for Chinese experts to build capacity in the local team. It was not clear who would maintain these machines and where the money would come from.



L-R: Automated rice planters and harvesters; and the accessories from the MAAIF China South-to-South project were in storage at Butaleja District Headquarters

Irrigation dam in Eastern Uganda

Under the MAAIF Enhancing National Food Security Through Increased Rice Production Project (ENRP), the GoU signed a contract in May 2013 (ending 13th October 2022) with the development partner Islamic Development Bank (IsDB) to construct an irrigation dam in Bugiri and Bugweri districts in the catchment lowland areas of Kitumbezi and Igogero (in Bugiri) and Naigombwa (in Bugweri) in Eastern Uganda. The project development objective is to increase production and productivity, mainly of small-holder rice farmers, by: a) Bringing into productive use 4,400ha of land brought under protective irrigation; b) Doubling the productivity of small-scale producers from a national average of 2.5 tons/ha to 5 tons/ha; c) Facilitating the development of agro-processing and marketing for rice output from small scale producers.

The project became effective on 20th October 2016 but failed to take off for eight years due to the following challenges: a) withdrawal of the private sector player (Tilda Uganda Ltd) after having failed to find consensus on the agreement with the Government. This resulted in a project re-scoping exercise and search for other partners to execute the public-private partnership; and b) COVID-19 travel restrictions affected and delayed consultations and training of farmer groups; c) Low project readiness at the time of project effectiveness; the project did not have feasibility studies in place before loan signature; and d) delays in approval by IsDB team due to the absence of a physical office in Uganda. The project completion date was revised to 31st December 2023.

By 30th June 2023, USD 7.278 million (21%) of the total loan project amount of USD 34.050 million had been disbursed which was a poor performance. Due to inadequate available funding, the project was scaled back to one dam. The average project physical performance for the project was poor estimated at 31% against a time progress of 94% (Table 2). Site mobilization was at 25% progress as well as geotechnical mapping surveys. There is a high probability of project cost overruns and the intended project development objective of doubling the rice production per hectare, facilitating agro-processing and rice marketing may not be achieved in the stipulated project period.



Some of the machinery on site at the contractor's camp for the ENRP Project in Bugiri District

Evaluations were done for PAPs situated in the area where the dam is to be constructed (660 acres) and disclosures were made of the compensation amounts; 75% of the PAPs accepted valuations and the process of negotiations was continued. A total of 220 farmer groups were trained in both Bugweri and Bugiri districts by MAAIF and the Ministry of Trade, Industry and Cooperatives (MoTIC). Detailed studies, engineering designs, tender documentation, and baseline surveys were completed. A PAPs Valuation Report was completed and approved by the Chief Government Valuer. The total compensation award was Ug shs 14,129,882,817 for 1,943 acres. Geotechnical investigations were ongoing to map the boundary areas of the main canal. However, the right of way was denied by PAPs to map 8.4km in the four villages of Nambale, Kataaala, Nakasubi and Buwaaba as they demanded compensation to be paid first.

Atari Irrigation Scheme

Through the MAAIF Project on Irrigation Scheme Development in Central and Eastern Uganda, the GoU commenced in 2012 to establish the Atari Irrigation Scheme in Bulambuli and Kween districts without success. The project completion date was revised several times and the intervention was in phase II (2018-2023). With funding from the Japan International Cooperation Agency (JICA), the project aimed at developing irrigation schemes in Central and Eastern Uganda for improved rice production and household incomes. The project progress was at 20% since 2012.

The Resettlement Action Plan (RAP) feasibility study reports, EIAs and property valuation report were completed. A project office was established in Bulambuli District in July 2022, and training of farmers and stakeholder engagements in Bulambuli and Kween districts had commenced. Most of the prior conditions for triggering the disbursement of funds from JICA had not been fulfilled and were considered unattainable by MAAIF project managers. The consultant and contractor who were supposed to be sourced from Japan had not yet been procured by 30th June 2023.

The condition of securing all land and paying off all PAPs before project commencement was not met due to budget constraints. Twenty-three out of the 163 PAPs were not yet compensated. The target was to build the irrigation infrastructure on 630 hectares. However, due to the protracted delays and time loss of more than 10 years, the value of the JICA grant had reduced. Consequently,

the project was re-scoped to cover 165 hectares (26.19%). The impact of the project would be significantly reduced with the scaling back of coverage.

It was unlikely that this project would be completed by the revised end date. It is recommended that the prior conditions should either be relaxed to allow implementation to proceed or the project should be cancelled.

Ministry of Water and Environment Irrigation Schemes

The MWE planned the construction of 10 schemes⁷. By 30th June 2023, works for three ongoing schemes monitored were at the following completion levels: Namaitu was at 30% physical progress; Wadelai was at 90% completion, and Kabuyanda had just commenced mobilisation. The remaining seven schemes were pending detailed design completion, PAPs compensation and the finalisation of environmental and social safeguards plans. The completion of Wadelai was long overdue as the contractor slowed the pace of work for unclear reasons.

Development of the Igogero-Naigombwa Irrigation Scheme in Bugiri and Bugweri districts was at less than 10% progress (equipment mobilization and geotechnical mapping surveys ongoing) against a project time progress of 90% as at 30th June 2023. The project performance was affected by the withdrawal of one of the collaborators, and the delayed compensation of PAPs.

The Rwengaju Irrigation Scheme was complete and the Dott Services handed over MWE on 8th February 2023 upon the expiry of the Defects Liability period. The handover was however made with some sections in the catchment area not accessing water for production and some leakages on the distribution lines. Specifically, Rwebitaba Zonal Agriculture Research and Development Institute located in Kyembogo Village, Rwengaju Parish, Rwengaju Model Sub-county in Kabaloro District was not receiving water from the scheme. In addition, the contract for the Irrigation Systems Operator (ISO) expired in May 2022 and had not been renewed as at 9th February 2023 which was irregular and compromised the effectiveness, efficiency and zeal of the ISO staff who continued to receive half their pay due to limited cash flows.

As at 9th February 2023, a total of 350 farmers were connected to the scheme excluding the illegal connections against the initial target of 100 farmers. The legal connections were required to pay Ug shs 6,000 as a service charge and Ug shs 730 per Unit consumed. The beneficiaries noted that increased access to water for production supported commercial agriculture and diversification; the ability to farm all year round due to reduced reliance on direct rain in season, and reduced distance to water source.

Mr. Baguma David of Kyakakere Cell, Bwabya Parish, Rwengaju Sub-county for instance diversified into livestock, horticulture, and pasture growth. Expanded from subsistence to commercial growing of pineapples. Another farmer Mr. Vicent Asiimwe a 50-year-old noted that “we were worse off before receiving this water. I had to ferry water on the bicycle as my children were at school.”

⁷ Kabuyanda (Isingiro), Matanda (Kanungu); Unyama (Gulu), Sipi (Kapchorwa), Namaalu (Nakapiripirit), Namaitu (Bududa), Wadelai (Packwach) and in the districts of Butebo, Namisindwa, and Soroti.

To support farmers to store and bulk, cold rooms were established at the Rwengaju Irrigation Scheme. These were however not utilized as farmers were yet to be fully organized to start collective bulking.

Key challenges

- Limited reliability of water for production especially during the dry season.
- Vandalism and pipe breakages.
- Untimely payment of water bills.
- The households use the water for domestic purposes and not for production purposes making it harder to pay.

Wadelai Irrigation Scheme in Packwach District

The works contractor is Coil Construction Company Ltd, supervised by BEC Engineers. The construction contract period was from 23rd November 2018 to 23rd November 2020. This was extended to 23rd November 2021. Due to delays in land acquisition and the RAP. As at 16th January 2023, the construction of the Wadelai Irrigation Scheme was ongoing but behind schedule at 86% physical progress, and 83% financial progress. The slow progress was attributed to the delayed conclusion of the RAP and the limited capacity of the contractor.



Casting a section of the main canal in Ragem, Packwach District

The substantially completed works included: The head works, scheme buildings, earth dam, main canal, and secondary canal (1). pending works included: secondary canals (4&5), equipment (motorcycles, computers, tools), and sanitation facilities among others.

Tochi Irrigation Scheme in Oyam District

The construction of the irrigation scheme was completed in FY 2021/22, and the scheme began operation. However, the scheme developed challenges of flooding in farmers' plots. An assessment was done which determined that there was inadequate water flow along River Tochi. Thus a contract was awarded to Ambitious Construction Company Ltd to undertake dredging/widening of the river bank. As at 18th January 2023 field findings, the works were ongoing at 24% physical progress.



Dredging of River Tochi in Oyam District

Recommendation

The MAAIF and MWE should prioritise funding for the maintenance of irrigation schemes and expanding water reservoirs in areas prone to drought and water stress.

Solar-powered small-scale irrigation schemes (5-100ha): Both MWE and MAAIF-NAADS established solar-power irrigation systems in various parts of the country.

Ministry of Water and Environment: A countrywide completion of the development of over 150 solar-powered Small-Scale Irrigation Schemes (SSIS) was planned. However, the general performance was fair with completed schemes like Lutente in Kalungu, Apuwai in Tororo and Mpumudde in Lwengo, and some substantially complete such as Tangi in Nwoya and Opapa in Serere, where vegetables and fruit trees were being watered. Other schemes monitored progressed as follows: Zigoti (70%) in Mityana, Katakala (5%) Rwemivubo (60%) in Mubende, Awal Aboro (30%) in Gulu and Orama Tebung (90%) in Agago District. Table 3.14 shows the performance status of the facilities monitored.

Table 3.14: Status of MWE Water for Production facilities by 30th June 2023

No.	Name of scheme	Location	Acreage	Status and remarks
1	Orama Tebung Small-Scale Irrigation Scheme	Patongo Town Council (Agago District)	7.5	The scheme was 90% complete, with the water source (a valley tank), solar energy package, reservoir tank, latrine, and nursery among others completed. Work in progress was the installation of the drip irrigation lines. Mobilisation of beneficiary farmers and ploughing of plots was pending.
2	Kabos Small Scale Irrigation Scheme	Bugondo Parish, (Serere District)	12	Physical progress was 30% complete. The reservoir tank tower, pump house and bases for the solar system were constructed, but with poor quality works. Supervision was inadequate owing to the increase in the number of sites yet with one clerk of works.
3	Pajukwi Small Scale Irrigation Scheme	Kalawang Parish (Nebbi District)	4.62	Approximately 20% of the work was completed including the reservoir tank base, pump house, and bases for the solar energy package. However, the quality of work was poor due to the hire of an incompetent subcontractor, whose contract was terminated and the defects were being rectified.
4	Mokoloyoro Small Scale Irrigation Scheme	Logongangwa Parish (Adjumani District)	12.36	Works were 50% complete. The distribution and transmission mains were laid, reservoir tank stands erected, and works for the intake were ongoing. The works were progressing well. Approximately 20 households were to benefit from the scheme.
5	Awalaboro Small Scale Irrigation	Palaro Parish (Gulu District)	7	The scheme was 30% complete. This was to benefit a model farmer. The water source, solar energy package

No.	Name of scheme	Location	Acreage	Status and remarks
	Scheme and cattle watering troughs			and reservoir tank stands were completed. Casting of the cattle troughs was ongoing.

Source: Field Findings

The poor performance of the SSIS was attributed to poor coordination between MAAIF and the MWE; and inadequate planning where a countrywide implementation of 150 SSIS in a single FY would be difficult to achieve with limited staffing, and technical and financial capacity for the contractor. Consequently, instances of substandard work were noted in Kabos SSI (30%) in Serere District, and Pajukwi SSI (20%) in Nebbi District, during monitoring in August 2023. In other cases, sites were abandoned due to delayed payment of the sub-contractors or the same contractor handling another site.



L: A tomato garden at Apuwai SSI in Soroti District; A cabbage garden at Opapa SSI in Serere District



Reservoir tank tower for Mokoloyoro SSIS in Adjumani District; Cattle trough construction for Awal aboro SSIS in Gulu District

Challenges for solar-powered small-scale irrigation schemes

1. Cost overruns. As at June 2023, the GoU counterpart funding of the Irrigation for Climate Resilience Project was overshoot by USD 3.5 million (48%). This was expected to increase further given the high compensation costs. This is a risk for the government as more funds are required than budgeted for the project.

2. Limited coordination between MAAIF and MWE to undertake implementation under the Irrigation for Climate Resilience Project which is one of the poor-performing projects in terms of time spent and physical works. The MAAIF had failed to construct the small-scale irrigation schemes allocated to it.
3. Limited capacity to undertake implementations, especially under the Development of Solar Powered Irrigation and Water Supply Systems Project, where there was a single clerk of works supervising a wide area of intervention. Hence poor-quality work was noted on some sites.
4. Inadequate stakeholder engagement, monitoring and supervision especially for the Development of Solar Powered Irrigation and Water Supply Systems project, which lacked budgetary provisions for the client (MWE).
5. Procurement delays for schemes of Kabuyanda and Matanda. These arose from the bidder's contestation, slow evaluation processes, and non-finalisation of detailed designs, resulting in low absorption of external financing.

Recommendations

1. The MWE should re-scope or restructure the Development of Solar Powered Irrigation and Water Supply Systems Project to reflect activities that can be realistically undertaken within the estimated project cost and time.
2. The MWE and MAAIF should adhere to the prevailing policy and guidelines for the implementation of irrigation schemes to avoid in fights for control of resources.
3. Both the contractor and consultant should review the work method, and increase the staff capacity through hiring of additional staff for timely execution of the works in the Development of Solar Powered Irrigation and Water Supply Systems Project.

The **National Agricultural Advisory Services (NAADS)** supplied and installed 17 solar-powered mini-irrigation systems to farmers and institutions. However, the installed systems lacked batteries and inverters. Some of the systems lacked a water storage tank and irrigation accessories. The procurement processes were lengthy thus delaying the establishment of the systems which continued in FY 2023/24. The solar water pumping interventions were established in Kabarole, Rubirizi, Katakwi, Abim, Kween, Kassanda, Wakiso, Isingiro, Kiruhura, Luuka, Lyantonde, Mityana, Omoro, Nwoya, Nakaseke and Terego districts.

Marianna Farms in Katinya Village, Barlyec Parish, Nwoya District got a solar-powered drip irrigation system in May 2023. The system was installed in two acres of the coffee plantation but was not operational by 14th July 2023 as the tank, pipes and pumping system had not yet been delivered.

A farmer in Kapkorosol Village, Kwosir Parish, Kween District benefitted from a solar-powered irrigation system in October 2022 that was installed on three



NAADS solar powered irrigation system was installed in Kween District and was functional

acres and was functional. In the first season, it was used to produce horticultural crops on a pilot basis.

The soybean breeding programme at Makerere University Agricultural Research Institute, Kabanyoro received a solar irrigation system (30 solar panels of 545 watts' capacity each, 3 phase submersible pump, sprinkle irrigation and 110,000 ltrs tank+ stand). The system was operational and covered 16 acres of soybean. However, the system did not have an inverter or batteries and as such the pump could only function when there was sufficient sunshine; and the beneficiaries had no input regarding the specifications for the irrigation equipment and hence, they were not sure of their entitlements.

Gayaza High School in Wakiso District received components of a solar irrigation system (15 solar panels of 410 watts' capacity each, a 10,000 ltr water tank and a pump). The solar panels, pump and water tank were installed however, water delivery pipes were not provided thus the system was not operational. The beneficiary institution had no input regarding the specifications for the irrigation equipment they were getting and hence they were not sure of their entitlements and when the other desired components would be delivered and installed.

Installation of smallholder coffee irrigation models under the Agricultural Cluster Development Project was ongoing at 12 farms in five districts⁸.

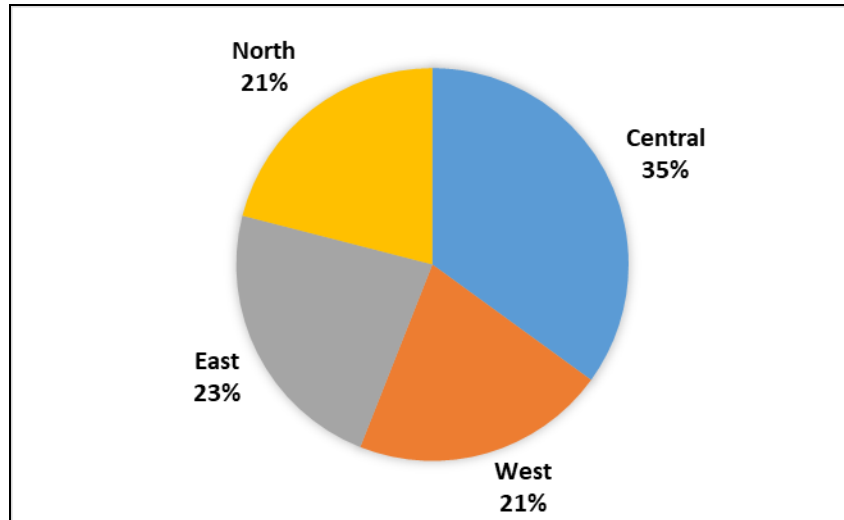
Dams and valley tanks for livestock watering constructed

Valley dams and tanks were constructed countrywide by MAAIF, NAADS and MWE. By 30th June 2023, the MAAIF Improving Access and Use of Agricultural Equipment and Mechanisation through the use of Labour Saving Technologies Project established 157 water for-production facilities (valley tanks, fish ponds, dams) countrywide out of the planned 300. The total installed volume was 11.134 million cubic metres of water for production. There was an equitable distribution of water for production, as shown in Figure 3.6.

There was affirmative action for the North and East that were previously disadvantaged in the past years in terms of access to water for production. More than 40% of the established water capacity (3.664 million cubic metres) was in Northern Uganda and 9.31% (1.037 million cubic metres) was in Eastern Uganda.

⁸ Kasanda, Hoima, Kikuube, Bukwo and Masindi.

Figure 3.6: Distribution of water for production facilities by MAAIF by 30th June 2023



Source: Field Findings

Under the MWE, the planned completion of Kyenshama (Mbarara) and the commencement of Kyemamba (Lyantonde) were not achieved. Kyenshama attained an 88% completion level, with the contractor seeking a three-month extension. The major impediment was the floods caused by heavy rains which affected the pace of work. The construction of Kyemamba did not commence due to delayed design completion.



L-R: Overview of the dam and spillway; Culvert works ongoing at the access road destroyed by the floods at Kyenshama dam

One (Aleles Valley Tank in Katakwi District 60,000m³ capacity) out of 20 livestock watering facilities earmarked for development was completed and functional. The construction of 12 valley tanks was ongoing, while the remaining seven did not commence due to funding constraints.



Aleles Valley Tank in Katakwi District

ii) Sustainable Management Institutions for effective utilization of WfP facilities established

These comprise Water User Management Committees (WUCs) established for new irrigation facilities, while old non-functional committees are revitalised for effective management. Some WFP facilities monitored like Aleles Valley Tank, and Apuwai SSIS had new committees formed and community engagements were ongoing for Orama Tebung SSIS. Old facilities such as the Kagango Valley Tank (120,000m³) in Isingiro District had valves and taps broken an indicator of non-functional committees. The committee became inactive owing to the voluntary nature of their work. Noted was the limited community involvement and committee formulations especially under the Development of Solar Powered Irrigation and Water Supply Systems Project which did not have sufficient budget allocated for this output. Therefore, the sustainability of the schemes would be at risk unless a clear plan for the same.



Kagango cattle trough depicting lack of maintenance

Challenges

1. Poor coordination and readiness between MAAIF and MWE to implement the water for production interventions.
2. Low functionality of large and medium-scale irrigation schemes due to lack of maintenance budgets and inadequate capacity for governance by the cooperatives.
3. Low readiness for implementing PPPs by MAAIF leading to time and cost overruns.

Recommendations

1. The MAAIF and MWE should aim to strengthen inter-agency coordination and readiness to implement water-for-production interventions
2. The MFPED, MWE and MAAIF should prioritise sufficient funds for maintaining irrigation schemes.

