



AGRICULTURE SECTOR

SEMI-ANNUAL BUDGET MONITORING REPORT

FINANCIAL YEAR 2020/21

MAY 2021

Ministry of Finance, Planning and Economic Development
P.O. Box 8147, Kampala
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MOFPED
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ABBREVIATIONS

ACF	Agriculture Credit Facility
AEG	Agricultural Extension Grant
AIA	Appropriation in Aid
BMAU	Budget Monitoring and Accountability Unit
Bn	Billion
BoQs	Bills of Quantities
BoU	Bank of Uganda
CAO	Chief Administrative Officer
CDO	Cotton Development Organisation
CF	Community Facilitator
CGS	Competitive Grant Scheme
CI	Credit Institution
COVID-19	Corona Virus Disease - 2019
DAES	Department of Agricultural Extension and Skills Management
DAMD	Department of Aquaculture Management and Development
DDA	Dairy Development Authority
DLG	District Local Government
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
FFB	Fresh Fruit Bunches
FY	Financial Year
GAFFSP	Global Agriculture and Food Security Program
GoU	Government of Uganda
GRC	Grievance Redress Committees



Ha	Hectare
HRD	Human Resource Development
ICT	Information and communications technology
IDA	International Development Association
IDB	Islamic Development Bank
IFAD	International Fund for Agricultural Development
IFMS	Integrated Financial Management System
IT	Information Technology
KCCA	Kampala Capital City Authority
Kg	Kilogram
LG	Local Government
LLG	Lower Local Government
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MCC	Milk Collection Centre
MDAs	Ministries, Departments and Agencies
MDIs	Micro Deposit Taking Institutions
M&E	Monitoring and Evaluation
MFPED	Ministry of Finance, Planning and Economic Development
MOPS	Ministry of Public Service
MoU	Memorandum of Understanding
MT	Metric Tonne
MTIC	Ministry of Trade, Industry and Cooperatives
NAEP	National Agricultural Extension Policy
NAES	National Agricultural Extension Strategy
NAADS	National Agriculture Advisory Services
NaCRRI	National Crops Resources Research Institute.
NaCORI	National Coffee Research Institute
NaFIRRI	National Fisheries Resources Research Institute



NaFORRI	National Livestock Resources Research Institute.
NaLiIRRI	National Livestock Resources Research Institute
NASARRI	National Semi-Arid Resources Research Institute
NAGRC&DB	National Animal Genetic Resources Centre and Data Bank
NARO	National Agriculture Research Organization
NAROSEC	National Agriculture Research Organization Secretariat.
NEMA	National Environment Management Authority
NDAL	National Dairy Analytical Laboratory
NEC	National Enterprise Corporation
NDP	National Development Plan
NLR	National Laboratories Research
NOPP	National Oil Palm Programme
NPL	Non-Performing Loans
NTR	Non Tax Revenue
OAG	Office of the Auditor General
OWC	Operation Wealth Creation
PFI	Participating Financial Institution
PBB	Programme Based Budgeting
PFM	Public Financial Management
PMG	Production and Marketing Grant
PMU	Programme Implementation Unit
PPDA	Public Procurement and Disposal of Assets
PPP	Public-Private Partnership
PWD	Persons with Disabilities
Q	Quarter
SAGIP	Strategic Intervention for Animal Genetic Improvement Project
TA	Technical Assistance
TSA	Treasury Single Account



UCDA	Uganda Coffee Development Authority
UGCEA	Uganda Ginners and Cotton Exports Association
Ug shs	Uganda Shillings
VHT	Village Health Teams
ZARDI	Zonal Agricultural Research Development Institute



FOREWORD

This Financial Year 2020/21 marks the first year of implementation of the third National Development Plan (NDPIII), within which we aim to achieve inclusive growth, employment and wealth resulting from sustainable industrialisation. It is hoped that the newly adopted coordinated programmatic approach will be a springboard to enabling government achieve its development objectives.

The semi-annual findings by the Budget Monitoring and Accountability Unit (BMAU) show that sectors still posted a fair performance. Whereas the Ministries, Departments, Agencies (MDAs), and Local Governments (LGs) should have adopted Programme Based Budgeting (PBB) this Financial Year, this is yet to be fully embraced as evidenced from the BMAU findings where entities are still operating and reporting achievements in sector format.