3.2.6 Access and use of agricultural mechanization increased

The Government aims to enhance agricultural production and productivity and commercialisation by increasing farmers' access to agricultural mechanization services. During FY 2022/23, the GoU focused on implementing two outputs in this area: i) Expand and equip regional agricultural mechanization and services centres, ii) Establish appropriate public and private financing options for agricultural mechanization. One output i) was monitored. There was a lack of data for a comprehensive assessment of output ii).

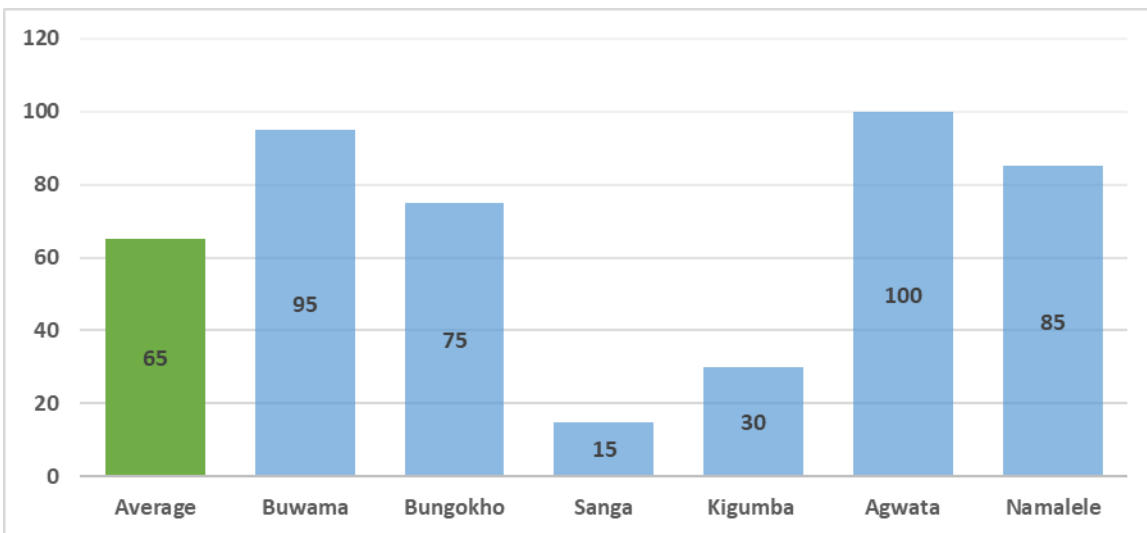
Performance

i) Expand and equip regional agricultural mechanization and service centres

a) The 5 regional centres in Kiruhura, Mbale, Kiryandongo, Agwata, Buwama and Namalere National Referral Agriculture Mechanization Centre constructed and equipped

Overall progress averaged 65% by 30th June 2023 at different sites. The performance varied with Buwama in Mpigi District at 95% completion which was not operational as yet. Equipping the workshop was not done awaiting the FY2023/24 budget. However, the installed shutters at the Buwama centre were not of quality as they were hollow doors imported from China with a short lifespan. Mbale-Bungokho at 75%, Kiruhura-Sanga at 15%, and Kigumba at 30%. Renovation works at the National Referral Agriculture Centre in Namalele, Wakiso District at 85% and the Agwata Station in Dokolo was completed and equipped with 9 tractors though awaiting a thorough equipment installation (Figure 3.7).

Figure 3.7: Progress of mechanization establishment by 30th June 2023 (%)



Source: Field Findings, MAAIF Progress Report

The delayed payments to the service providers mainly contributed to stalled works at Mbale-Bungokho and Buwama, as contractors were off-site at the time of monitoring. Mobilization of contractual works was low at Sanga Station and had only completed the holding ground, supply of materials and geotechnical test of the foundation. The MAAIF however deployed tractors intended

to be hosted at the Sanga Mechanization Workshop before the commencement of works and were at the time being stationed at Sanga NAGRC&DB Field station.



Mechanization workshop in Mbale with some of the materials laid off on site

b) Tractors and implements delivered and distributed by MAAIF

The ministry acquired 274 tractors and matching implements against the target of 180 tractors. The tractors were delivered and assembled at the National Referral Mechanisation Centre in Namalere. The MAAIF also acquired 450 walking tractors and a complete set of heavy earth-moving equipment to increase the area under cultivation from the current 35% to 60%. The tractors were delivered to varied beneficiaries while others were yet to be distributed to farmers' groups and were temporarily kept at the Namalere National Referral Mechanization Workshop.



Clockwise: Tractors, implements, and excavator/dredging equipment at Namalere National Referral Mechanization workshop



c) Tractors and implements delivered and distributed by NAADS/OWC

A total of 25 units of tractors with matching implements for beneficiaries were procured and delivered in the districts of Kanungu, Ntungamo, Isingiro, Bugiri, Gulu, Iganga, Amuru, Napak, Kiruhura, Ouke, Buvuma, Agago, Lira, Kyenjojo, Kiryandongo, Napak, Rubirizi, Mabara,

Mitooma, Kiboga, Wakiso, Oyam and Kitagwenda. Additional units of tractors and matching implements were procured in line with policy guidance. The delivered tractors were operational, the Operators were trained in the operation and basic maintenance of the tractors. However, funds earlier budgeted for the design and establishment of the Regional Farm Service Centre (RFSC) were utilized to support interventions for water for production and provision of tractors and matching implements due to the failure to declare land for the establishment of the RFSC in Kasese Agro-industrial and Business Park.

3.2.7 Farmer organizations and cooperatives strengthened

Introduction

The intervention has two focus areas namely: sensitizing farmers on the benefits of cooperating; and supporting up-coming farmer groups and cooperatives to effectively manage themselves. The intervention has four actions: i) Engage cooperatives and colleges of commerce to inculcate cooperative and entrepreneurial skills to the farmers and farmer groups; ii) Register and profile farmer organizations; iii) Register breeder associations; and iv) Undertake capacity assessment of farmer groups, identify and fill their capacity gaps. The planned outputs for FY 2022/23 included: a) Cooperative and entrepreneur skills inculcated to farmers and farmer groups and b) Farmer organizations registered and profiled. Annual monitoring focused on the two outputs. The detailed performance is presented as follows:

Performance

i) Cooperative and entrepreneur skills inculcated to farmers and farmer groups

By 30th June 2023, the MAAIF through ACDP supported capacity building for Farmer Organizations (FOs) by Enterprise Uganda and Uganda Cooperative Alliance to manage their business enterprises effectively and to scale up their operations. Activities included mentoring participating ACCEs, establishment of Productive Alliances to build market linkages and support to certification of products by FOs to enable them competitively penetrate better markets. This was done through providing onsite refresher mentorship sessions to 20 DLG teams/District Business Clinics (DCOs, Extension Officers, lead CBF, District Agricultural Officers (DAO) and 1,008 Farmer Leaders. Mentorship was ongoing with 114 Area Cooperative Enterprises/Rural Producer Organizations (ACEs/RPOs) (31.8%) at their premises in clusters 2, 3, 8 and 9. Fifty-nine ACEs/RPOs trained on offsite training for marketing managers and district teams (business clinics) in market readiness and acquisition of Q-marks.

The ACDP supported the supervision and appraisal of ongoing capital works (construction of storage facilities and installation of value addition equipment) for beneficiary ACEs under the Matching Grants Scheme and a total of 358 farmer organizations/groups received matching grants. These farming groups were mentored to manage business enterprises effectively and improve profitability. District and city leaders, the Production Sector Committee and the DCT Core Team Members from various DLGs did stakeholder monitoring for matching grant facilities and small farmer groups strengthened.

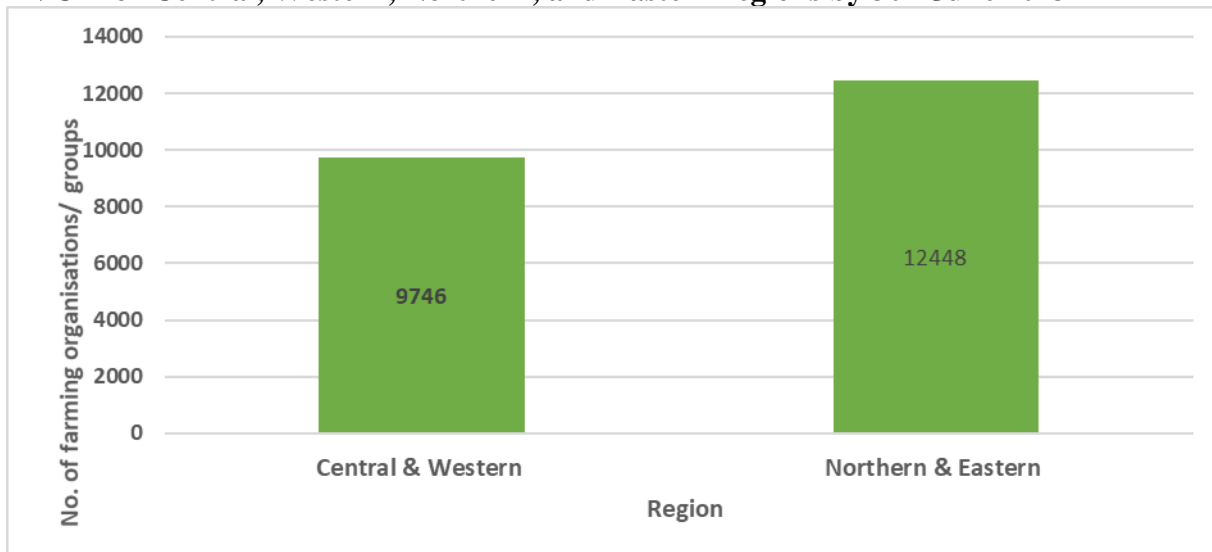
The agricultural extension staff visited farmer groups (FGs) to emphasize timely harvest, proper processing and storage, especially for grains. The market price for most of the crop enterprises remained relatively high with most fluctuations noticed in maize. For instance, in Masindi District, the PDM supported/trained 475 FGs in mandatory topics for farmer institution development, similarly 100 FO leaders were supported to build agribusiness skills and strengthen business linkages.

The MAAIF through the Uganda Multi-Sectoral Food Security and Nutrition Project (UMFSNP) had formed 3,000 Parent Groups (PGs), 2 PGs in each of the 1,500 primary schools) reaching 90,000 community members (60% women) for increased community-based multiplication and distribution mechanisms to increase access to improved micronutrient-rich planting materials. A total of 3,000 lead farmers (2 in each of the 1,500 primary schools) were trained and facilitated to participate in nutrition activities to set up community demonstration gardens at the community level.

ii) Farmer organizations registered and profiled

The Business Development Services (BDS) providers under the AVCP had identified, registered and mobilized 533,887 farmers (51% female) in 22,194 farmer groups across the project area. By region, 239,569 farmers (54% female) in 9,746 farmer groups/organisations were registered and received project services in Central and Western Uganda, while in the Northern and Eastern regions, 294,318 farmers (49% female) in 12,448 farmer groups/organizations were registered and received project services as shown in (Figure 3.8).

Figure 3.8: Farmer groups/organizations identified, registered, mobilized and trained under AVCP for Central, Western, Northern, and Eastern regions by 30th June 2023



Source: Field Findings

3.2.8 Systems for management of pests, vectors and diseases strengthened

Introduction

This intervention focuses on three areas namely: the development and equipping of infrastructure and facilities for disease diagnosis and control, development of human capacity for management of pests, vectors and diseases, and investment in agricultural drugs manufacture and distribution. Key activities included the construction and equipping of animal holding grounds and quarantine stations and distribution of vaccines to control the spread of epidemics and ensuring that all established infrastructures are maintained.

- i) Develop and equip infrastructure and facilities for disease diagnosis and control.
- ii) Develop human capacity for the management of pests, vectors and diseases.
- iii) Invest in agricultural drugs manufacture and distribution.

Performance

i) Develop and equip infrastructure and facilities for disease diagnosis and control

The MAAIF under the AVCP set out to construct animal holding grounds, quarantine stations and animal checkpoints, two zonal animal disease control centres in Lyantonde and Nwoya districts with an office block, animal clinic, laboratory, vaccine storage facility, holding area and other amenities.

As at 30th June 2023, the works at Got Apwoyo Zonal Animal Disease Control Centre located in Bar-lyec Parish, Got Apwoyo Sub-county, Nwoya District were 100% completed except for a few snags which were being addressed in the defect liability period. Completed works included the junior and senior staff quarters; administrative block plus laboratory; three stance and two stance toilets; foot and tyre wash; cattle crush and spray race; pump house, barbed wire fencing and water tank installation. The facility was completed and handed over to NAGRIC&DB, however, the facility remained with challenges of lack of operational costs and laboratory equipment. Over 150 barbed wire rolls were wasted, having been abandoned in the bushes.



Unmaintained, completed Animal Disease Control Centre in Got Apwoyo Sub-county, Nwoya District



Over 150 barbed wire rolls abandoned in bushes at Got Apwoyo Station, in Nwoya District

The Expressions of Interest for the design of the Kiruhura Zonal Animal Disease Control Centre were evaluated and the report was submitted to the African Development Bank for a “no objection”. The AVCP procured a consultant for design and construction supervision for the Kiruhura Zonal Animal Disease Control Centre in Western Uganda. The MAAIF handed over the site and the design process (geotechnical, topographical, cadastral, and hydro-geo investigations) was ongoing. Draft preliminary design reports were under review. The NAGRIC&DB had completed the evaluation of bids (awaiting contracts committee approval) for the rehabilitation of one National Semen Laboratory at the station in Entebbe to strengthen the cold chain system for the management of semen.

ii) Develop human capacity for the management of pests, vectors and diseases

The MAAIF Directorate of Crop Resources is mandated to manage and control crop pests, diseases and weeds in the country. Over 100 plant doctors in Central and Karamoja Sub-region and 75 youths and 48 Agricultural Officers across the country were trained in diagnosing problems with plants (plant doctors) for proper crop pests, disease diagnosis, effective control and operation of plant clinics.

Through good collaboration with the Food and Agricultural Organisation (FAO) and Centre for Agriculture and Bioscience International (CABI) development partners, the MAAIF acquired 18 plant clinics for Karamoja Sub-region. Also released over 1,300 parasitoid wasps for biological control of the mango mealybug (a new mango pest) in areas of Ntungamo District, Mirama Hills to curb the high pest infestation.

The Agricultural Cluster Development Project supported surveillance and mapping of fall armyworm (FAW) infestation and research on Integrated Pest Management (IPM). This was

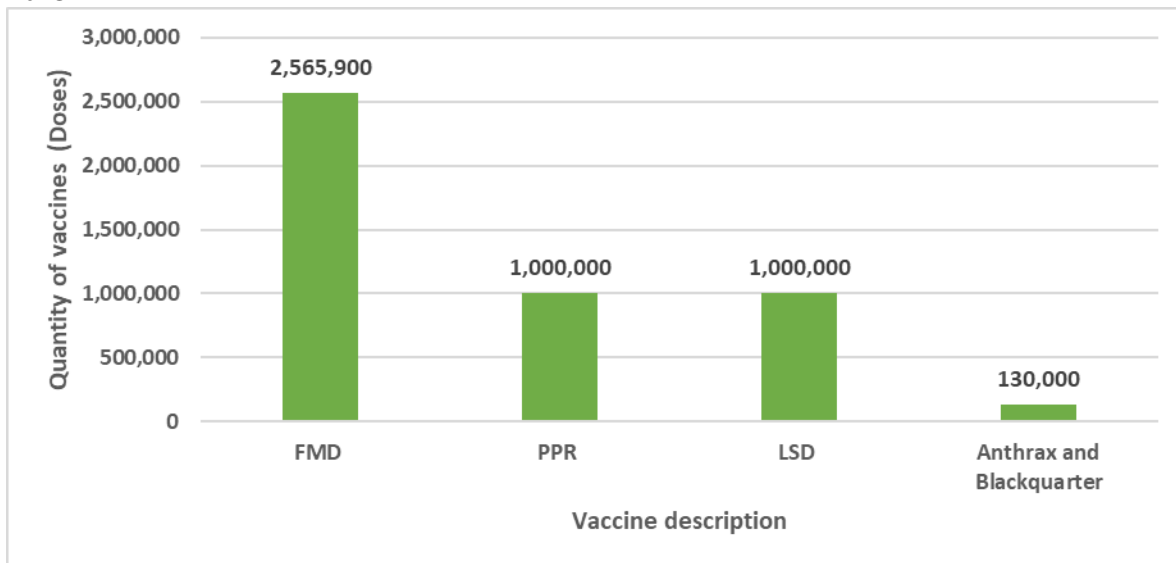
executed through the purchase and distribution of chemicals to combat the infestation during outbreaks. Correspondingly, the project trained 1,067 agricultural extension workers on FAW biology, ecology surveillance and control; mass production of natural enemies of FAW started and production was at 10,000 egg parasitoids per week with a target of 4 million egg parasitoids. The surveillance conducted in 32 districts for season 2022 A and B indicating that the average FAW incidence was at 58.75% and leaf damage at 2.3; <5% on a 1-9 CYMMIT scale.

iii) Invest in agricultural drugs manufacture and distribution

Through MAAIF, the Livestock Disease Control Phase 2’s (LDC-2P) and Meat Export Support Services (MESSP) whose objective is to create a conducive capital investment atmosphere in the livestock sub-sector that will see increased employment opportunities related to improved animal health by: putting in place, operationalization and use of technical infrastructure to prevent, control and eradicate contagious and other major animal diseases, that will enhance increased animal productivity; food security; food safety; local, regional and international market access for animal products such as meat, milk, hides and skins, honey, horn tips among others; the reduction in poverty and improvement of the associated human health.

In the above regard, LDC-2P supported the procurement and distribution of livestock vaccines for state-controlled diseases which included; foot and mouth disease (FMD), contagious bovine pleuropneumonia (CBPP), Peste des petits ruminants (PPR), Anthrax and Blackquarter, Lumpy skin disease (LSD), and rabies. An addition of vaccination equipment and supplies were procured. The project vaccinated one million goats and sheep against PPR, and one million heads of cattle against lumpy skin disease in the hot spot districts as shown in Figure 3.9.

Figure 3.9: State-controlled animal disease vaccines procured and distributed as at 30th June 2023



Source: Field Findings

Similarly, 1,518,000 heads of cattle were vaccinated against FMD in the 126 affected and districts at risk, thus reducing the FMD incidences. By 30th June 2023, only about 10 districts had reported FMD outbreaks out of the 146 districts, representing a 6.8% decrease in incidence. Quarantine

restrictions in 18 districts due FMD and PPR were lifted following sero-surveillance which confirmed the absence of the diseases in the herds.

For example, DLGs got a range of animal vaccines which were distributed to farmers on request. These included: Mubende (8,000 FMD, 5,000 LSD, 1,300 rabies); Kyankwanzi (38,400 FMD, 20,000 LSD, 1,000 Rabies); Nakaseke (45,000 FMD, 20,000 LSD, 3,000 rabies); Gomba (30,000 FMD) among others. However, the extension staff assigned to this activity lacked transport means and safety usable gears.

It was also noted that there was inadequate stocking of vaccines and drugs to meet national requirements by MAAIF (LDC-2P). For instance, the quantities of vaccines procured for state-controlled diseases only covered 5% of the national herd yet the recommended vaccination coverage was at least 80% for effective control of animal diseases. This implied that about 95% of the susceptible animal population was left at risk of contracting the diseases. Also, the small quantities of vaccines procured implied that the Government's response to disease outbreaks/emergencies was more reactionary than planned. Equally, there was inadequate stocking of laboratory reagents and consumables due to limited funding resources crippled the ability of the veterinary services to timely detect and respond to disease emergencies.

Through MESSP, Ssembeguya Estates (U) Ltd is implementing a Goat Roll-Out Project (GRP) and Production Scheme for Export under a memorandum of understanding (MoU) signed between MAAIF, and the participating districts of Wakiso, Gomba, Sembabule, Mubende, Kyankwanzi, Nakaseke and Nakasongola. Following the Presidential Directive, the project purchased and administered 600 doses of multivax vaccines to all the procured goats, which greatly improved kid survival and reduced the prevalence of clostridial diseases among young and adult goats.

Conversely, besides multivax, the goats were not vaccinated against PPR and CCPP when undergoing quarantine at the Ssembeguya Estate. This escalated the prevalence of the disease, leading to a severe outbreak which caused uncontrollable mortalities leading to fewer goats given out to beneficiaries than planned since most of them succumbed to PPR. For example, goats received in Nakaseke DLG had not been vaccinated which exposed the farmers' goat herds to the risk of contracting diseases after integrating with the new herd. Most of the distributed goats succumbed to clostridial diseases given the fact that many of them were young and unvaccinated yet being introduced to a new environment.

Challenges

1. Lack of operational funds and transportation means for the district veterinary officers (DVOs).
2. Lack of cold chain facilities, temperature tags, and ice boxes for field-based activities
3. Understaffing within the district veterinary offices.
4. Overdependence on foreign vaccine manufacturing plants for vaccines which most times cannot sustainably meet the high demand for vaccines by Uganda. This causes erratic supply and thus affecting our plans to protect the livestock population at risk in time

Recommendations

1. The MAAIF should strengthen the cold chain system to preserve vaccines
2. The MAAIF should facilitate transport means for the DVOs.

3. The MAAIF should avail resources to enable the establishment of the livestock vaccine and drug storage facility
4. The MAAIF should allocate adequate financial resources to support disease control activities along the livestock value chain and capacitation of the laboratory diagnostic facilities' time

3.3 Storage, Agro-Processing and Value Addition Sub-programme

3.3.1 Introduction

The sub-programme aims to improve post-harvest handling and storage and increase agro-processing and value addition in Uganda. Annual monitoring focused on four NDPIII interventions: construct and regularly maintain community access & feeder roads for market access; establish post-harvest handling, storage and processing infrastructure including silos, dryers, warehouses, and cold rooms of various scale; and establish new and rehabilitate existing agro-processing industries

Performance

The overall sub-programme performance was good at 74% as at 30th June 2023 (

ANNEX 4: Performance of the Storage, Agro-processing and Value Addition Sub-Programme by 30th June 2023). The sub-programme budget excluding external financing was Ug shs 549.128bn, of which Ug shs 486.988bn (88.7%) was released and Ug shs 367.318bn spent (75.4% of the release) by 30th June 2023. The Uganda Development Corporation (UDC) interventions aimed at agro-processing constituted 93% of the sub-programme budget. The sub-programme absorption was low especially by UDC due to delays by UDC in conducting business valuation and investment appraisals, due diligence, feasibility studies and revalidation of investment projects.

The sub-programme outcome performance was very good at 98.6% whereas the output performance was fair at 60.7% of the monitored outputs achieved. The export value of priority agricultural commodities surpassed the programme's annual target of USD 2.3bn and this was mainly attributed to the rise in the international price of coffee (Robusta) as a result of the reduction in supply on the international market from major coffee producers. This prompted Ugandan exporters to off-load coffee from their warehouses for sale. The intermediate outcome indicator for storage capacity performance was very good at 98.9%, but the functionality of the established infrastructure was still low.

The performance of establishing postharvest handling, storage and processing infrastructure intervention was fair at 66.8% whereas establishing new and rehabilitating existing agro-processing industries performed poorly at 37.2% (Table 3.15). The fair output sub-programme performance was mainly due to inadequate budgetary releases, non-functionality of established value addition and storage infrastructure due to lack of power and inadequate raw material supply and delayed completion of value addition and storage infrastructure under LEGS and ACDP projects.

Table 3.15: Summary of Sub-Programme Performance by Intervention as at 30th June 2023

Intervention	Performance	Remark
Construct and regularly maintain community access & feeder roads for market access	59.8	Fair performance
Establish post-harvest handling, storage and processing infrastructure	66.8	Fair performance
Establish new and rehabilitate existing agro-processing industries	37.2	Poor performance

Source: Author's Compilation

Detailed performance of the monitored interventions is provided hereafter:

3.3.2 Construct and regularly maintain community access & feeder roads for market access

The planned budget outputs include: mechanization service centres and farm access roads; infrastructure development and management; marketing and value addition, and local economic development support services.

Infrastructure developed and managed

Construction and installation of 10 metallic cages was completed at Mwena, Kalangala and construction of the hatchery commenced, farm access roads to link with trunk and market access roads opened up. Final engineering designs for the Mwena Aquaculture Park were approved.

Marketing and value addition

During FY2022/23, a total of 135 roads of a total length of 1,007.47km in the 57 ACDP implementation districts were planned to be constructed and rehabilitated. Physical progress of community access roads and road chokes averaged 56%. A total of 69 roads were substantially completed, 48 road works were ongoing, and 13 roads had works contracts signed while 5 roads had stalled. The districts whose access roads were completed included Kyotera, Kakumiro, Kamwenge, Bushenyi, Rakai, Masaka, Kalungu, Nebbi, Pakwach and Amuru among others. Three districts Butaleja, Mpigi and Madi-Okollo had not commenced physical works though the contracts were signed in February 2023.

The fair output performance was attributed to procurement delays, non-responsiveness of bidders and weak capacity of contractors to undertake major works in the different LGs under a given cluster. Therefore, there is a need to expeditiously manage the contracts to ensure the project closure timelines are observed.

Access roads opened up in partnership with the National Oil Palm Project (NOPP)

A total of 28.8km of farm roads were rehabilitated in Buvuma and 14.53km of community access roads in Kalangala Hub were also rehabilitated. Opening of 32km farm roads in Buvuma Hub was ongoing at bush clearing by Buvuma DLG, works department. During the FY2022/23, MV Palm

with a 519 passenger, 25 vehicles and 230MT cargo capacity was launched on 27th May 2023 and it is operational at Kiyindi and Buvuma landing sites as at 24th July 2023.



L-R: MV Palm ready for boarding at Kiyindi landing site and farm access road constructed under NOPP at Kanyerera – Bwaka Village in Buvuma District

Local Economic Development Support Services

The output is implemented by the Ministry of Local Government (MoLG) with support from the Local Economic Growth Support Project (LEGS) funded by the Islamic Development Bank (IsDB). The project development was implemented in 17 districts⁹. The planned output target for FY2022/23 was 300km of community access roads constructed/rehabilitated in beneficiary DLGs.

A total of 250km of community access roads were completed in the project-implementing districts. In Gomba District a 30.3km Kyayi-Kyabagamba Road was completed but not commissioned and the practical completion certificate was yet to be issued to the contractor. However, the road was under-costed and some sections of the road were not properly done. The beneficiary DLG reported to have communicated to MoLG to provide a new contract for the extra work. Construction of the Gayaza-Kalungu-Mityomere Community Access Road in Nakaseke District had stalled at 60% physical progress. This was due to under costing of the bills of quantities (BoQs) for sections of the road that were low laying; thus halting works after exhausting the contract funds.

The incomplete works were reported to affect the movement of both people and produce especially in the rain season. The project supervisor cited a risk of the completed sections of the road also deteriorating if an addendum to the contract is not done timely. The planned road works (11.4km) in Bunyangabu District had not commenced as at 30th June 2023.

The cross-cutting challenge for road works in the monitored districts was under the costing of BoQs and the limited involvement of the district works department at the design stage.

⁹ Isingiro, Gomba, Nakaseka, Bukedea, Amuria, Oyam Adjumani, Buyende, Buikwe, Isingiro, Tororo, Luwero, Kibuku, Kyenjojo and Rukungiri. (Alebtong, Bunyangabu, Kabarole, Kumi, Katakwi, Ntoroko, and Nwoya.

3.3.3 Establish post-harvest handling, storage and processing infrastructure

Introduction

The intervention aims at improving post-harvest handling and enhancing storage of agro produce including value addition to facilitate marketing of agricultural exports.

The planned output for FY2022/23 included: postharvest handling, storage and processing, local economic development support services, support to agro-processing and value addition, and postharvest management. The outputs are largely implemented by MAAIF (ACDP), MoLG (LEGS), NAADS, and UCDA. The performance of the output is provided in detail hereafter:

Lint Buffer Stock procured using the Revolving Fund

To assure a good market for the lint and a steady supply of raw materials to textile mills, the CDO procured and supplied lint buffer stock totalling 5,600 to Fine Spinners and 9,384 bales to Southern Range Nyanza Limited to support value addition. However, the bales supplied under Southern Range Nyanza Ltd had a higher average bale weight of 244kgs compared to the projected bale weight of 230kgs, Lira ginnery had a bigger bale press. The overall quantity of cotton produced was 115,975 bales and the exported cotton totalled 76,523. The proportion of lint graded in the top 3 grades was achieved at 71% against the target of 80% (Table 3.16).

Table 3.16: Bales production status from the Lint Buffer stock by 30th June 2023

Performance Indicator	FY 2022/23 targets	Achieved
Quantity of cotton produced (bales @ 185kgs)	120,000	115,975
Quantity of cotton exported to-date (bales)	108,000	76,523 (Lint marketing was ongoing)
Quantity of cotton consumed locally (bales)	12,000	9,384
Estimated value of exports (USD million)	50	24
Proportion of lint graded in the top 3 grades	80%	71%

Source: Field Findings, Cotton Development Organization Progress Report

Cotton Seed Dressing Station operationalized

As at 30th June 2023, the Cotton Seed Dressing Station in Akwara Village, Pajule Sub-county, Pader District was complete and fully operational. The station received 2,741.083Mt of unprocessed seed of which 1,388.034Mt was processed and distributed to farmers. A balance of 1.947Mt was in the store awaiting distribution. A total of 5,570 seed growers including 40 Prison Farms participated in seed multiplication. An estimated 14,900 acres were planted and produced 3,504 Mt of certified fuzzy seed.



Installed and functioning machinery that required new delinter and grading machines at Pajule Ginning Factory in Pader District for increased production

Having operated since its establishment in FY 2014/15, some of the machinery at the Seed Dressing Station were no longer effective requiring new delinter and grading machines. The production rate of the plant reduced from the established 16 Mt/day in 2016/17 to 6 Mt/day (37.5%) in 2022/23. The dryers were no longer effective – leaving a 15% moisture content in dressed seeds, far above the recommended 6%. Drying of the seeds was being done manually under the sun.

Postharvest handling, storage and processing

The MAAIF under the Agriculture Cluster Development Project (ACDP) provided mentorship to 114 out of the 358 ACEs under the matching grant. The mentorship also included the provision of training manuals and farmer guides to the 57 project districts. A total of 59 ACDP beneficiaries (ACEs) were offered offsite training on market readiness and acquisition of Q-mark.

During the period under review, a total of 43 farmer organizations located in 14 districts¹⁰ received processing and value addition equipment under the ACDP matching grants scheme. Installation and functionality of the equipment and facilities respectively at varying levels. The total number of completed storage facilities completed under ACDP was 296 with a storage capacity of 54,579 MT out of the planned 358 storage facilities. The storage and value-addition facilities constructed were for five enterprises namely: beans, cassava, coffee, maize and rice. Maize and coffee had the largest share of the storage and value-addition facilities under the matching grant arrangement at 32 and 28% respectively whereas beans had the least share at 11% (Table 3.17).

Table 3.17: Physical status of ACDP matching grant storage, value addition and processing facilities as at 30th June 2023

Enterprise	Completed	Final Finishes	Incomplete	Total	Percentage Score
Beans	32	-	7	39	11
Cassava	44	4	6	54	15
Coffee	82	8	11	101	28
Maize	90	10	15	115	32
Rice	38	10	1	49	14
Total	286	32	40	358	100

Source: ACDP Project Management Unit and Field Findings

¹⁰ Apac, Soroti, Hoima, Masindi, Kyotera, Pallisa, Dokolo, Kitagwenda, Bunyangabu, Iganga, Bugweri, Tororo, Butebo, Bukwo

Of the planned 358 storage facilities, 290 had a component for value addition and processing. A total of 139 value addition and processing facilities were completed and operational, while 75 were completed but not operational, and 76 were under construction as at 30th June 2023. A total of 164 (57%) out of the completed 286 storage, value addition and processing facilities were operational whereas 122 (43%) were not operational as at 30th June 2023.

Maize and coffee had the highest share of operational facilities at 29% and 28% respectively whereas beans had the least operational facilities at 12%. However, it was observed that still coffee and maize had the highest number of completed and non-operational facilities compared to other commodities as shown in Table 3.18. Three facilities in the finishing phase were also operational.

Table 3.18: Operational status of the completed storage, value addition and processing facilities as at 30th June 2023

Commodity	Operational	Not Operational
Beans	20	12
Cassava	24	20
Coffee	46	36
Maize	48	42
Rice	26	12
Total	164	122

Source: ACDP Project Management Unit and Field Findings

The non-functionality of completed structures was mostly due to a lack of three-phase power, missing equipment components (partial delivery of processing equipment), and inadequate volumes (off-season) among others. The functionality status of the monitored storage and value-addition facilities under ACDP is provided in Table 3.19.

Table 3.19: Status of the monitored ACDP beneficiary ACEs under a matching grant by 30th June 2023

District	Beneficiary ACE	Enterprise	Status	Remarks
Mubende	Kamabale Farmers' Group	Maize	Civil works completed	The facility is functional; however, the warehousing practices were lacking.
	Kanyogoga Kigando Maize Cooperative Society Limited	Maize	Completed and test runs done	The facility seemed to be underutilized and the co-operators reported transformer challenges, and low capacity to run all three components of the mill. The cooperative had applied for a UNBS audit in pursuit of the UNBS Q-mark.
	Madudu Twegatte Maize Cooperative Society Limited	Maize	Physical works substantially complete and mill machinery delivered but not installed	Poor performance the ACDP Project Management Unit (PMU) and the beneficiary should consistently engage the machinery supplier to finish equipment installation.
	Kitenga Agaliawmau Coffee Cooperative Society Limited	Coffee	Physical works were substantially complete at final finishes; partial	The machinery supplier to finalize the equipment installation and need to strengthen the contract management by directly involving the beneficiaries.

District	Beneficiary ACE	Enterprise	Status	Remarks
			equipment installation done	
Kyegegwa	Kyaka Cassava Growers and Producers Association	Coffee	The equipment (coffee huller, destoner and roaster) was installed and test run however it was not operational at the time of monitoring.	The reasons for the non-operational status were: (i) the mill doesn't push out husks and the destoner has small perforations, and hence the coffee beans do not go through easily, (ii) the association lost a sizable amount of coffee in an attempt to roast it and hence need training in coffee roasting. There is a need for the cooperative to hire qualified technicians and also engage the supplier to retrain them. The equipment supplier (China Hongpai) should replace the screens.
	Kyegegwa District Produce and Marketing Cooperative Society Limited	Maize	Maize store was completed and operational.	There is a need to engage and train the beneficiary cooperative on good warehouse-keeping practices.
Kabarole	Kasenda Youth Farmers Association	Maize	Store and processing facility construction completed; electrical works completed but power not extended to the facility and maize mill not delivered.	Strengthen the contract management for the supply of maize mills.
	Karangura Peak Modern Coffee Farmers' Cooperative Society	Coffee	The processing facility was complete and pulper was installed although test running of the pulper had not yet been done. Therefore, the facility was not operational	There is a need to engage the pulper supplier to do test runs and train the beneficiary group on operations and maintenance. However, the beneficiary group were concerned with the transformer's capacity to run the pulper and serve the community as well.
Bunyangabu	Balema Kweyamba	Maize	The ACE was using the installed equipment	Good performance.
Kabale	Reign Development Agency	Beans	Storage and bean sorting facility completed and equipment installed and test runs were done.	The facility is expected to deal in seed sorting beginning season B 2023 and so the equipment was not in use at the time of monitoring. The beneficiary co-operators reported that the screens provided for sorting beans were instead for rice.
Hoima	Buhanika Rice	Maize	Storage and	The facility is not operational not even

District	Beneficiary ACE	Enterprise	Status	Remarks
	Farmers' Cooperative Society		processing facilities were completed. Milling equipment installed and not a test run.	the store. This was attributed to the lack of three-phase power at the facility. Pending civil works include: fencing, paving of the parking yard, and construction of a pit latrine as a contribution by the co-operators.
Masindi	Masindi District Farmers Association	Maize	Facility was complete and operational. The beneficiaries reported the challenge of sieves for the pre-cleaner that were oversized compared to maize	Good performance
	Bujenje Maize Farmers' Cooperative Society	Maize	Facility was completed and milling equipment installed but no test run. The facility is not operational	Poor performance facility not operational one and half years after completion due to lack of three-phase power.
	Bwijanga Coffee Farmers' Cooperative Society	Coffee	Facility was completed equipment installed and test run but not functional due to management negligence.	Poor performance. The production department of Masindi DLG should routinely monitor the beneficiary.
Mbale	Mt. Elgon Coffee and Honey Cooperative Society	Coffee	Construction of a processing facility and installation of coffee value addition equipment done. The facility is operational.	Good performance. The cooperative reported an increase in membership from 700 in January 2023 to 752 in July 2023, the quantity and quality of coffee roasted and was able to open four outlets in three towns. The cooperative had cited challenges of the low domestic market for roasted coffee.

Source: Field Findings July and August 2023

Local economic development support services

The project goal is to improve individual and household incomes in the participating districts: (i) providing water for enhanced agricultural productivity and environmental conservation and (ii) support to value chain development. The project is implemented by MoLG in 17 districts¹¹. The component of support to value chain development contributes to the intervention of establish postharvest handling, storage, and processing infrastructure.

¹¹ Isingiro, Gomba, Nakaseka, Bukedea, Amuria, Oyam Adjumani, Buyende, Buikwe, Isingiro, Tororo, Luwero, Kibuku, Kyenjojo and Rukungiri. (Alebtong, Bunyangabu, Kabarole, Kumi, Katakwi, Ntoroko, and Nwoya

The project’s planned outputs included: storage facilities constructed in selected LGs, processing plants constructed in selected DLGs, farmers supported in 17 DLGs under the Microfinance Support Centre, market sheds and livestock markets constructed in selected DLGs, milk collection centres constructed in selected DLGs, and artificial insemination units established in selected DLGs.

The monitoring of the project covered interventions in the districts of Kyenjojo, Gomba, Nakaseke, Bunyangabu and Kumi. The project was undertaking the construction of storage/bulking facilities and processing facilities for the following enterprises maize, rice, coffee and dairy.

Performance

The average cumulative physical progress of the 11 agro-processing facilities under construction was 53% whereas progress for the six milk collection centres was at 63% in the districts of Kyenjojo, Bunyangabu, Nakaseke, Kumi and Gomba as of 30th June 2023. Five out of the seven monitored facilities had their contract periods expired while two had barely two months to expiry. The performance and status of monitored projects (agro-processing and milk collection centres) are provided in Table 3.21.

A total of 11 market sheds and livestock markets in the districts of Alebtong, Katakwi, Kumi, Kibuku, Nakaseke, Gomba, Bunyangabu, Ntoroko, and Kabarole were under construction and physical progress was reported at 37% as at 30th June, 2023. Detailed performance of market shed and markets is provided above. A total of 11 groups from the districts of Gomba and Luweero received Ug shs 180 million from the Uganda Microfinance Support Centre (MSC) under the Islamic micro-financing arrangement.

The beneficiary DLGs cited delays and bureaucratic processes at MSC as some of the reasons for the glaring poor performance. For example, in Nwoya District, only one out of the planned 10 SACCOs received Ug shs 30 million for grain trade after eight months since the funds requisition was sent to MSCL. In Kumi District, only seven groups accessed the finances out of more than 20 eligible groups, in Gomba District only eight out of 32 selected groups accessed money. A total of 90 artificial inseminator (AI) technicians were trained from selected districts before the establishment of the planned 37 AI Centres. Some of the beneficiary DLGs reported challenges of transport to supervise and monitor the projects for example Gomba District. The status of the storage and value-addition facilities that were monitored is shown in Table 3.20.