It is imperative that the lead agencies under all programmes ensure that all their constituent entities shift to the new development approach for us to harness its collective gains.

Patrick Ocaïlap

Ag. Permanent Secretary/Secretary to the Treasury



EXECUTIVE SUMMARY

Introduction

The Agriculture Sector is composed of nine votes, namely: i) Vote 010: Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) ii) Vote 121: Dairy Development Authority (DDA) iii) Vote 125: National Animal Genetic Resource Centre and Data Bank (NAGRC&DB) iv) Vote 142: National Agricultural Research Organisation (NARO) v) Vote 152: National Agricultural Advisory Services (NAADS) Secretariat vi) Vote 155: Cotton Development Organisation (CDO) vii) Vote 160: Uganda Coffee Development Authority UCDA viii) Vote 122: Kampala Capital City Authority (KCCA) and ix) Vote 501-850 Local Governments (LGs) - District Production Services.

Financial performance

The approved budget for the Agriculture Sector for Financial Year (FY) 2020/21 excluding arrears and external financing was Ug shs 756.54billion (bn), of which Ug shs 412.940bn (54.6%) was released and Ug shs 270.524bn (65,5%) spent by 31st December 2020. This was very good release and fair expenditure performance.

Highlights of sector performance

The overall semi-annual performance of the Agricultural Sector in FY2020/21 was fair rated at 63.45%. Performance was generally not good in the various programmes as most planned outputs were scaled back due to budget cuts and suppression and inability to do field based activities in observance of the COVID 19 Standard Operating Procedures (SOPS). Most capital investments were not made and were at various stages of procurement. Understaffing and interdiction of some accounting officers in the sector affected programme implementation.

The best performing votes were NARO (81.99%) followed by Local Governments (74.99%) and DDA (73.46%), while the worst performing Votes were the National Agricultural Advisory Services (NAADS) rated at 26.54% followed by MAAIF (53.88%).

By 31st December 2020, a number of key outputs were delivered in the sector. Cumulative disbursements to farmers and firms under the ACF totaled to Ug shs 581.29bn given to 863 eligible projects countrywide. Delayed processing of loans by an average of 100 days was a major challenge to access to the ACF.

Agricultural production increased as a result of distribution of inputs distributed to farmers. For example, the following inputs were distributed: 2,334 metric tonnes (Mt) of de-linted and graded cotton planting seed; 41 Mt of Foundation seed and 1st Generation seed; 1,435,509 one-acre units of pesticides; 4,740 spray pumps; 40.4 Mt of assorted fertilizers and 6,616 litres of herbicides were distributed to cotton farmers; 466.6 Mt of fertilisers, 220 spray pumps, 60,000 one acre units of pesticides and 486 litres of herbicides were distributed to seed growers.

E-Vouchers subsidies for inputs were provided to a total of 84,715 beneficiaries in the 12 clusters bringing the cumulative total number of beneficiaries to 156,765. The level of registration and enrolment of farmers on the programme remained low due to a combination of factors and more particular: network system failures and inconsistencies; stockouts and limited capacity of the agro-input dealers and lack of input



distribution networks and channels. Coffee seedlings, livestock breeding materials and other strategic inputs and equipment were provided by the various sector programmes.

By 31st December 2021, 1,146 milk handling premises were inspected countrywide; 852 new premises/equipment/exporters/importers were registered countrywide; 1,806 milk and milk product samples were analysed; and 324 dairy farmers were trained. A total of 168 valley tanks with a capacity of 15,000 cubic meters each were constructed/rehabilitated in the Eastern, Central and Western Regions; 9,258 acres of farmland were cleared and 267 kms of farm roads were rehabilitated using the MAAIF heavy earth moving equipment.

Various agricultural technologies were either under experimentation or generated for strategic commodities including bananas, maize, beans, coffee, tea, cotton, livestock, catfish, potato, cassava, rice, apiary, pastures, fertiliser and pesticide use, agro-forestry, animal feeds, aquaculture, horticulture and vaccines. The research and extension interface was promoted, although some planned activities in field could not be implemented due to lack of funds and COVID 19 restrictions.