Table 3.20: Status of the monitored storage and value addition facilities under the LEGS project by 30th June 2023

District	Beneficiary	Progress	Remarks
Kumi	Kajamaka Rice Bulking Centre	Works were at 88% completion	Milling equipment was delivered but not assembled, farmers lacked knowledge of the use of the machine and operational funds.
Kyenjojo	Katooke Milk Collection Centre	Construction works were at 80% physical progress. Delivery of the milk cooler and generator was not yet	Building works are behind schedule by eight months. The quality of work was of low quality, especially the chain-link fence. There were new changes in the design as proposed by DDA and were to be advertised for a new contract. The

District	Beneficiary	Progress	Remarks
		done plus final finishes (electrical, plumbing, painting and flooring. The completion date was supposed to be 12 th December 2022	contractor was not on site and works looked to have been paused for some time.
	Kasiina Maize Processing and Storage Plant	Construction works were at the roof stage for both structures (storage and processing) and estimated at 70% progress. Pending works included final finishes (plastering, shuttering, painting, electrical installations, landscaping for the loading and offloading bays and delivery and installation of the maize mill.	The project activities were behind schedule and it was very unlikely to be completed by the contract end date of 23 rd September, 2023. The main challenge was that some grades of concrete in the BoQs were not fit for purpose especially grades for the slab and columns. The BoQs quoted grade 15 which is weak for this purpose.
Gomba	Kifampa Milk Collection Facility	Construction works were at 92% complete	The facility is towards completion pending the proposed modifications.
Nakaseke	Buwana Milk Collection Centre	Construction works were at 55% complete.	Issues on the site: a) The structure is pending structural changes as proposed by DDA b) The quality of work was defective. For the septic tank - mixes of the concrete were poor; the behind roof had partly sunk, the milk cooler left no space for operations, and the roof of the latrine was pouring rainwater in the walkway. All these inadequacies point to design issues. However, the community members are demoralized about the project delays. So there is a need to speed up the modification process.
Bunyangabu	Gatyanga Coffee Processing and Storage Plant	Physical works were at 70% progress. The project was at final finishes, pending works included electrical, flooring, compound landscaping and delivery and installation	The project was behind schedule by one month due to the slow implementation by the contractor and the poor road network that affected the delivery of construction materials during the rainy season. It was observed that the chain link for the fence was old (re-used).

District	Beneficiary	Progress	Remarks
		of coffee huller.	
	Rwimi Rice Processing and Storage Plant)	Construction works were at 70% progress. The pending civil works are electrical, painting, construction of toilet, drying slab and fence. Delivery and installation of rice processing equipment were awaiting completion of the processing facility.	The contractor cited the challenges of soft ground as the site is near a swamp and has volcanic soils. The contractor had increased the number of workers to ensure completion of the contract timelines.

Source: Field Findings

The project performance was fair with the average achievement of the output indicator targets and this was due to: delayed initiation of procurements and weak contract management by MoLG; limited involvement of other critical stakeholders like DDA at the design stage that led to the revision of the architectural designs when the superstructures are already constructed; the slow pace of contractors due to weak financial capacity as some had not been paid the advance amount and; delayed release of funds by MSCL to the intended beneficiaries under the Islamic microfinance arrangement.

Support to agro-processing and value addition

The NAADS planned to establish storage and value addition facilities for various enterprises that include: maize, cooking oil, rice, fruit and dairy processing; technical assessment visits and supervision conducted.

The NAADS procured and delivered five sets of maize mills to selected beneficiary farmers and/or groups in Lwengo, Luweero, Kiryandongo, Bushenyi and Kasese districts against the targeted 27 sets of maize mills. One of the monitored beneficiaries of the maize mills was Cled Investment in Rwentuha Town Council, Bushenyi District who appreciated the support. Cled Investment received a 20MT/day capacity double hammer mill and it was operational. Three operators were trained by the equipment supplier on operations and maintenance. However, it was observed that the equipment was underutilized and the resultant processed products (maize flour) were not certified by UNBS. Underutilization of the facility was attributed to poor maize harvest in season 2023A in the sub-region.

Five sets of milk coolers (3,000 ltrs) and matching diesel generators were reported to have been procured and delivered to selected beneficiaries against the targeted seven milk coolers. One of the monitored beneficiaries Kabeiheruga Farmers Limited received a 2,000ltrs capacity cooler and 20kva generator.

The NAADS conducted two technical inspections and site meetings on testing and commissioning for two fruit processing factories in Nakaseke and Yumbe districts. In addition, technical field assessments of the various equipment beneficiaries were conducted as well as supervision of the

sites under construction. The NAADS conducted specialized trainings for small-scale dairy and wine processors. The implementation challenges that led to the fair pair were mainly due to inadequate budgetary releases against the approved budget during the period under review which affected the implementation of the planned activities on the distribution of agriculture inputs and value additional equipment. In addition, the delayed communication of budget cuts created domestic arrears since the suppliers of seedlings and value addition equipment had been contracted.

Postharvest management (UCDA)

The UCDA distributed and installed 35 wet mills in specific regions to improve the quality of coffee produced and post-harvest handling management. Elgon region got six, the Northern region – four, the Rwenzori region - 13, and the South-western region 12. However, it should be noted that the 35 wet mills were procured in FY2021/22 and procurement of the 25 wet mills for FY2022/23 had not been concluded by 30th June 2023. Additionally, 50 motorized pulpers out of the planned 175 were procured and distributed; the reduced number was attributed to inadequate funds.

The UCDA inspected and registered a total of 4,005 and 2,615 coffee value chain actors respectively (Table 3.21). Additionally, 130 coffee exporters were licensed during the period under review. Coffee stores and factories were the most inspected and registered at 45.4 and 42.3% respectively whereas grading facilities were the least inspected and registered at 0.4%. This implies that grading facilities were still few and concentrated in the central sub-region. The Rwenzori region and Greater Masaka had the highest number of actors inspected and registered respectively, whereas the Elgon and Northern sub-regions had the least number of actors inspected and registered respectively.

The output performance was poor due to inadequate budget releases with some of the planned activities not implemented like establishing demonstration drying trays and establishing demonstration solar dryers.

Table 3.21: Inspection and registration of coffee value chain actors by Sub-region

Coffee sub-region	Factories	Stores	Roasters	Wet Mill	Grading Facilities	Buyers	Total
Inspection							
West	155	255	-	-	-	-	410
Greater Masaka	364	449		-	-	-	813
Elgon	20	106	6	15	6		153
Central	292	194	21	-	8	-	515
Southwestern	145	200	-	-	2	-	347
Eastern	314	145	4	-	-	-	463
Rwenzori	659	373	5	14	-	-	1,051
Northern	3	242	2	2	4	-	253
<i>Sub-total</i>	<i>1,952</i>	<i>1,964</i>	<i>38</i>	<i>31</i>	<i>20</i>	<i>0</i>	<i>4,005</i>
Registration							

Coffee sub-region	Factories	Stores	Roasters	Wet Mill	Grading Facilities	Buyers	Total
West	60	75	-	-	-	145	280
Greater Masaka	230	257	2	-	-	174	663
Elgon	-	70	4	16	1	73	164
Central	159	164	34	1	5	149	512
Southwestern	137	194	-	-	-	93	424
Eastern	119	103	4	-	-		226
Rwenzori	136	127	1	14	-	5	283
Northern	6	54	-	2	1		63
<i>Sub-total</i>	<i>847</i>	<i>1044</i>	<i>45</i>	<i>33</i>	<i>7</i>	<i>639</i>	<i>2615</i>
TOTAL	2799	3008	83	64	27	639	6620

Source: UCDA FY2022/23

3.3.4 Establish new and rehabilitate existing agro-processing industries

The intervention aims at increasing agro-processing and value addition in Uganda and the planned NDPIII outputs were to be implemented by UDC, MoTIC, CDO, DDA and MAAIF. The planned output for the FY22/23 was industrial and economic development (support to UDC). The monitoring focused on UDC intervention projects. The UDC was re-established under the Uganda Development Corporation Act, 2016 as the investment and development arm of the GoU. Its primary objective is to promote and facilitate industrial and economic development in Uganda. This is to be met through: i) establishment of subsidiaries and associated companies, ii) enter into public-private partnerships with other enterprises, and iii) promoting and facilitating research into industrial development.

Performance

The UDC budget for FY2022/23 was Ug shs 443,560,676,587, of which Ug shs 395,226,664,587 (89% of the budget) was released by 30th June 2023. However, the total cash available to UDC was Ug shs 607,027,465,276, of which Ug shs 211,800,800,689 (35%) was the balance brought forward from FY2021/22. A total of Ug shs 458.527bn of the total cash available to UDC was for agricultural-related investments (inclusive of funds for UDC wage and non-wage and feasibility studies) of which Ug shs 341.956 bn was spent by 30th June 2023. The physical performance of the monitored agro-processing industries is given hereafter:

Soroti Fruit Factory

The Soroti Fruit Factory (SOFTE) is a government intervention aimed at supporting value addition in fruit processing for the promotion of industrial growth, income diversification and increasing household incomes in the Teso sub-region. In 2012, the Government of Korea through its development arm - the Korean International Cooperation Agency (KOICA) provided a turnkey project worth USD 7.4 million for the construction of the Soroti Fruit Factory with the GoU responsible for the provision of complementary services and works.

The planned outputs for FY2022/23 were processing plant maintained and working capital provided, procurement and installation of a packaging line for Polyethylene Terephthalate (PET) and construction of an effluent treatment plant. The approved budget for SOFTE for FY2022/23 was Ug shs 11.332bn, of which Ug shs 10.951bn (96.6%) was released and spent. By 30th June 2023 procurement of an automated packaging line had not been completed and another Ug shs 9.4bn was required.

During the FY a total of 378,293.6kg of fruit pulp (concentrate) and ready-to-drink juice were sold and valued at Ug shs 1.57bn. However, it was observed and reported that 73% of the sales were for mango-related products, whereas oranges contributed 27% and the factory was operating at a net loss.

The factory cited challenges of inadequate working capital for procurement of key equipment, increase in selling and distribution expenses, and increase in price of key ingredients like sugar. The establishment of SOFTE was to add value to the locally produced fruits (oranges) in the region, however, the sales trends indicate mango products to have more demand than orange products thus the need to either market the orange products vigorously within and outside Uganda or to review the strategy to have the focus on mangoes for the project to achieve the intended impact of increased revenues for fruit farmers. There is also a need for UDC to fully capitalize on the entity and streamline its operations for the factory to break even.

Mabale Growers Tea Factory, Kyenjojo District

Mabale Growers Tea Factory Limited (MGTFL) is located in Kyenjojo District and is a farmers' owned company with a current membership of 2,365. The factory was designed for a processing capacity of 80,000 kg/day of green leaf. However, the factory was indebted and production went below 10,000kg/day before UDC intervention in FY2019/20.

In FY2022/23, the UDC invested an additional Ug shs 5.3bn into MGTFL in the form of a shareholder loan bringing the total investment to Ug shs 25.3bn. A total of Ug shs 13.62 (53.8%) of the UDC investment into MGTFL was equity equivalent to 48.99% shareholding, whereas Ug shs 11.68bn (46.8%) was invested as a shareholders' loan. The MGTFL used the money to clear part of the loan to Kenya Commercial Bank (KCB), pay creditors (suppliers), working capital, factory repairs and outstanding statutory dues (taxes and employee benefits). As a result of UDC's investment in the company, it can process 70,000kg/day during the peak season and make timely payments to farmers and suppliers.

During the period under review, the MGTFL processed 5,747.4MT of green leaf valued at Ug shs 2.795bn and made exports at the Mombasa auction market valued at USD1,167,517.22. The factory performance had improved over the years with net loss value reducing by 27% in 2022 compared to 2021. The aggregate borrowing for the factory remained high and since the company was operating at a net loss, the loan refinancing was coming from the operating capital thus stifling the company's operations.

The reasons for poor performance included: increased production costs; falling prices for the tea at the Mombasa auction market with Ugandan tea prices averaging at USD0.8/kg against an average cost of production of USD1.2/kg, low prices for green leaf thus demotivating farmers to take good

care of their gardens, old and obsolete Cut Tear Curl (CTC) line that greatly affect the final product quality, financial inadequacies to enable the company pay suppliers in time and the company could not access short-term financing due to its bad loan status with the creditors.

Mpanga Growers Tea Factory Limited

Located in Kaswa Parish, Busoro Sub-county, Kabarole District Mpanga Growers Tea Factory Limited was incorporated in 1995 as a farmer-owned factory. As at 30th June 2023, UDC had acquired 51% shareholding and provided Ug shs 4.34bn in 2021 as equity and Ug shs 6.385bn was invested in FY2022/23 as a shareholder's loan. The funding was used to clear part of the outstanding loan obligations, statutory obligations, creditors, repair key equipment components (steam boiler and conveyor) and operating capital.

The factory processed 5,667MT of green leaf valued at Ug shs 2.705bn as at 31st March 2023. During the same period, the factory made sales both local and export valued at Ug shs 1.028bn and USD 933,725 respectively. However, the prices for tea at the Mombasa auction market fell below USD 1/kg in July 2023 and the factory continues to operate at a net loss due to increased selling and distribution. Thus no shareholder returns in the short term.

Bukona Agro Processors Limited

Located in Nwoya District, Bukona Agro Processors Limited produces denatured ethanol from cassava chips and has an input capacity of 100MT/day of dry cassava chips. The factory signed an offer letter in December 2020, and the UDC has invested Ug shs 11,957,283,275 to acquire equity in the company.

During the FY2022/23, UDC invested Ug shs 5.5bn in Bukona in the form of equity, however signing of the shareholder's agreements and conditions precedent were yet to be completed by 30th June 2023. The factory exported 2 million litres of denatured ethanol to Vivo Energy Kenya and reported a net profit of Ug shs 12,128,774 for the period 1st July 2022 to 12th April 2023. The factory was operating below the installed capacity of 35,000 litres of denatured ethanol per day due to inadequate working capital and raw materials.

Mutuma Commercial Agencies Limited (MCAL)

The company adds value to raw cotton produced in Uganda to produce products like surgical cotton wool, vegetable oil and cotton seed cake.

During the FY2022/23, the UDC invested an additional Ug shs 1.813bn bringing the total investment to Ug shs 4.5bn and total ordinary shareholding at 36%. The company sales revenue was Ug shs 1,442,762,437 at the end of quarter three from the sale of cotton wool, lint, cottonseed, husks and crude oil. The company reported challenges of power outages, outstanding loan obligations with Uganda Development Bank Limited (UDBL), low throughput machinery, low market for products like crude oil and seed cake. The company continues to report a net loss.

Yumbe Fruit Factory

Located in Yumbe District and owned by Food and Nutrition Solutions Ltd-FONUS, the factory adds value to mangoes to produce ready-to-drink mango juice and concentrate with a capacity of 5MT/h. The share distribution is 20% to Aringa Cooperative, 41% to Food and Nutrition Solutions Ltd-FONUS and GoU represented by UDC at 39%. By July 2023, all the structures were

substantially complete and all production equipment was installed and commissioned. All technical staff were recruited and attached to SOFTE for training and a governance board for the factory was constituted. The factory was not operational as at July 2023 despite being commissioned a year ago.

3.3.5 Conclusion

The overall sub-programme performance was good at 74%. The sub-programme outcome performance was very good at 98.6%, whereas the output performance was fair at 60.7% of planned outputs achieved. The NDPIII focuses on transforming the subsistence agriculture sector into a commercial and competitive sector. One of the listed avenues to realize this transformation is increased export value of selected agricultural commodities. Therefore, the establishment of storage, value addition, and agro-processing and construction and maintenance of transport infrastructure was in the right direction for the attainment of the desired outcomes, however, the output performance was fair. The output performance was fair, with a few complete infrastructure functional, while most were operating at below capacity, non-functional and incomplete. The fair output performance was mainly attributed to delayed initiation of procurements and weak contract management for civil works, delayed completion of valuation and feasibility studies, due diligence and appraisal of investment projects by UDC, lack of appropriate electricity to power the established value addition facilities, inadequate budgetary releases, especially to UCDA and NAADS.

Recommendations

1. The MAAIF and MoLG should strengthen the contracting processes for civil works and ensure the project outputs are delivered in the stipulated timeframes. Inefficiencies in the contracting processes should attract penalties and sanctions.
2. The UDC should expedite pre-investment studies and processes to ensure that projects that have been in the pipeline for over two years are implemented or dropped.
3. The MAAIF and MEMD should develop robust mechanisms for the electrification of the established value addition and agro-processing facilities. All project coordination units and procurement managers should deliver project output targets in the stipulated timeframe to reduce the likely risk of time and cost overruns.
4. The MAAIF and MoLG should intensify monitoring and supervision of ongoing civil works in collaboration with beneficiary DLGs, and ensure results are reported promptly and corrective measures taken where activities are not performing well.

3.4 Agricultural Market Access and Competitiveness Sub-programme

3.4.1 Introduction

The GoU aims to increase market access and competitiveness of agricultural products in domestic and international markets through three NDPIII interventions. The interventions are to strengthen enforcement and adherence to product quality requirements including; food safety, social and environmental standards, grades; improve agricultural market infrastructure in rural and urban areas and; strengthen capacities of public institutions in analysis, negotiation and development of international market opportunities particularly for the selected commodities.

The key implementing agencies for the sub-programme included: The Uganda National Bureau of Standards (UNBS), the Ministry of Local Government (MoLG), the Ministry of Agriculture,

Animal Industry and Fisheries (MAAIF), Uganda Coffee Development Authority (UCDA), Dairy Development Authority (DDA), and Cotton Development Organisation (CDO). The performance of the monitored interventions is given hereafter:

Performance

The overall sub-programme performance was very good at 92.4%. Both output and outcome performance were very good at 91.1% and 95.2% respectively (*ANNEX 5: Performance of Agricultural Market Access and Competitiveness Sub-programme by 30th June 2023*).

3.4.2 Strengthen enforcement and adherence to product quality requirements

i) Certification permits for products and firms issued

The DDA inspected a total of 965 milk-handling premises; undertook 17 enforcement operations and; analysed 1,776 milk and dairy product samples. The DDA also registered 177 dairy premises, equipment, exporters, and importers¹².

The UCDA inspected and certified 6,292,004 bags (60kgs) for export (Arabica – 905,161 bags and Robusta – 5,386,843 bags). A total of 331,017 (60kg) bags were referred for reprocessing due to non-conformance to export-grade specification requirements. Coffee export volumes were below the target by 16.1% due to drought and seasonal changes leading to an off-year crop.

The UCDA registered and licensed 847 coffee processing factories, 1,044 coffee buying stores, coffee 639 buyers, 33 wet mills, 45 coffee roasters, 129 coffee exporters, and 7 export grading facilities across the country. A total of 404 suspensions for non-compliance were recorded as follows: 27 in Western Uganda, 190 in Greater Masaka, nine in Eastern, 89 in the Central region, 34 in Rwenzori, four in the South-West and 51 in the Northern region. The non-compliances included no processing/store licenses, unapproved structures, poor hygiene and processing wet coffee. Furthermore, the UCDA participated in a Coffee Proficiency Testing program for physical and biochemical parameters as a requirement for ISO 17025 recognition and accreditation in collaboration with UNBS.