There were outstanding arrears in the sector under the Uganda Coffee Development Authority (UCDA) amounting to Ug shs 39.627bn, despite Government of Uganda (GoU) having disbursed Ug shs 80.373bn at the start of FY 2020/21 for clearing arrears to nursery operators who had supplied coffee seedlings to farmers. By 31st December 2020, only Ug shs 51.334bn (64%) of the released funds was spent indicating low absorption of these funds despite the large number of private sector nursery operators who remained unpaid. Performance of the National Agricultural Research Organisation (NARO) was negatively affected by the high levels of domestic arrears amounting to Ug shs 1.70bn due to failure to pay fully contributions to national and international organisations and for utilities.

Sector performance was lower due to loss of research trials, agricultural infrastructure and pastures due to re-allocations of agricultural sector institutions land to investors and other Government entities without compensation and persistent encroachment especially by public officials. During FY 2020/21, this problem was most pronounced in the NAGRC&DB, NARO and Dairy Development Authority (DDA).

There were many cases of stalled works in the agricultural sector associated with MAAIF and agencies hiring low capacity contractors, encroachment on public land, and interruptions in workflow caused by COVID 19 standard operating procedures. For example, the construction of Bugala Ferry Landing Site in Nkusi village Bujumba subcounty Kalangala district by the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) was two years behind schedule as the first contractor was terminated due to non-performance and the second contractor had also failed to perform. By February 2021, only 5% of the works was done for a project that was scheduled to be completed in 2018.

The construction of aqua parks in Apac and Kalangala districts by MAAIF had stalled for more than 180 days due to failure by the GoU and donors to meet the contractual obligations and the lockdown. The funds that were allocated to the Promoting Commercial Aquaculture in Uganda Project were inadequate for establishing the aqua parks. There was a delay of the contractors to submit the final designs before construction could commence.



Key challenges

1. Persistent arrears in the agricultural sector affected programme implementation.
2. Significant non-implementation of planned activities due to budget suppression, COVID-19 restrictions, delayed releases and disbursements from MAAIF and sector agencies, morbidity and absence of/inadequate staff.
3. Persistent encroachment on land belonging to agricultural sector institutions, especially NAGRC&DB and NARO especially by public officials; the institutions were involved in court cases that had not been concluded for many years
4. Poor health, starvation and increasing death of animals on NAGRC&DB stations due to inadequate pastures and water, land encroachment and loss of established infrastructure to the encroachers, inadequate herdsman, delayed disposal of old, lame and blind animals.

Recommendations

1. The MFPED should enforce compliance to Public Finance Management (PFM) regulations especially by the accounting officers.
2. The Uganda Land Commission, Judiciary and Sector institutions should ensure speedy conclusion of land encroachment cases in court and evict the encroachers. All land belonging to Government sector institutions should be surveyed and boundaries marked.
3. The NAGRC&DB should prioritise provision of water and focus on pasture improvement; and consider selling productive animals to farmers for genetic improvement.



CHAPTER 1: INTRODUCTION

1.1 Background

The mission of the Ministry of Finance, Planning and Economic Development (MFPED) is, “*To formulate sound economic policies, maximize revenue mobilization, and ensure efficient allocation and accountability for public resources so as to achieve the most rapid and sustainable economic growth and development.*” It is in this regard that the ministry gradually enhanced resource mobilisation efforts and stepped up funds disbursement to Ministries, Departments, Agencies and Local Governments in the past years to improve service delivery.

Although some improvements were registered in citizens’ access to basic services, their quantity and quality remains unsatisfactory, particularly in the sectors of health, education, water and environment, agriculture, ICT and roads. The services being delivered are not commensurate to the resources that have been disbursed, signifying accountability and transparency problems in the user entities.

The ministry established the Budget Monitoring and Accountability Unit (BMAU) in FY2008/09 to monitor Government programmes to assess performance against targets and the key implementation bottlenecks. The BMAU is charged with tracking implementation of selected government programmes or projects and observing how values of different financial and physical indicators change over time against stated goals and targets (how things are working). This is achieved through semi-annual and annual field monitoring exercises to verify receipt and application of funds by the user entities. Where applicable, beneficiaries are sampled to establish their level of satisfaction with the public service.

The Unit prepares semi-annual and annual monitoring reports of selected government programmes and projects. The monitoring is confined to levels of inputs, outputs and outcomes in the following areas: Accountability; Agriculture; Infrastructure (Energy and Roads); Industrialisation; Information and Communication Technology; Social services (Education, Health, and Water and Environment); Public Sector Management; and Science, Technology and Innovation.