The MAAIF, under the ACDP accredited and successfully uploaded 220 agro-input dealers to supply under the e-voucher. A total of 569 and 286 samples of pesticides and foliar fertilizers respectively were undergoing laboratory analysis for suspected adulteration. Inspection and certification of 55,296 MT of maize seeds, 2,595 MT of rice seed, 9,944 MT of bean seed and 207,174 cassava bags were during the FY2022/23. The ACDP supported the review of three laws - the Plant Protection and Health Act of 2015, the Seeds and Plants Act of 2006, the Plant Variety Protection Act of 2014, and the Seed Policy.

ii) Farmers and manufacturers trained on sanitary and phytosanitary standards

A total of 510 extension officers across the 57 project districts under ACDP were trained on input quality assurance in established input markets. 389 agro-input dealers and 47 inspectors were trained on the input regulatory framework and quality standards. The ACDP supported offsite trainings for marketing managers of 59 ACEs/RPOs and district teams (business clinics) in market readiness and acquisition of Q-marks. The UNBS, the Uganda Export Promotions Board (UEPB)

¹² Road tankers- 08, Processors-10, MCC/coolers-108, Freezers/retail outlets-25, exporters-01 and importers- 06.

and the Uganda Warehouse Receipt System (UWRS) facilitated the trainings. The ACEs/RPOs were guided to develop Q-mark acquisition and Export plans.

iii) Renovate, build and adequately equip certification laboratory facilities

a) Certification laboratory facilities renovated, built and equipped

Civil works for the National Metrology Laboratory at UNBS Headquarters in Wakiso District funded by the Agricultural Value Chain Development Project were at 96% completion against a time progress of 100% as at 30th June 2023. Installation of the heating, ventilation and air conditioning system (HVAC) was ongoing in August 2023. The procurement of a contractor to supply the laboratory equipment was at the bidding stage. The project was behind schedule and had received two extensions that ended on 30th April 2023. The change in design and the approvals thereafter led to scope variation and thus time extension. The contractor also cited delays in approvals of deemed value-added tax (VAT) by the Uganda Revenue Authority, especially for the revised scope of works. The UNBS reviewed, developed and adopted 44 standards under the food and agriculture sector.

b) National Seed Testing and Certification Laboratory constructed and rehabilitated

The rehabilitation and construction of the laboratory at Kawanda was supported by the ACDP and civil works were at 65% progress. The works involved remodelling and renovation works including, electrical and mechanical works. The civil works were behind schedule and it was very unlikely for the works to be completed by the project closure date of 30th September 2023. Weak contractor capacity (financial) and contract management were some of the likely reasons for the observed slow progress.



L-R: Substantially complete National Metrology Laboratory at UNBS Headquarters, Bweyogerere and National Seed Testing and Certification Laboratory at Kawanda under remodeling and renovation

c) The phytosanitary laboratory at Namalere rehabilitated

Physical progress of the civil works for the phytosanitary laboratory was at 89% and the contract for equipping of the facility was at the bidding stage. Rehabilitation of the phytosanitary laboratory was at the bid evaluation stage. Relatedly, ACDP supported the Fertilizer Analytical Laboratory at Namalere to procure equipment worth Ug shs 1.8bn. The laboratory will have the capacity to test

between 100 and 150 samples daily to support the certification of seed exports, bio-pesticides and bio-fertilizers.

d) National Dairy Analytical Laboratory (NDAL) rehabilitated at Lugogo

By 30th June 2023, the rehabilitation of the National Dairy Analytical Laboratory (NDAL) located at Lugogo, Kampala District was completed and functional. The laboratory was also equipped with CHARM II and high-performance liquid chromatography (HPLC) and its consumables by MAAIF (AVCP). The accreditation of the NDAL for ISO: 17025:2017 was yet to be achieved and procurement of accreditation firm was ongoing. The NDAL was granted recognition for the ISO: 17025:2017 by UNBS. The procurement of a mobile laboratory van was halted due to the supplier's failure to meet the product specifications. However, the performance of the NDAL was partly affected by budget suppression that limited the functioning of the laboratory including the development of milk and milk products standards.

3.4.3 Agricultural market infrastructure in rural and urban areas improved

i) Farm and community access roads and road chokes constructed

The output aims at improving access to farms and to markets for inputs and produce respectively. The output is implemented by the MAAIF under the ACDP and NOPP, and MoLG under the LEGS project. Construction of road chokes and community access roads under the ACDP was at 56% physical progress as at 30th June 2023. A total of 250km of community access roads were completed under the LEGS Project out of the targeted 300km. A total of 28.8km and 14.53km of farm roads were rehabilitated in Buvuma and Kalangala hubs under the NOPP. The detailed output performance is provided under *3.3.2 Construct and regularly maintain community access & feeder roads for market access* intervention in the Storage, Agro-Processing and Value Addition Sub-programme.

ii) Market infrastructures established

The construction of market infrastructure under the NAADS and LEGS Project performed fairly. Detailed performance and status of the visited markets are provided in Table 3.22. The fair output performance was attributed to delayed site handover, weak financial capacity of some contractors especially under the LEGS Project, land acquisition challenges, slow approvals and issuance of no-objections by the donors and weak contracting processes by MoLG.

Table 3.22: Status of monitored markets implemented under LEGS, MOBIP and NAADS as at 30th June 2023

Implementer	Market	Status	Cost (Ug shs)	Remark/reason
	Construction of Kagera Market Lot 5 Kagera village, Kyamukube Town Council Bunyangabu District.	Construction works were at 50%, Completion date was supposed to be 15th October 2023.	421.834 million	Implementation delays were attributed to delays in issuing receipts to the contractor.
	Agule Livestock market in Kumi District	Works were at 50% completion	428.636 million	Works were behind schedule as the contractor had financial challenges; the contract was left with only

Implementer	Market	Status	Cost (Ug shs)	Remark/reason
Local Economic Growth Support Project				two days to expiry.
	Maddu Market Shed in Gomba District	The progress of works was estimated at 2%	591.409 million	The site was handed over to the contractor in March 2023, but the works were behind schedule. The contractor was slow, these delays affected the farmers' development progress.
	Katalekamese market shed in Nakaseke District	The progress of works was estimated at 40%	442.727 million	The contractor was behind schedule. Much as they got the advance payment.
	Magoma Market Shed in Nakaseke District	The progress of works was estimated at 70%	492.763 million	The contractor was on schedule, however, they had the performance guarantee and this affected payment processing.
Market-Oriented & Environmentally Sustainable Beef Meat Industry	Rehabilitation of Sanga slaughter facility in Sanga Town Council, Kiruhura District	Civil works were at 75% for phase 1. Phase two (bio-gas unit, incinerator, machinery workshop, sludge drier, constructed wetland) work progress was at 20%.	830.000 million	The pending works for phase 1 were shuttering of the facility, final finishes, equipping the facility and laboratory and external works (yard levelling and compacting).
	Busunga Town Council border market constructed in Bundibugyo	Works were at 70% physical progress.	2.690bn	Works ongoing.
	Rwaihamba Market constructed in Kabarole District	Works commenced and were at 10% progress, pending clearance on a major variation on site clearance (rocky site)	1.163bn	The contractor was not on site.
	Upgrade Rwensaasi cattle and general merchandise market at Ruyonza Sub-county, Kyegegwa Town Council in Kyegegwa District	Fencing of the cattle holding facility and construction of the loading bay was ongoing at 80% physical progress.	1.185bn	Works ongoing.
	Two (2) Rural Agricultural Markets (Kasangali - Kajolly)	Works were in progress at 80% in Kasangali and 40% in Kinyamaseka	1.185bn	Works ongoing.

Implementer	Market	Status	Cost (Ug shs)	Remark/reason
Agri-led NAADS	market and Ezron Mbethe - Kinyamaseke main Market) constructed in Kasese District	main market		
	Construction of Kamwenge Central Market Phase 1 in Kamwenge	Works commenced and procured, the progress of the market was at 80%	1.263bn	The project experienced delays in commencement due to stakeholder encouragement and this affected performance.
	Kyenjojo Central Market constructed	Construction Works at Mukunyu TC ongoing at 70% progress	1.714bn	Commencement of works was due to the pending approval of revised designs, following the change of site from Kyenjoj TC to Mukunyu TC.
	Civil works for upgrading of Kaculeeta Farmers Market in Fort Portal City	Works commenced, at 45% progress	2.105bn	Works ongoing.
	Construction of Roadside market at Nyakigumba TC, Bunyangabu District	Physical performance at 95%	306.357 million	Works ongoing.

Source: Field Findings, MAAIF, MOLG and NAADS Progress Report

3.4.4 Capacities of public institutions in analysis, negotiation and development of international market opportunities strengthened

The intervention contributes to the objective of increasing market access and competitiveness of agricultural products in domestic and international markets. It involves Uganda's bilateral engagements/diplomatic missions to promote Ugandan products abroad. One output - coffee value addition services implemented by UCDA was monitored and its performance is given hereafter:

Coffee value addition services

The UCDA promoted coffee consumption at 43 local events including the 28th National Agricultural Show in Jinja, the PPDA Business Expo and the Harvest Money Expo at Kololo among others. The UCDA supported 26 private sector participants to market and promote Ugandan coffee and cocoa in the East African Community (EAC) and Europe. Relatedly, UCDA promoted Uganda's speciality and fine coffee at three international exhibitions: the 2nd Uganda Expo in Moscow, Russia; the Specialty Coffee Expo in Portland, USA, and the World of Coffee Expo in Greece. Over 10,000 exhibition goers visited the UCDA booth at the three events. They were divided into the following categories - Roastery - 29%, Coffee Bar/Cafe - 22%, Coffee Enthusiasts - 19%, Traders - 13%, Growers - 8% and Not-for-Profit Agencies - 4%) and 33 buyer contacts shared with exporters for business engagements.

The UCDA participated in the 19th African Fine Coffee Association (AFCA) exhibition and conference held in Kigali-Rwanda where four Ugandan baristas competed at the African Barista Championship and emerged in 1st, 2nd and 3rd positions.

3.4.5 Conclusion

The overall sub-programme performance was very good at 92.5%. Both output and outcome performance were very good at 91.1% and 95.1% respectively. The outcome indicator for the value of agricultural imports performed poorly at -63%. The outcome aimed at reducing the value of agriculture imports to USD 672.44 million, however, the import value increased to USD1,094 million. The very good performance of the intermediate outcome is also largely contributed by the private sector. Though the sub-programme performance was very good, the following key implementation challenges were reported and observed: delayed approval of payments for contractors for finished and certified works, weak contract management and low contractor capacity to undertake multiple contracts at ago, delayed provision of land to the investor for establishment of preliminary infrastructure for palm growing like access and farm roads, and adulteration of coffee for export.

Recommendations

1. The MAAIF Accounting Officer should review the turnaround time for honoring payments for certified works to hasten project implementation as the payment delays constrain the cash flows of the contractors.
2. The MAAIF, NAADS and MoLG should review project implementation including cancellation of contracts for the non-performing contractors, strengthen the contracting process and fast-track procurement for the remaining works to cope with the time lost for the enduring works.
3. The GoU through the MAAIF and Ministry of Lands, Housing and Urban Development (MLHUD) should expedite the process of opening boundaries for all the land provided for the Buvuma Hub.
4. The MAAIF and UNBS should strengthen quality controls and certification of agro-produce to meet international market standards to ensure the importation and exportation of quality products.

3.5 Agricultural Financing Sub-programme

3.5.1 Introduction

The Government aims to increase the mobilization, equitable access, and utilization of agricultural finance for farmers, agro-processing firms and farmer groups. The funding for agricultural financing was disbursed through the Private Sector Development and Manufacturing Programmes. The annual monitoring covered three outputs: capitalization of government-owned institutions and financing schemes, industrial and economic development (UDC), and oversight and coordination of the non-banking sector.

Although the outputs are implemented under different programmes they were largely contributing to the agro-industrialization programme interventions of - develop concessional long-term financing for agricultural infrastructure and capital investments; and finalize and implement the Agricultural Finance and Insurance Policy.

Performance

The agricultural financing sub-programme budget was Ug shs 54.75bn which was all released and Ug shs 48.75bn (89% of the release) was spent by 30th June 2023. The sub-programme budget release and expenditure performance were very good and good respectively.

The overall sub-programme performance was good at 84.4%% as of 30th June 2023 (

ANNEX 6: Performance of the Agricultural Financing Sub-programme by 30th June 2023). The output performance was very good at 94.4% whereas the outcome performance was fair at 66.9%. The UDC intervention performed poorly with 21% of the availed funds not invested by 30th June 2023 and most of the projects still in the investment phase, others heavily indebted while others were operating at a net loss. The UDC must restructure the operational plans and strategies to reduce the turnaround for feasibility studies; valuation and investment appraisals to improve the absorption of availed funds.

Available data reveals that access to agriculture insurance and knowledge about the scheme has increased however, the fund allocation does not allow fund managers to enroll more farmers. It was observed that the subsidy contribution for agriculture insurance was way above the annual budgetary allocation and some of the reported beneficiaries were not aware of the scheme. Detailed field findings are presented hereafter.

3.5.2 Develop concessional long-term financing for agricultural infrastructure and capital investments

Capitalization of Government-owned Institutions and other Financing Schemes

Introduction

This intervention involves capitalization of partially GoU-owned value-addition industries and private players engaged in agriculture production and productivity; storage, aggregation and bulking, agro-processing and value-addition entities. It also involves the capitalization of the Agro-Consortium and the Insurance Regulatory Authority (IRA) to support Agriculture Insurance. The annual planned outputs were: Farmers supported with agriculture credit under the Agriculture Credit Facility of the Bank of Uganda (BoU), and factories financed through the acquisition of equity/shareholding/direct funding for the subsidiaries under the UDC.

Performance

Farmers were supported with agriculture credit under BoU's Agriculture Credit Facility (ACF). The ACF is a risk-sharing public-private partnership that provides medium to long-term financing to farmers since 2009 to undertake agricultural projects, (agro-processing, on-farm activities, postharvest management and grain trade) at subsidized interest rates. The ACF leverages the resources of Participating Financial Institutions (PFIs) to bridge the financing gap, with interest chargeable being 12% per annum except for working capital for grain trade which is chargeable at 15% per annum. Block allocations of Ug shs 20 million are provided to micro-borrowers who often lack collateral.

During the period under review, the BoU as the ACF fund manager got Ug shs 49.750bn from GoU onto the ACF escrow account, of which Ug shs 42.50bn was transferred to the ACF capital for onward lending by the PFIs; Ug shs 1.250bn was expended on ACF operations and Ug shs 6.0bn not spent. A total of 324 loans worth Ug shs 122.908bn were disbursed to individuals, blocks and companies involved in agriculture value chains as at 30th June 2023. A total of Ug shs 5.476bn was disbursed as block allocations constituting 4.5% of the total loan facilities during FY2022/23. The GoU contribution of the total loans disbursed was Ug shs 66.622bn.

Analysis of the loans disbursed to individuals and companies during the period under review indicated that the biggest share of the loan values went to on-farm activities at 50.1% (Ug shs58.824bn), whereas agro-processing had the least share of the loan value at 5.6% (Table 3.23).

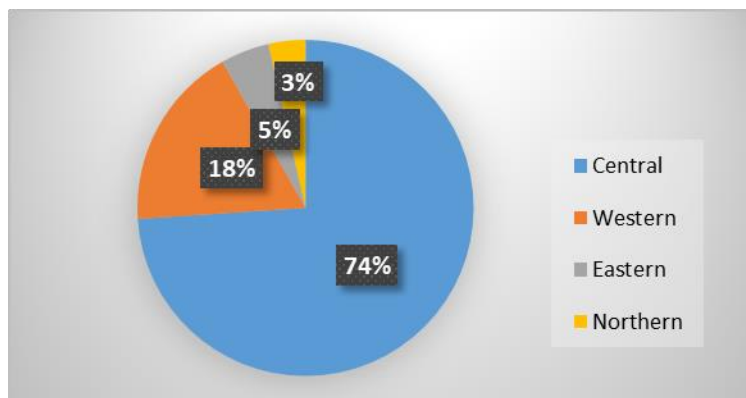
Table 3.23: Share value of loans taken by individual borrowers aggregated by purpose

Purpose	Loan Amount	% Share
Agro-processing	6,536,000,000	5.6
On-farm activities	58,824,584,398	50.1
Post-harvest management	15,360,060,000	13.1
Grain trade	36,710,810,818	31.3
Total	117,431,455,216	100.0

Source: ACF Database

Equity analysis in access to ACF revealed regional inequality in access to the ACF as at 30th June 2023. The value of ACF loans to individuals was highest in Central Uganda at 74% and lowest in Northern Uganda at 3% (Figure 3.10). The disparity in access to ACF financing in Northern and Eastern Uganda was partly due to low awareness within the population about the ACF, low availability of the scheme in the banking sector within these regions, and lack of collateral as most land is communally owned.

Figure 3.10: Percentage share of ACF loans by region



As part of affirmative action to increase access to smallholder farmers, including women and youth, the GoU introduced block allocations to farmers who lack collateral, to enhance financial inclusion by unlocking access to credit for the micro, small and medium enterprises (MSMEs).

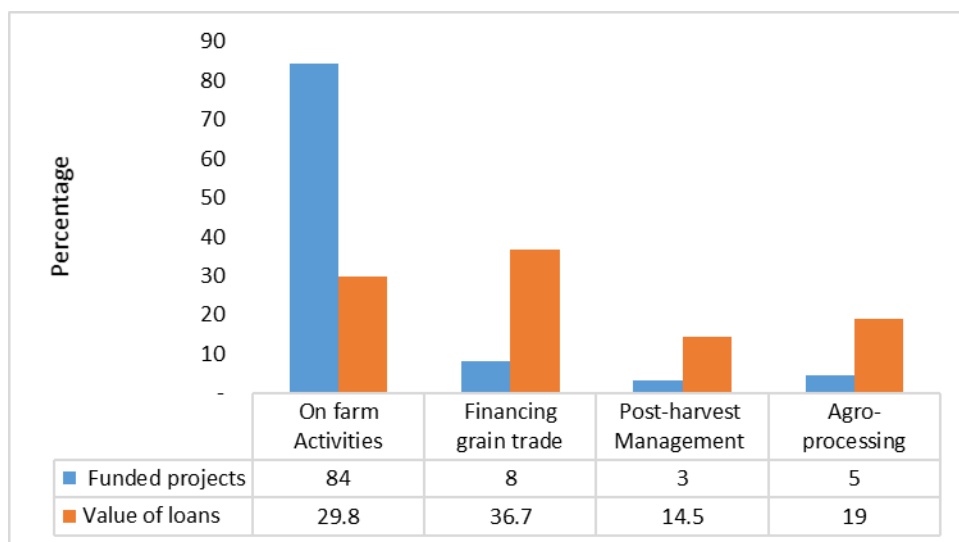
Under the block allocation, a total of 850 farmers/applicants benefited from the facility, of which 56.4% of the beneficiaries were from Western, followed by 24.6% from Eastern, 15.6% from Central and 3.4% from Northern Uganda.

Financing to farmers in the block allocation category covered three main areas: financing grain trade, post-harvest management, and on-farm activities. Most of the loans were purposed for on-farm activities constituting 90.5% of the loan value under block allocation. Post-harvest management had the least share of the loan value under block allocation at 0.9% and this was attributed to the low value of funds received under the block allocation that could not sufficiently support activities under that category. Consequently, block allocation just like the ACF without affirmative action mainly supported lower levels of the value chain.

Further analysis of the ACF performance since inception to March 2021 revealed that a total of 2,063 projects were funded, amounting to Ug shs 669.881bn, of which GoU contribution was Ug shs 339.935bn (50.7% of the total loan value). Most of the funded projects were for on-farm activities (84.3%), however, the bulk of the value of loans disbursed was for grain trade at 36.7%. Postharvest management registered the lowest number of projects and the percentage value of loans at 3.2 and 14.5% respectively (Figure 3.11).

On-farm activities and grain trade are considered to be lower levels of the agriculture value chain therefore the trend of ACF funding implies that the intervention is skewed towards supporting the lower levels of the value chain to enhance agricultural production and productivity and are less focused on addressing the higher levels of the value chains of improving post-harvest handling and agro-processing. This trend does not holistically support a progressive movement towards agro-industrialization and increased competitiveness for both local and international markets.

Figure 3.11: Performance of ACF since inception to March 2021 by loan category



All the beneficiary farmers monitored as at 11th August, 2023 confirmed receipt of the funds as reported by BoU. The majority of the beneficiaries however complained of under-valuation of the collateral and thus could not get the envisaged/applied for funds and no grace period. Though the BoU strives to attain a 15 working days' turnaround time for loan application reviews and loan disbursement most of the beneficiaries complained about the lengthy approval process that can take close to two months. Table 3.24 shows the performance of the case studies of ACF beneficiaries as at 30th June 2023.

Table 3.24: Performance of ACF beneficiaries as at 30th June 2023

Name	Parish	District	% Loan requested (Ug shs '000'000)	% receipt of loan (Ug shs '000'000)	Actual Use of the received funds	Remarks
Odong Joe	Barlowelo South	Apac	100	100	Procured a truck.	His tractor is in good condition, uses it to plough the land and also hires it out at a fee.
Obete Denis	Temogo	Apac	100	33	Purchased produce (Grain).	He received less money than he had requested, hence his targets were not met.
Atuhaire Gerald	Buhimba	Hoima	100	100	Purchased dairy cattle 9	The market price was higher than he had anticipated. He therefore acquired less of his targets. His main challenge was that he wasn't given a grace period.
Fredrick		Jinja	100	100	Procured a truck.	Acquiring a truck enabled him to reduce the costs of production, however, loan processing was delayed by 5 months.

Name	Parish	District	% Loan requested (Ug shs '000'000)	% receipt of loan (Ug shs '000'000)	Actual Use of the received funds	Remarks
Kapero Micheal		Kapchorwa	100	100	Purchased produce (Grain).	Delayed loan processing period, so at the time of loan disbursement maize prices had gone up due to changing seasons. No grace period was given yet it is a seasonal-based enterprise.
Ogwang Joe	Railway Quarters	Lira	100	65	Purchased produce (Grain).	He purchased less produce than he had planned due to less funds disbursed. This was attributed to inadequate collateral security.
Mrs. Asimwe Robert	Kiteredde	Masaka	100	80	Purchased grain	Long loan processing period, so at the time of loan disbursement, the maize prices had gone up due to the changing seasons.
Mrs. Kyosimire Sylvia	Kinyara	Masindi	100	100	Procured two trucks	There was a delay in loan processing. He also noted that fewer farmers are aware of this facility.
Subuma Hamza	Kinyara	Masindi	100	100	Procured two trucks	There was a delay in loan processing, and he found the loan processing fee too high.
Matsiko Nicholas	Kamushoko	Mbarara	100	100	Procured Agricultural equipment	The loan processing period was long (three months' delay), which affected the dollar rate since he was importing the equipment.
Dr. Mugasira Cranimer	Bwizi – Bwera	Mbarara	100	66.6	Purchased 18 bulls, paddocked, fenced, constructed a deep well, dam and improve the banana plantation.	His project was doing fairly well. However, he was faced with the challenge of losing his livestock to tick bone diseases, which was attributed to the counterfeit acaricides on the market.
Sejjemba Deogracious	Kabyuma	Mubende	100	50	Constructed; shallow well, planted pastures, fenced and purchased 35 bulls.	He only achieved 50% of his planned targets because the money advanced to him was not enough. This left his business hanging and struggling. The key challenge was the low project profitability due to the inadequate credit that was disbursed.

Name	Parish	District	% Loan requested (Ug shs '000'000)	% receipt of loan (Ug shs '000'000)	Actual Use of the received funds	Remarks
Mrs. Yiga Beatrice	Seeta	Mukono	100	66	Only a skeleton structure was constructed	There was low project profitability due to the inadequate credit that was disbursed. She intended to construct a warehouse, however, she was given less money yet construction materials were more expensive on the market than planned. Works stalled at 45%.
Gaboi Nicholas	Maziba	Mukono	100	43.8	Purchase of irrigation equipment and pineapple farm expansion	He only expanded the pineapple farm and bought agricultural inputs and deferred the irrigation system due to insufficient money disbursed.
Oyola Charles	Soroti City East	Soroti	100	50	Purchased produce (Grain).	He was appreciative of ACF. After milling his produce, he was able to acquire 6 plots of land @ 30x100.
Ndege Benson	Kakiri	Wakiso	100	66.6	Purchased dairy cattle	He purchased fewer cattle than he had planned due to inadequate funds extended to him.
Ssempe Samuel	Lyangoma	Mubende	100	50	Grain purchase	He procured 49MT of maize grains at Ug shs 1,000,000 per MT in February 2023. The maize was later sold at Ug shs 1,700,000/MT. The beneficiary aims at acquiring a canter truck to ferry the grains from farms to his store.
Justus Tukamwesiga	Kigazi	Kamwen ge	500	300	Farm improvement	Part of the money was used to paddock 2sq miles and Ug shs130m was used to buy cattle for fattening. The beneficiary complained about the undervaluation of the collateral.
Tumusiime Wavamuno Richard	Kakika	Mbarara city	100	60	Farm improvement	Constructed a shallow well, procured and installed water distribution pipes in four paddocks of eight acres size each and procured a silage chopper. The challenge experienced by the farmer was prolonged dry spells.
Kakooza Mathias	Rukindo	Mbarara city	150	100	Farm improvement	Planted three acres of bananas; bought manure and mulch, constructed a shallow well and ventured into poultry, piggery and animal feed production. He appreciated the facility for being at a

Name	Parish	District	% Loan requested (Ug shs '000'000)	% receipt of loan (Ug shs '000'000)	Actual Use of the received funds	Remarks
						low interest rate compared to other available credit.
Mukasa Michael Kaweesi	Ngongolo	Wakiso	100	100	Poultry	Used the funds to buy chicks and poultry feeds. The beneficiary had 6,000 layers. His prayer was to have the interest rate lowered to around 10%.
Magomu Kenneth	Nkokonjeru	Mbale	120	120	Coffee purchase	The beneficiary used the money for trading in FAQ coffee. He received a special facility that would allow him to make loan repayments on the principal bi-annually whereas the interest is paid monthly. He complained about the undervaluation of the collateral by the bank.
Cherotic Anthony, Chelanga Milly	Kapkweteny	Kapchorwa			Dairy farming	Bought 15 dairy cows; silage cutter and constructed an animal shade.
Chemusto K. Rashid	Ngesi	Kapchorwa	100	50	Coffee, maize and beans trade	Used the money to trade in 222 bags of maize; 311 bags of beans and 6 bags of coffee. However, the money to trade in the envisaged volumes.

Source: Field Findings

The performance of the ACF in FY2022/23 was good at 87.6% of the received funds loaned out to 1,988 beneficiaries (o/w 850 were under block allocation). The key challenges include: lack of a grace period particularly for ACF beneficiaries engaged in perennial agriculture as they needed more time to harvest and use the proceeds to amortize the loan; delayed disbursements greatly affected farmers in grain production since prices had increased at the time when the loan was disbursed; constrained participation by consenting PFIs as they prioritize the commercial loans; and limited access, especially in rural areas where banks are not in existence and limited financial literacy and bookkeeping knowledge. Therefore, for farmers and other actors of the agro-industrialization agenda to benefit from the facility, there is a need for the fund manager to be more interested in the value addition/agro-processing value chain to take up the facility such that the products of primary production can have a ready and competitive market.

Industrial and Economic Development (UDC)

Introduction

The UDC is mandated to facilitate Government investment in strategic sectors of the economy for purposes of industrial and economic development through the promotion and facilitation of PPPs; enter into joint ventures or other arrangements with any domestic or foreign entity and act as one of the implementing agencies of PPPs on behalf of Government.

Performance

The UDC budget for FY2022/23 was Ug shs 443,560,676,587, of which Ug shs 395,226,664,587 (89% of the budget) was released by 30th June 2023. However, the total cash available to UDC was Ug shs 607,027,465,276, of which Ug shs 211,800,800,689 (35%) was the balance brought forward from FY2021/22. Of the total cash available to UDC, Ug shs 458.527bn was for agricultural-related investments (inclusive of funds for UDC wage and non-wage and feasibility studies).

The UDC invested in eight¹³ companies/entities involved in agro-processing and value addition. The total investment was Ug shs 326.306bn in the form of equity, shareholder loans and grants. It was observed that 89.4% (Ug shs 291.857bn) of the investment was to one entity Horyal Investment Holdings Company Limited (HIHC) in the form of preference shareholding and lease financing (Table 3.25). Three investments were reported to be making a net profit, whereas five investments were reported to be operating at a net loss. The poor performance of the investment projects was attributed to an increase in selling and distribution expenses, price drops especially for tea at the Mombasa auction markets and some of these companies were heavily indebted before the UDC intervention. The detailed performance of some of the monitored UDC investments was provided in the section for - *Establish new and rehabilitate existing agro-processing industries*.

The UDC extended grants to two companies worth 2,149,318,650 which is contrary to its mandate of facilitating Government investment in strategic sectors of the economy for purposes of industrial and economic development (UDC Act 2016).

Table 3.25: Investments by UDC during FY2022/23

Investment Type	Investee Company /Project Name	Amount (bn Ug shs)	Comment
Investment in Subsidiaries	Soroti Fruits Limited	10.951	Investment towards working capital and constitutes part of UDC's shareholding in the company. The company continues to operate at a net loss.
Investment in Associates	Mutuma Commercial Agencies Ltd (MCAL)	1.813	Final payment towards the acquisition of 36% shares in MCAL. The factory was in operation in July 2023 however it reported a net loss as at March 2023.
	Budairi Arabica Coffee Mills Ltd (BACML)	3.945	Final payment towards the acquisition of 32% shares in BACML.
	Yumbe Fruit Factory	0.101	Payment towards salaries for staff. The Investment forms part of UDC's investment in shares in the company. The factory is not operational though commissioned a year ago.
	Nile Hotel International Ltd (Igongo Cultural Centre)	5.50	Shareholding agreement not yet signed

¹³ Soroti Fruits Limited; Mutuma Commercial Agencies Ltd (MCAL); Budairi Arabica Coffee Mills Ltd (BACML); Yumbe Fruit Factory; Bukona Agro Processors Ltd; Horya Investment Holding Co. Ltd (HIHC); Mabale Growers Tea Factory Ltd; Mpanga Growers Tea Factory

	Bukona Agro Processors Ltd	5.50	Acquiring shareholding in Bukona however, signing of shareholder agreement and fulfilment of prior conditions were yet to be done by 30 th June 2023.
Preference Shares	Horyal Investment Holding Co. Ltd (HIHC)	198.590	100% preference shares in HIHC.
Finance Lease	Horyal Investment Holding Co. Ltd (HIHC)	93.267	Advance payment and amounts held in LCs for the supply of agriculture farm equipment and earthmoving equipment.
Shareholders Loan	Mabale Growers Tea Factory Ltd	5.30	Shareholder loan to Mabale Growers Tea Factory. The factory was operating below the installed capacity and reported a reduction in the net loss made.
	Mpanga Growers Tea Factory	6.385	Shareholders loan to Mpanga Growers Tea Factory. The factory reported a net loss in Q3 FY2022/23
Grants	Kigezi Highland Tea Factory Ltd	1.813	Grant towards the planting of 10m tea seedlings in line with the SIFA agreement.
	Busoga Sugar Cane Transportation (Atiak)	0.336	A grant

Source: UDC and Field Findings July and August 2023

3.5.3 Finalize and implement the Agricultural Finance and Insurance Policy

Oversight and coordination of the non-banking sector (Agro-Consortium support to agriculture insurance in Uganda)

The Uganda Agricultural Insurance Scheme (UAIS) is a public-private partnership arrangement in which the Government subsidizes Agricultural Insurance Premiums for farmers. This was established starting FY2016/17 as a five-year pilot project whose main objective was to ensure that farmers in Uganda are protected against agricultural risks associated with losses arising from natural disasters; and also to attract additional financing to the agricultural sector. The GoU provided an annual contribution of Ug shs 5bn as a premium subsidy to agriculture insurance as a way of encouraging farmers to take up insurance cover for their crops and livestock.

However, after the five-year period, it was deemed necessary to extend the UAIS for another four years from 2021/22 to 2024/25 to consolidate gains made under the first phase including bringing on board crops and animals expected under the PDM and to further rollout Agriculture Insurance to all regions of the country. Consequently, the memorandum of operationalization of UAIS was amended.

For its effectiveness, the scheme is implemented through financial institutions, direct farmer interface in their cooperatives, savings and credit cooperative societies (SACCOs), area cooperative enterprises, and insurance companies country-wide. Uganda Insurers Association the private partner implementer of the scheme through the Agriculture Insurance Consortium (AIC) insures the

farmers. The AIC, a coalition of 13 insurance providers¹⁴ partnered with UAIS to provide insurance premium subsidies to farmers at the following rates: 50% for small-scale farmers; 30% for large-scale farmers and 80% for disaster-prone areas. The UAIS offers a variety of insurance products such as crop weather index insurance, livestock insurance, multi-peril crop insurance, poultry insurance aquaculture and plantation fire insurance.

The planned activities included: quarterly monitoring of the agricultural insurance scheme; conduct validation and develop the implementation framework of the Agricultural Finance Policy; Provide technical input to the development of the insurance regulations and review of the Insurance Act; quarterly field assessments on the penetration and uptake of the agricultural insurance scheme carried out.

Performance

The Agriculture Insurance Scheme intervention was embraced in all regions of Uganda with a total of 298,488 farmers enrolled during the period and the value of insured enterprises was Ug shs 238.148bn (Table 3.26). The intervention recorded a 227.4% increment in the number of farmers enrolled down from 91,171 farmers in FY2021/22; however, the value of the enterprises insured decreased by 63%. The increase in the number of subscribers during FY2022/23 is partly attributed to the increased uptake of agricultural loans that happen to insured. The eastern region had the highest number of farmers enrolled at 38%, whereas the northern region had the lowest number of farmers enrolled at 18%. A total of Ug shs 9.264bn (59.8%) was paid as the government subsidy way above the annual allocation of Ug shs 5bn.

Table 3.26: Summary of performance of access to Agriculture Insurance Scheme by 30th June 2023

Region	Number of Farmers	Sum insured (Ug shs)	Basic Premium (Ug shs)	Subsidy Amount (Ug shs)
Central	74,551 (25%)	75,206,204,400	3,422,010,324	1,702,605,163
Western	56,647 (19%)	85,748,180,843	4,149,542,757	2,370,542,909
Eastern	112,655 (38%)	41,216,014,899	4,162,386,084	2,925,825,555
Northern	54,637 (18%)	35,977,698,200	3,746,075,733	2,265,556,198
Total	298,490	238,148,098,342	15,480,014,898	9,264,529,826

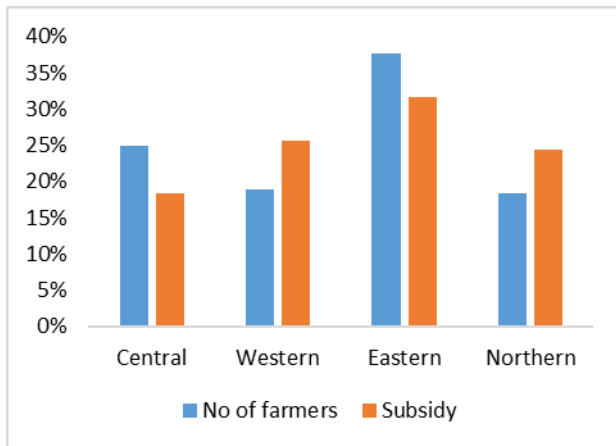
Source: AIC Progress Report

The insurance was majorly taken up by smallholder farmers in disaster-prone areas at 99.9%, whereas the share by commercial farmers was minimal at 0.1% of total farmers enrolled during FY2022/23. The average sum insured by farmers was Ug shs 797,843 further asserting that the facility is taken up by smallholder subsistence farmers. Even though the Eastern region had the highest number of farmers accessing the scheme the sum insured was indirectly proportional thus the subsidy contribution by the government. This indicates that the majority of the farmers in the Eastern region are smallholder farmers dealing in low-value crops like maize, beans, cassava, sugarcane etc. The Western and Northern regions had the least number of subscribers but with a

¹⁴ UAP Old Mutual Insurance (U) Ltd, Pax Insurance Company Ltd, NIC General Insurance Ltd, First Insurance Company Ltd, CIC General Insurance Ltd, APA Insurance (U) Ltd, GA Insurance (U) Ltd, Alliance Africa General Insurance Ltd, Mayfair Insurance (U) Ltd, Excel Insurance Company Ltd, Grand Micro-Insurance Ltd, Jubilee Insurance, and Sanlam Uganda General Insurance.

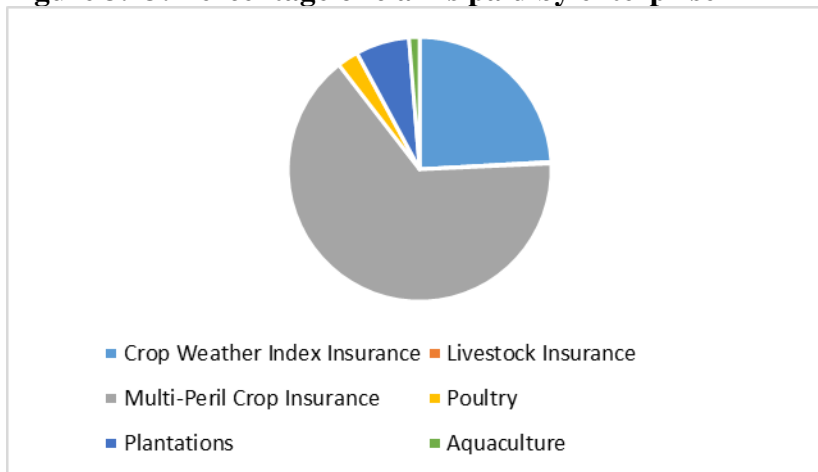
significant share of the subsidy, which was attributed to the value of enterprises insured and the likelihood of occurrence of disasters respectively (Figure 3.12).

Figure 3.12: Percentage share of the insurance subsidy by region



By 30th June 2023, Ug shs 2.084bn had been paid in claims to the different subscribers. The highest number of claims paid was under Multi-Peril Crop Index Insurance at 65.2%, which encompasses some clients through financial institutions insuring agriculture production loans. Livestock insurance had the least claims at 0.2% (Figure 3.13). The cause for the agricultural losses incurred by the farmers were mainly due to drought, and animal diseases (foot and mouth disease, lumpy skin disease, gumboro/infectious bursal disease, swine fever, new castle etc), fire, excessive rain (flooding), hail storms.

Figure 3.13: Percentage of claims paid by enterprise



A total of 42 sensitization and awareness activities were carried out across all regions in the districts of Jinja, Gulu, Amuru, Amolatar, Isingiro, Kyotera, Ibanda, Kabale, Rubanda, Iganga, Mayuge, Bugiri, Tororo, Bulambuli, Kapchorwa, Bududa, Kampala, Kalungu, Nakaseke, Kotido, Mbarara, Kamuli, Bukedea, Kyenjojo, Mbale, Nwoya, Omoro, Nebbi, Lira and Kaberamaido.

During the monitoring for FY2022/23, key informant and telephone interviews with the sampled subsidy beneficiaries were conducted and Table 3.27 shows the responses.

Table 3.27: Summary of the case studies sampled for Agriculture Insurance

Name	Location	Access modality	Remarks
Chebet Milton	Worya Village, Ngenge Sub-county in Kween District	Direct farmers interface from an agent in Sebei Farmers Sacco	Planted 15 acres of maize but only insured three acres against drought and paid a premium of 4,900 Ug shs per acre. He however harvested 12 bags each of 100kg compared to the expected 60 bags from the insured 3 acres due to drought. Despite making losses Mr. Chebet was not compensated. Key challenges were there were no farm inspections done before he paid the premium and after making losses and therefore didn't know how much his compensation would be.
The Youth Transformative Network	Kween, Buko, Bulambuli and Kapchorwa	SACCO interface with the insurance agent	A total of 200 farmers subscribed under the Weather Index Insurance. Farmers were mainly growing maize and beans; they paid 20,500 per acre. The farmers made losses of 75% in seasons A and B in 2022; however, they were compensated for losses incurred in seasons A and B up to Ug shs 61 million and 83 million respectively.
Wagagai Farmers Sacco	Kasereem Village in Kapchorwa District	SACCO interface with Excel Insurance Company	A total of 85 farmers subscribed under the Weather Index Insurance. They were not compensated despite making losses because the AIC through its satellite readings inferred that farmers had a good season with bumper harvests.
Topista Nakayombya	Rubaga		She has never applied for agriculture insurance although she deals in rearing chickens for egg production.
Daniel Kalombo	Kanyanya Malangala, Kampala		He has never applied for agriculture insurance though his name was on the list of subsidy beneficiaries.
Masobu Forman	Mbuya 1, Nakawa Division		Not sure if he applied for the insurance scheme but has a loan facility from a commercial bank and he grows maize in Kamuli District.
Odea Washington	Kabalagala, Makindye Division Kampala		Not aware of the insurance subsidy and has never applied for one.

Source: Field Findings

The performance of the agricultural insurance scheme was very good, however, the value of the subsidy paid by the AIC was way above the annual budget allocation. It was observed that some beneficiaries were not aware of the agriculture insurance subsidy and others benefited from the facility by insuring agriculture loans which points to misuse of the fund. It was observed that farmers were only able to access insured agricultural loans from tier-one financial institutions. Despite the good performance of the UAIS, the fund manager (AIC) cited the following implementation challenges: inadequate budget releases, and the limited number of specialist agriculture risk and adjustment service providers.

Therefore to improve the performance of the UAIS, the MFPED should streamline and audit the AIC operations to ensure that the intended beneficiaries are enrolled on the scheme, review the budget allocation for UAIS to above Ug shs 5bn currently provided because the number of subsidy applicants were increasing, and implement the UAIS dissemination and marketing strategy, and formulate a working relationship with MAAIF to leverage the existing agriculture extension infrastructure to increase the scheme awareness amongst farmers.

3.5.4 Conclusion

The overall sub-programme performance was good at 84.4% as at 30th June 2023 (

ANNEX 6: Performance of the Agricultural Financing Sub-programme by 30th June 2023). The output performance was very good at 94.4% whereas the outcome performance was fair at 66.9%. The sub-programme objective is to increase mobilization, access and utilization of agricultural finance. However, by 30th June 2023, the proportion of farmers accessing agriculture finance was below the set annual target at 12.8% against a 22% set indicator target. The sub-programme implementation challenges included an inadequate budget allocation to the agriculture insurance consortium, delayed initiation of projects under the UDC, and low awareness about the ACF and AIC.

Recommendations

1. The MFPED should consider reviewing upwards the budgetary allocation to the UAIS.
2. The BoU and AIC as fund managers for ACF and UAIS should leverage existing structures like district commercial office and agriculture extension officers to popularize and market the schemes amongst the intended beneficiaries.
3. The UDC should expedite pre-investment studies and processes to ensure that projects that have been in the pipeline for over two years are implemented or dropped.

3.6 Institutional Strengthening and Coordination Sub-programme

3.6.1 Introduction

The sub-programme aims to strengthen institutional coordination for improved service delivery. Monitoring focused on the implementation of the Parish Development Model. The sub-programme is composed of two sub-interventions namely - strengthen coordination of public institutions in the design and implementation of policies including access to quality food and food security, and strengthen linkages between public and private sectors in agro-industry.

The annual monitoring exercise focused on one sub-intervention - strengthen coordination of public institutions in the design and implementation of policies including access to quality food and food security with the components of the PDM and data collection among DLGs to support policy and coordination.

Performance

The performance of the monitored sub-intervention was fair, although a rating could not be derived due to a lack of credible data and information from the implementing agencies. There was a poor attitude towards PDM activities by some LG leaders and technical staff- including around the use of Parish Development Management Information System (PDMIS) for data collection and profiling of intended beneficiary households; contextualizing PDM in the broader Local Economic Development agenda.

The PDM implementation was constrained by inadequate funding, intermittent network for the PDMIS, partial completion of trigger processes especially enterprise selection and farmer selection and lack of clear instructions and changing guidelines from different ministries, departments and agencies.

3.6.2 Strengthen coordination of public institutions in design and implementation of policies

This intervention contributes to the objective of Strengthening Institutional Coordination for Improved Service Delivery. The planned outputs were: i) Public-private dialogue guidelines developed (PDM implemented); ii) Regular collection and dissemination of agriculture data undertaken; iii) Nucleus farmer model across all ecological zones supported and developed; iv) Partnerships and collaboration with other relevant stakeholders promoted e.g. women groups. The annual monitoring focused on two outputs out of four as discussed hereafter.

i) Public-private dialogue guidelines developed (Parish Development Model)

Performance

As at 30th June 2023, full implementation of the Parish Development Model was not achieved by all parishes and inputs had not been fully purchased primarily due to: a) lack of clear instructions and changing guidelines from different ministries, departments and agencies, b) inaccessibility of Banks by the beneficiaries and long queues at the branches, c) Unreliable PDMMIS network to enable the registration and loan processing for potential beneficiaries, d) inadequate sensitization on PDM to both the *Mwanainchi* & leaders, e) PDM SACCO leaders had no operational funds - stationery, photocopying, transport fares associated with the loan appraisal by the SACCO loans committee, and f) inadequate facilitation for parish chiefs and extension to supervise PDM activities.

The formation of Enterprise Groups and PDM SACCOs was concluded. A total of 10,595 PDM SACCOs were registered, of which 10,585 received Ug shs 1,058.125bn as parish revolving funds (PRF) for the FY 2022/23. Nine PDM SACCOs¹⁵ did not receive the PRF as their existence was doubted and at the time of monitoring in August 2023, an audit was ongoing. Each household was supposed to receive Ug shs 1,000,000 as PRF. All the PRF loan repayments were to start after the 24th month from disbursement, as lump-sum or bits not beyond the 36th month.

Readiness for implementation at all levels of the LG was estimated at 85%: By 30th June 2023, Parish Chiefs/Ward Agents were recruited across the 10,595 gazetted parishes; District PDM Core Teams and focal persons were established as a District PDM Secretariat; Parish Development Committee (PDCs) (LC2s) were re-activated all spearheaded by MoLG & LGs. However, gaps in the extension workers' system were acknowledged and there were no substantive PDCs in some parishes; data profiling/PDMIS was undertaken but not completed due to logistical challenges of lack of gadgets (mobile phones, laptop computers, data and others), trainings for households through Enterprise Groups formation and PDM SACCO leaders on managing Parish Revolving Funds was carried out. However, the allocation for the PDC was noted to be meagre as it translated into Ug shs 250,000 per quarter.

The MoLG provided technical support to LGs on the implementation modalities of the financial inclusion activities, community mobilization and sensitization for PDM was undertaken, 63 national Trainers of Trainers (ToTs) were identified and trained by the MGLSD, the ToTs, in turn, trained 885 officers from all the 177 LGs, and mobilization and sensitization campaigns were led by members of Cabinet.

¹⁵ Fort Portal MC (3), Moroto (1), Kapelebyong (1), Bushenyi DLG (1), Kampala City (1), Yumbe (1), and Otuke (1)

By 30th June 2023, implementation was initiated only for two out of the seven pillars, funds were disbursed to districts and parishes under Pillar One and SACCO formation, setting of governance structures and enterprise selection were largely completed under Pillar Two. Various versions of guidelines for implementing the PDM were disseminated to stakeholders by the key implementing agencies (MoLG, MFPED, and MGLSD).

The PDMIS Financial Inclusion System was developed and completed a series of User Acceptance Tests (UAT) and system security tests of the PDMIS-Financial Inclusion Module. The Ministry of Information Communication Technology and National Guidance (MoICT&NG) supported the Financial Services Department with the validation of PDM-SACCOs on e-registration and IFMS with attestation forms.

Participated in a post-production testing exercise of the PDMIS-Financial Inclusion Module to review and identify key pending issues on the system. Some LGs gained confidence and increasingly used the PDMIS-FIS well (Kikuube, Kisoro, Amolator, Oyam, Masaka City, Wakiso, Zombo & Bukedea). This enhanced transparency and accountability, detect possible double/multiple payments, monitoring and evaluation (M&E) functions, monitoring PRF and performance of household investments and reporting at a click of a button.

Inconsistencies in the data requirements were identified, and this affected the performance of the PDM. The PDMIS required leaders and members to have a National Identification Number (NIN) and telephone number registered using the same NIN, which was not necessary during the first data collection exercise. This implied a new profiling. For instance, Kayunga District was ahead of the DLGs monitored and had re-profiled 22 out of the 71 PDM SACCOs. The key concerns were some PDM members lacked a NIN, while others lacked mobile phones. Also, the requirement to scan and attach documents on the PDMIS including by-laws, resolutions, certificates of incorporation, and minutes of the first Annual General Meeting was noted to be cumbersome for the majority of the PDM SACCO members who were semi-literate.

In terms of utilization of implementation of the operational activities, most of the monitored districts such as Mubende, Gomba, Kayunga, Arua, Bushenyi, Kyenjojo and Kyegegwa had disbursed funds for the Parish Development Committee through the sub-counties, while others were yet to disburse the funds.

Overall, the visited districts provided trainings to PDM SACCOs in enterprise selection throughout the agriculture value chain, governance and accountability, and conducted PDM SACCO's first general meetings, and special general meetings among others. However, the majority of farmers selected short-term enterprises that required a low capital outlay and would fit within the PDM allocations. This was disadvantageous to prioritization of high-value long-term enterprises such as coffee, cocoa and tea which are among the country's strategic commodities.

Key risks identified that may derail the programme: a) possibility of high post-harvest losses after large harvests at the farm level due to lack of functional storage, value addition and agro-processing facilities, b) possibility of farmers undertaking uneconomic or very small projects that do not address income and food security concerns due to the limited funding disbursed by the parish. This could result from a lack of clarity on processes and criteria for selecting beneficiary farmers,

including how much each farmer should receive, c) the possibility of misuse and misallocation of funds by SACCOs by implementing activities that are not PDM compliant due to unclear guidelines and lack of supervision mechanisms.

ii) Regular collection and dissemination of agriculture data undertaken

The MAAIF supported DLGs to collect data intended to support strengthening of policy and coordination. For example, the MAAIF collected quantitative data from 1,534 randomly selected farming households across three national oil palm project hubs: Kalangala (424), Buvuma (493), and Mayuge comprising Bugiri (198), Namayingo (107), and Mayuge (312).

Qualitative data was collected to provide in-depth information on project indicators. Key findings included; a) the average household monthly income was Ug shs 26.2 million among oil palm farmers and Ug shs 4.4m among non-oil palm farmers, b) based on the Food Insecurity Experience Scale (FIES), food insecurity was reported at 13.4% of the Oil Palm Grower (OPGs) and 23.4% of non-OPG households, c) the average size of an oil palm plot was 6.0 acres in male-headed households whereas in female-headed households was at 4.2 acres on average implying limited land ownership by women.

The ACDP developed a quantitative tool and programmed it in SurveyCTO. The project also supported the recruitment and training of enumerators and quantitative data collection was ongoing at the time of monitoring.

3.6.3 Conclusion

The sub-programme performance was considered fair, although a rating could not be derived due to a lack of credible data and information from the implementing agencies especially those working on the PDM. It was noted that 99.9% of the parishes countrywide had received the parish revolving funds and registration and profiling of the intended beneficiaries was ongoing using the PDMIS. Although the disbursement of the PRF to the PDM SACCOs was at 99.9%, disbursement to intended beneficiaries was at varying levels. Data collection for agriculture statistics was done though at a low scale. The key sub-programme implementation challenges included:

1. Lack of operational funds to facilitate the District Production and Marketing Office to effectively implement the PDM activities. The funds disbursed to the districts were appropriated for the Parish Development Committees leaving the DPO's office without funds for monitoring inspection and supervision.
2. Unreliability of the PDMIS network and lack of NINs for members of the PDM SACCOs.
3. The majority of farmers selected short-term enterprises that required a low capital outlay and would fit within the PDM allocations. This disadvantages the prioritization of high-value long-term enterprises such as coffee, cocoa and tea which are among the country's strategic commodities.
4. Inadequate knowledge and understanding of the operations of PDM by a majority of stakeholders due to rapidly changing guidelines and instructions from several MDAs. The focus of SACCOs was on spending the PDM funds and not spending as a revolving savings fund.

Recommendations

1. The MFPED and PDM Secretariat should prioritize funding of the district PDM operational activities to support timely monitoring, inspection and supervision.
2. There is an urgent need to devolve the National Identification Registration Authority (NIRA) services at the sub-county to fast-track access to NINs.
3. The MoICT&NG should fast-track training and support the enrolment of members on to the PDMIS to facilitate access to funds for beneficiaries.
4. The grace period should be part and parcel of the PDM credit especially for the members involved in the primary agriculture/production and productivity to allow for planting and harvest.

CHAPTER 4: CONCLUSION AND RECOMMENDATIONS

4.1 Programme Conclusion

The approved budget for the Agro-Industrialization Programme for the FY 2022/23, inclusive of arrears and external financing, was Ug shs 1,450.026bn, of which Ug shs 1,143.001bn (78.8%) was warranted and Ug shs 1,039.710bn (91% of warrant) was spent by 30th June 2023. This was a good release and expenditure performance. The underperformance of the programme was mainly under the external financing component with only 57.2% of the budget released (Ug shs 311.917bn) and 68.6% of the releases spent (Ug shs 213.955bn).

The overall performance of the Agro-Industrialization Programme was good at 82.6%. Good performance in commercializing agriculture was a result of additional investments in the production of strategic commodities under the food and animal feed security program and the Parish Development Model, enhancing value addition and agro-processing and increasing farmers' access to water for production and agricultural financing. Although funds were repurposed from planned activities, implementation continued with the increased availability of external financing, off-budget support and collaborative effort with private sector players.

The programme outcome performance was good, indicating that the multi-year and annual interventions implemented were relevant for achieving the goal of agro-industrialization. There was an increased export value of processed agricultural commodities, especially coffee, tea, fish and maize, the value of agriculture imports increased to USD1,094 million against an annual target of USD 672.44 million and the proportion of food-secure households increased. Consequently, the agricultural sector growth rate improved from 4.3% in 2020/21 to 5.0% in 2022/23. The outcome aimed at reducing the value of agriculture exports to USD 672.44 million, however, the import value increased to USD 1,094 million.

Generation and development of technologies and adaptive research by the National Agricultural Research Organisation institutions continued, although most interventions were partially done and results were inconclusive. Performance was fair, negatively impacted by persistent challenges of drought, lack of appropriate agro-machinery and laboratories, inadequate vehicles and equipment, incomplete research infrastructure, migration of technical staff to universities, and underfunding and repurposing of budgets to the food and animal feed security program.

Staffing of extension workers at the national level was low at 4,310 (44.6%) compared to the approved staffing norms of 9,665 leaving 5,355 (55.4 %) positions vacant. On average, the extension worker to farmer ratio was one extension worker to 1,800 households (1:1,800), higher than the recommended ratio of one extension worker to 500 households (1:500) in Uganda.

Significant expansion of the water for production facilities was realized. The main challenge was fully operationalizing the schemes and the lack of maintenance budgets for the established infrastructures.

Implementation of the Parish Development Model progressed, as all the PDM SACCOS received at least Ug shs 100 million for onward lending to farmers to purchase farm inputs. However, the

onward lending to beneficiary farmers had commenced but at varying levels. The pace of fund disbursement to farmers for enterprise development was low

Significant progress was made in the establishment of storage, processing and value-addition facilities by NAADS, UCDA, MAAIF, UDC, and MoLG. However, the functionality of the established facilities was not fully realized due to key constraints including lack of power connectivity, inadequate raw materials, cooperative managers and beneficiaries who lacked technical expertise on how to operate the machines, poor planning for operationalisation of the facilities and missing parts in some of the machines. The delays in the completion of the facilities were attributed to weak contract management; and low contractor capacity to undertake multiple contracts. Interventions were implemented to enhance standards development and quality assurance along the agricultural value chain.

4.2.1 Overall Challenges

1. Low preparedness to implement development projects and poor contract management, thus leading to cost overruns and stalled projects.
2. Low achievement of planned outputs and targets due to re-purposing of funds to other priorities in the middle of the financial year, and lack of funds to compensate PAPs for infrastructure-related projects.
3. Limited coordination, supervision and poor planning between MAAIF and MWE to undertake the implementation of shared water for production interventions.
4. Poor implementation and supervision of the PDM and other agricultural interventions due to inadequate extension services and operational budget.
5. Low functionality of established value addition facilities especially under the ACDP due to lack of three-phase power.

4.3 Recommendations

1. The MFPED should not disburse funds to projects that are not investment-ready. The MAAIF should enhance the capacity of technical staff in contract management.
2. The MFPED should strengthen budget credibility to ensure that funds are disbursed against the approved work plans, and the multi-year plan for infrastructure projects, including compensation of PAPs.
3. The MAAIF and MWE should improve joint planning, coordination, supervision and implementation of water for production interventions.
4. The MFPED and MAAIF should prioritize recruitment and equipping extension workers to oversee PDM implementation, special attention should be given to newly created administrative units.
5. The MAAIF should strengthen inter-programme synergies with the Ministry of Energy and Mineral Development (MEMD) to ensure that planning for power investments is done at project inception.

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ANNEXES

ANNEX 1: Planned interventions in the PIAP that were monitored for FY 2022/23

S/N	Sub-programme	Total Interventions in PIAP	No. of Interventions in PIAP Monitored	Interventions that were monitored
1	Agricultural Production and Productivity	11	8	<ol style="list-style-type: none"> 1) Agricultural research and technology development strengthened 2) Agricultural extension system strengthened 3) Agricultural input market and distribution systems strengthened to adhere to quality standards and guidelines 4) Access and use of water for agricultural production increased 5) Access and use of agricultural mechanization increased 6) Access and use of digital technologies in agriculture 7) Land tenure systems and security mechanisms improved 8) Farmer organisations and cooperatives strengthened 9) Systems for management of pests, vectors and diseases strengthened 10) Sustainable land and environment management practices promoted 11) Strengthen the capacity to collect, report, disseminate and use weather or accurate meteorological information
2.	Storage, Agro-processing and Value Addition	4	3	<ol style="list-style-type: none"> 1) Post-harvest handling, storage and processing infrastructure established 2) Agro-processing industries established and rehabilitated 3) Community access and feeder roads for market access constructed or regularly maintained
3	Agricultural Market Access and Competitiveness	3	3	<ol style="list-style-type: none"> 1) Strengthen enforcement and adherence to product quality requirements 2) Agricultural market infrastructure in rural and urban areas improved 3) Capacities of public institutions in analysis, negotiation and development of international market opportunities strengthened
4	Agricultural Financing	3	2	<ol style="list-style-type: none"> 1) Finalise and implement the Agricultural Finance and Insurance Policy 2) Develop concessional long-term financing for agricultural infrastructure and capital investments
5	Institutional Strengthening and Collaboration	1	1	<ol style="list-style-type: none"> 1) Strengthen coordination of public institutions in design and implementation of policies
	Total Interventions	22	17	
	% of Total Interventions monitored		77.3%	

ANNEX 2: Districts and Entities monitored for Annual FY 2022-2023

REGION	DISTRICT	INSTITUTION
Northern	Apac	Maruzi Ranch-NARO, Maruzi Ranch NAGRC&DB
	Lira	Ngetta NARO CDO Office, District Production Department
	Pader	Pader Cotton Seed plant (CDO), Aswa Ranch-Zebu Aswa Ranch-NAGRC&DB
	Gulu	DDA Regional Office, UCDA Regional Office, (UCDA) Gulu University
	Nwoya	Gwot-Apwoyo Animal Disease Control Centre, Bukona Agro-Processors, District Production Department
	Nebbi	District Production Department, CDO offices.
	Yumbe	Yumbe Fruit Factory, District Production Department
	Arua	NARO-ABI ZARDI UCDA offices UCDA (Muni University) District Production Department
Eastern	Kamuli	Kasolwe Farm (NAGRC &DB), AVCP Offices
	Mbale	AVCP offices, District Production Department
	Bukedea	Achomai Irrigation Scheme, AVCP offices, Labour Saving Mechanisation Centre
	Bugiri	District Production Department
	Jinja	Njeru Stock Farm, Nytil Jinja, NAFIRRI-NARO, UCDA Regional Office
	Mayuge	Musubi Farm
	Iganga	CDO Office, District Production Department
	Luuka	Mutuuma Commercial Agencies, District Production Department
	Butaleja	Doho 1 Irrigation Scheme, Doho 2 Irrigation Scheme, District Production Department
	Kapchorwa	District Production Department
	Sironko	Budadiri Arabica Coffee
	Dokolo	Agwatta Mechanisation Centre
	Katakwi	District Production Department
	Kumi	District Production Department
Soroti	Soroti Fruit Factory, NASARRI-NARO, District Production Department	
	Kween	District Production Department, Ngenge Irrigation Scheme
Central	Kampala	DDA Analytical Laboratory Lugogo
		UCDA Analytical Laboratory

REGION	DISTRICT	INSTITUTION
	Wakiso	NAGRC&DB, NACCRI-NARO, District Production Department, UNBS, Namalere Mechanisation Centre, Kawanda-NARL
	Mubende	District Production Department
	Luwero	District Production Department
	Gomba	District Production Department
	Nakaseke	District Production Department
	Masaka	UCDA Regional Office
	Mityana	District Production Department
	Kiboga	District Production Department
	Buvuma	Buvuma Hub (NOPP)
	Sembabule	Sembeguya Estates Goat Ranch, District Production Department
Western Region	Bunyangabu	District Production Department
	Kabale	District Production Department
	Kyankwanzi	District Production Department
	Hoima	District Production Department
	Bushenyi	District Production Department
	Mbarara	District Production Department, UCDA (Mbarara University), Mbarara ZARDI
	Kyegegwa	District Production Department
	Kyenjojo	District Production Department, Mabale Tea Factory
	Kabarole	District Production Department, Mpanga Growers Tea Factory, UCDA Office
	Masindi	District Production Department
	Kiryandongo	District Production Department
Kiruhura	Sanga Field Station, Sanga Slaughter Facility, Nshara Ranch	

Source: Author's Compilation

ANNEX 3: Performance of the Agricultural Production and Productivity Sub-programme as at 30th June 2023

Output	Financial Performance			Physical Performance		
	Annual Budget (Ug shs)	% of budget received	% of budget spent	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)
Foundation seed for improved varieties of soybean, groundnuts and maize produced at Ngetta ZARDI and NASARRI (tonnes)	79,416,000	19.6	100	45.00	21.60	100.00
Fish farming technology and improved livestock feeding and animal health technology developed and demonstrated on station and off station at Ngetta ZARDI (number of technologies)	25,788,000	41.6	100	2.00	1.00	100.00
Agricultural technology and research interface services undertaken throughout the quarters (No. of Quarters when implemented)	97,360,000	99.8	100	4.00	3.00	75.12
Nutritious beans, groundnuts, millet sweet potato varieties promoted and climate mitigation tools developed at Abi ZARDI (No. of interventions)	58,180,000	-	-	5.00	0.00	0.00
Mubende goats genotype promoted and distributed to farmers at Abi ZARDI (number)	20,583,000	-	-	18.00	9.00	0.00
Cotton research undertaken to generate technologies resistant to Fusarium wilt and bacterial blight diseases, soil fertility management, and profitable varieties with industrial attributes at NASARRI (number of interventions)	300,000,000	33.3	100	4.00	1.50	100.00
Mirror carps seed multiplied for increased aquaculture under NAFIRRI (number of Mirror carps)	20,000,000	35.3	100	50000.00	9500.00	53.82
Feed formulation for infusing omega 3 fatty acids into Nile Tilapia fillet developed at NAFIRRI	23,000,000	69.6	100	1.00	0.80	100.00

Output	Financial Performance			Physical Performance		
	Annual Budget (Ug shs)	% of budget received	% of budget spent	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)
1 PhD and 1 MSc student trained in the genetics of Nile Perch (Number)	110,000,000	69.0	74	2.00	1.50	100.00
Assorted equipment for Alfasafe Research at NALIRRI procured and delivered (number of lots)	4,641,110,530	77.4	100	1.00	0.50	64.58
High Tech Bioreactor procured and supplied at NALIRRI-Nakyesesa (number)	3,073,112,784	31.3	100	1.00	0.50	100.00
Residential staff houses constructed at Maruzi NARO (number)	633,366,888	100.0	100	8.00	8.00	100.00
Alfasafe facility, Multi-purpose Vaccine Facility and calf barn constructed at NALIRRI Nakyesesa (number)	21,512,260,390	77.1	100	3.00	2.45	100.00
Water extension project, extra works for mini-offices and construction of gravel access roads in NALIRRI Maruzi and Nakyesesa (Number of lots)	2,192,636,079	57.4	100	3.00	2.33	100.00
Farm access roads established at Aswa Ranch (Km)	2,500,000,000	100.0	100	25.00	25.00	100.00
Community breeding by NAGRC implemented (number of sub-interventions)	2,900,000,000	34.5	100	3.00	1.20	100.00
Cattle dip renovated, boom sprayer and motorised livestock spray pump supplied, paddocks and climate-smart wood lots established and assorted feeds and supplies delivered at Kasolwe Stock Farm (number)	3,539,000,000	70.0	70	11.00	7.50	97.40
Innovative Extension models service delivery models scaled up (Number of models)	50,000,000	31.5	100	1.00	1.00	100.00
Conducted specialized trainings of GAPs (pest and disease management, stumping, sustainable land management) (Number of trainings)	3,221,876,000	82.0	100	1344.00	1325.00	100.00
Conducted 10 cup-tasting sessions to demonstrate the effect of practices and processing to the final cup quality in all regions (Number of	12,065,000	28.5	100	190.00	68.00	100.00

Output	Financial Performance			Physical Performance		
	Annual Budget (Ug shs)	% of budget received	% of budget spent	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)
farmers, traders, LGs& processors)						
Trained Youth Quality controllers (M=25; F=15) in QCs of Intermediate quality control (IQC) courses in South-western (20), and Eastern (20) (number of youth trained)	6,675,000	100.0	100	40.00	43.00	100.00
Capacity building trainings working with UCRA on National Coffee law at tertiary level undertaken (number of training sessions)	12,960,000	23.1	100	10.00	3.00	100.00
Conducted training on value addition to adopt appropriate technologies at primary and secondary levels in 8 regions (number of training)	7,200,000	27.6	100	8.00	1.00	45.22
Trained higher institutions of learning i.e. Lira University and Muni University (number of trainings)	15,000,000	75.8	100	12.00	5.00	54.95
Farmers/farmer groups trained (Number of trainings/ Farmers trained)	1,133,001,334	71.4	95	188423.00	176697.00	100.00
Farmer mobilised and sensitised for increasing production and quality (No. of Demo Plots/No. of Field visits/Activities)	1,368,483,450	66.4	96	13953.00	14096.00	100.00
Targeted extension services carried out (No. of extension workers)	522,291,656	71.0	92	1669.00	1363.00	100.00
Distributed cotton inputs (number of input types)	11,508,600,000	98.3	100	3.00	1.00	33.92
Distributed cotton planting seeds (MT)	410,351,065	95.8	100	2900.00	2449.00	88.13
Farmers trained in seed multiplication (number of coffee farmers trained)	316,302,574	84.0	100	7000.00	5570.00	94.69
Supported development of Agricultural Input Markets through capacity building of agro-input dealers (number of	800,000,000	44.1	100	57.00	46.00	100.00

Output	Financial Performance			Physical Performance		
	Annual Budget (Ug shs)	% of budget received	% of budget spent	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)
districts)						
Provided e-voucher subsidies to farmers (Maize, coffee, cassava, Beans, Rice) in the 12 project clusters (Cycle 1,2 and 3) (No)	20,500,000,000	108.5	100	450000.00	411872.00	84.37
Procured and distributed CWDr mature plantlets to farmers for the establishment of large-scale commercial farms and mother gardens (No)	1,000,000,000	100.0	100	666667.00	12185055.00	100.00
Procured and distributed Arabica coffee seedlings for the establishment of medium and large-scale commercial farms(No)	10,745,000,001	100.0	100	3070000.00	11943242.00	100.00
Established CWDR Robusta mother gardens per District each with 2,100 CWDR plantlets (No)	81,900,000	19.2	100	26.00	5.00	100.00
Procured and distributed organic fertilizer to coffee farmers to improve rejuvenation in all coffee-growing regions (No)	2,325,000,000	0.5	100	31000.00	165.00	99.00
Procured and distributed fungicide (Tebuconazole) to farmer organizations (Number of bottles of tebuconazole distributed)	479,204,000	2.6	100	5638.00	167.00	100.00
Procured and distributed copper-based fungicides to farmer organizations (Kgs)	6,445,000,000	17.5	100	400000.00	138031.00	100.00
Macadamia Seedlings procured and distributed (Number of seedlings)	7,083,000,000	51.9	100	833333.00	432106.00	100.00
Hass Avocado Seedlings procured and distributed (Number of seedlings)	1,499,000,000	149.9	100	50000.00	74971.00	100.00
Sunflower Seedlings procured and distributed (Kgs)	1,248,000,000	999.2	100	50000.00	499588.00	100.00
Soya bean Seedlings procured and distributed (Kgs)	4,250,000,000	54.5	100	15.00	3.00	36.69
	-	-	-	0.00	0.00	0.00

Output	Financial Performance			Physical Performance		
	Annual Budget (Ug shs)	% of budget received	% of budget spent	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)
Construction works at Acomai Irrigation Scheme completed (% completed)	71,868,100,592	33.6	100	100.00	40.00	100.00
MWE Water for Production Regional Center-North (Dams and valley tanks for livestock watering constructed; Large, medium, and small scale solar-powered irrigation schemes constructed; Multi-purpose water development schemes constructed)	10,901,739,300	79.2	100	100.00	20.00	25.26
MWE Water for Production Regional Center-East (Dams and valley tanks for livestock watering constructed; Large, medium, and small scale solar-powered irrigation schemes constructed; Multi-purpose water development schemes constructed)	12,972,591,852	93.3	100	100.00	25.00	26.79
MWE Water for Production Regional Center-West (Dams and valley tanks for livestock watering constructed; Large, medium, and small scale solar-powered irrigation schemes constructed; Multi-purpose water development schemes constructed)	16,217,227,000	57.0	100	100.00	29.00	50.85
MWE Water for Production Phase II (Dams and valley tanks for livestock watering constructed; Multi-purpose water development schemes constructed)	16,041,965,908	49.2	107	100.00	56.00	100.00
MWE Development of Solar Powered Irrigation and Water Supply Systems: (Small-scale solar-powered irrigation schemes constructed)	1,872,316,487	100.0	100	100.00	22.60	22.60
MWE Irrigation For Climate Resilience Project: (Dams and valley tanks for livestock watering constructed; Large, medium, and small scale solar-powered irrigation schemes)	91,203,000,000	68.3	18	100.00	14.00	20.49

Output	Financial Performance			Physical Performance		
	Annual Budget (Ug shs)	% of budget received	% of budget spent	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)
constructed; Multi-purpose water development schemes constructed)						
Water harvesting and storage facilities constructed by MAAIF - valley tanks, dams and fish ponds (number)	17,500,000,000	94.3	97	300.00	157.00	55.51
Regional mechanisation hubs constructed and equipped (number)	8,500,000,000	38.2	92	5.00	3.50	100.00
Farm market access roads opened and improved (number)	6,550,000,000	91.6	100	95.00	60.00	68.95
Bush opened and ploughed for mechanisation (acres)	1,800,000,000	95.0	99	6500.00	87650.00	100.00
Conducted training for recipients of e-Voucher Support including farmer and farmer organizations on the use of the purchased inputs and post-harvest storage options (No. of districts)	2,200,000,000	197.4	100	57.00	46.00	40.88
Supported supervision and appraisal of ongoing capital works (construction of storage facilities and installation of value addition equipment) (No. of farming organisation)	6,250,000,000	113.8	100	362.00	358.00	86.87
Supported capacity building for Farmer Organizations by Enterprise Uganda and Uganda Cooperative Alliance (No)	466,000,000	120.4	100	100.00	32.00	26.57
Purchased and Administered PPR, CCPP & Multivax Vaccine (Doses)	1,200,000	100.0	100	600.00	600.00	100.00
Average Output Performance						78.49
Outcome Performance						
Outcome Indicator				Annual Target	Achieved	Score (%)
GDP Growth rate				5.6	5	89.3
% change in yield of priority agricultural commodities				19.5	11.9	61.0
% water for functional production facilities				88.7	88.3	99.5
%incidence of crop diseases and pests				15	10	66.7

	Financial Performance			Physical Performance		
	Annual Budget (Ug shs)	% of budget received	% of budget spent	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)
Output						
% of lint classed in the top 3 grades				82	74	90.2
Average Outcome Performance						81.4
Overall Sub-programme Performance						79.5%

ANNEX 4: Performance of the Storage, Agro-processing and Value Addition Sub-Programme by 30th June 2023

Intervention	Output	Financial Performance			Physical Performance			Remark
		Annual Budget (bn Ug shs)	% of budget received	% of budget spent	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)	
Establish post-harvest handling, storage and processing infrastructure	Support to agro-processing and value addition	12.843	44.1	97	50.00	10.00	45.33	Poor performance due to delayed completion and the non-operational nature of established value-addition facilities.
	Postharvest handling, storage and processing	6.716	100.0	24	191.00	129.00	67.54	Fair performance due to the budget cuts affected the attainment of the output targets.
	Post-harvest management	3.398	0.8	100	810.00	50.00	100.00	Very good performance: 35 wet mills were distributed to farmers in Elgon, Northern, Rwenzori, and Southwestern regions.
	Local economic development support services	17.906	99.9	85	7.00	3.80	54.32	Fair performance: 11 agro-processing facilities and six milk collection centres were under construction.
Establish new and rehabilitate existing agro-processing industries	Industrial and Economic Development (UDC)	458.527	100.0	75	36.00	13.40	37.22	Poor performance.
Construct and regularly maintain community access & feeder roads for market access	Marketing and value addition	16.780	100.0	60	151.00	90.33	59.82	Fair performance: 69 roads were substantially complete while 66 roads were at varying stages of implementation under ACDP; 250km of community access roads were completed under the LEGS project and; MV Palm ferry was launched and operational.
Average Output Performance							60.71	Fair performance
Outcome Performance								
					Annual Target	Achieved	Score (%)	Remark
Outcome Indicator	Storage capacity (MT)				1,250,000	1,236,219	98.9	Very good
	Export value of priority agricultural commodities (USD Billion)				2.3	2.4	100.0	Very good

	Manufacturing value added as a proportion of GDP	16.2	15.7	96.9	Very good
Average Outcome Performance				98.6	Very good
Overall Sub-programme Performance				74.0	Good performance

Source: Vote Progress Reports; IFMS; Field Findings

ANNEX 5: Performance of Agricultural Market Access and Competitiveness Sub-programme by 30th June 2023

Intervention	Output	Financial Performance			Physical Performance			Remark
		Annual Budget (bn Ug shs)	% of budget received	% of budget spent	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)	
Strengthen enforcement and adherence to product quality standards	Developed a digital seed traceability and tracking system for the seed certification process (No. of trainings)	0.82	45.5	100	114.00	122.00	100.00	Targets greatly achieved.
	Participated in Proficiency testing for selected coffee, and dairy parameters in line with requirements of ISO 17025 and 17025:217 (No. of testing)	0.001	32.8	100	2.00	1.00	100.00	Fairy achieved.
	Enforced compliance with quality standards, regulation and accreditation (Number of traders and processors inspected, registered and certified)	61.282	93.7	96	3557.00	3631.00	100.00	Targets substantially achieved mainly by UCDA, DDA and CDO.
	Calibrated and standardized Equipment for labs (No. of equipment maintained)	0.018	2.4	100	4.00	4.00	100.00	Target achieved.
Agricultural market infrastructure in rural and urban areas improved	Rwensasi Cattle and General Merchandise Market at Ruyonza S/County (Construction of the stalls, lockups, restaurant, agrovet shop, loading bay) upgraded in Kyegegwa under Agriled implemented by NAADS (%)	1.185	80.0	100	100.00	80.00	100.00	Works ongoing.

Intervention	Output	Financial Performance			Physical Performance			Remark
		Annual Budget (bn Ughs)	% of budget received	% of budget spent	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)	
	completion)							
	Upgrading of Kaculeeta Farmers Market in Fort Portal under Agriled implemented by NAADS (% completion)	2.104	45.0	100	100.00	45.00	100.00	Works ongoing.
	Improved market access for livestock and livestock products (number)	8.198	56.1	96	23.00	6.80	52.69	Training of 102 newly recruited veterinary inspectors and sub-county officers and 92 animal health services providers was done. The Veterinary Practitioners Bill was gazetted in March 2023 and other bills and regulations were at varying stages of progress. Boundary opening of land for the seven animal holding grounds and checkpoints was done: cadastral mapping for the two sites in Isingiro District was done.
	Rehabilitation of Sanga slaughter facility in Sanga Town Council, Kiruhura District implemented by MOBIP (% completion)	3.776	100.0	44	100.00	60.00	60.00	Construction of the Sanga Abattoir Waste Management Facility was ongoing and physical progress was at 20%. Procurement of

Intervention	Output	Financial Performance			Physical Performance			Remark
		Annual Budget (bn Ug shs)	% of budget received	% of budget spent	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)	
								live animal transportation truck, sample collection mobile unit, mobile slaughter facility and station wagon were ongoing.
	National Metrology Laboratory (NML) at UNBS- Phase-3 constructed under AVCP (% completion)	14.881	96.0	100	100.00	96.00	100.00	It was unlikely that the works would be completed by the new end date, given the pending works coupled with the project challenges.
Capacities of public institutions in analysis, negotiation and development of international market opportunities strengthened	Coffee marketing promoted by UCDA (No of coffee brands)	0.871	60.8	24	70.00	42.00	98.63	Output fairly achieved.
	Total	104.334	85.4	95	0.00	0.00		
Average Output Performance							91.13	Very good performance
Outcome Performance								
Outcome Indicator					Annual Target	Achieved	Score (%)	Remark
Share of agricultural exports to total exports (%)					31	41.8	100.0	Very good
Percentage of lint classed in the top 3 grades (%)					82	74	90.2	Very good
Average Outcome Performance							95.1	Very good
Overall Sub-programme Performance							92.5	Very good performance

ANNEX 6: Performance of the Agricultural Financing Sub-programme by 30th June 2023

Intervention	Output	Financial Performance			Physical Performance			Remarks
		Annual Budget (bn Ug shs)	% of budget received	% of budget spent	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)	
Develop concessional long-term financing for agricultural infrastructure and capital investments	Capitalization of Government-owned Institutions and other financing schemes	49.750	100.0	88	100.00	87.60	87.60	Good performance: 324 loans worth Ug shs 122.908bn were disbursed to farmers and other value chain actors.
Finalize and implement the Agricultural Finance and Insurance Policy	Oversight and coordination of the non-banking sector	5.0	100.0	100	100.00	100.00	100.00	Very good performance: 298,490 farmers insured the produce worth Ug shs 238.148bn.
Average Output Performance							93.80	Very good performance
Outcome Performance								
Outcome Indicator					Annual Target	Achieved	Score (%)	Remark
Share of agricultural financing to total financing (%)					23	12.8	55.7	Fair performance
Proportion of farmers that access agricultural finance					12.8	10	78.1	Good performance
Average Outcome Performance							66.9	
Overall Sub-programme Performance							84.4	Good performance

Source: Vote Progress Reports; IFMS; Field Findings