In FY 2020/21, the mandate of BMAU expanded to include revenue monitoring. This report presents findings from monitoring the Agriculture Sector for the budget execution period 1st July to 31st December 2020.

1.2 Sector Objectives

The overall agriculture sector objective is to enhance rural incomes, household food and nutrition security, exports and employment¹. The overall goal of the sector is to achieve an average growth rate of 6% per year by focusing on four strategic objectives namely: increasing production and productivity of agricultural commodities and enterprises; increasing access to critical farm inputs; improving access to markets and value addition; enhancing the quality of agricultural commodities; and strengthening the agricultural services institutions.

¹ GoU, 2015.



The national budget to achieve these objectives is expended through nine sector votes, namely: i) Vote 010: Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) ii) Vote 121: Dairy Development Authority (DDA) iii) Vote 125: National Animal Genetic Resource Centre and Data Bank (NAGRC&DB) iv) Vote 142: National Agricultural Research Organization (NARO) v) Vote 152: National Agricultural Advisory Services (NAADS) Secretariat vi) Vote 155: Cotton Development Organization (CDO) vii) Vote 160: Uganda Coffee Development Authority UCDA viii) Vote 122: Kampala Capital City Authority (KCCA) and ix) Vote 501-850 Local Governments (LGs) - District Production Services.



CHAPTER 2: METHODOLOGY

2.1 Scope

This report is based on the selected programmes that were monitored in the agriculture sector during FY 2020/21 semi-annual. The following criteria guided selection of programmes and sub-programmes that were monitored:

- Significance of the budget allocations to the votes within the sector budgets, with emphasis on large expenditure programmes.
- Multi-year programmes with recurring major implementation issues.
- Intervention prioritized by Government as key to achievement of national priorities.
- Interventions that received additional funds/re-allocations towards COVID 19 response

The annual monitoring was undertaken in eight out of nine votes namely: CDO, MAAIF, NAADS, NAGRC&DB, NARO, DDA, UCDA and LGs. In addition, the Agricultural Credit Facility (ACF) was monitored. The programmes and sub-programmes that were monitored under each vote are listed in Annex 1.

2.2 Methodology

Physical performance of programmes was assessed through monitoring a range of indicators and linking the progress to reported expenditure. Across all the programmes and sub-programmes monitored, the key variables assessed included: performance objectives and targets; inputs and outputs and the achievement of intermediate outcomes.

2.2.1 Sampling

A combination of random and purposive sampling methods were used in selecting interventions to be monitored. Multi-stage sampling was undertaken at three levels: i) Sector programmes and projects ii) Local governments and iii) Project beneficiaries. Sampling also took into consideration the available time and resources for field work, COVID-19 prevalence and geographical representation of the interventions.

2.2.2 Data Collection

Data was collected from various sources through a combination of approaches:

- Review of secondary data sources including: Ministerial Policy Statements; Sector Budget Framework Papers; project documents; performance reports; Work plans, procurement plans; and approved Estimates of Revenue and Expenditure.
- Analysis of data from the Integrated Financial Management System (IFMS);
- Key informant interviews with project managers and beneficiaries.
- Field visits to project area; observation and photography.
- Call-backs in some cases to triangulate information.



2.2.3 Data Analysis

Both qualitative and quantitative approaches were used to analyse the data. Comparative analysis was done using the relative importance of the outputs and the overall weighted scores. Relative importance (weight) of an output monitored was based on the amount of budget attached to it; thus the higher the budget the higher the contribution of the output to the sector performance. This was derived from the approved annual budget of each output divided by total annual budget of all outputs of a particular programme/project. The weight of the output and percentage achievement for each output were multiplied to derive the weighted physical performance.

The overall sector performance is an average of individual programme performances that make up the sector. The performance was rated on the basis of the criterion in Table 2.1.

Table 2.1: Assessment guide to measure performance of projects monitored in FY 2020/21 semi-annual

SCORE	COMMENT
90% and above	Very Good (<i>Achieved at least 90% of both outputs and outcomes</i>)
70%-89%	Good (<i>Achieved at least 70% of both outputs and outcomes</i>)
50%- 69%	Fair (<i>Achieved at least 50% of both outputs and outcomes</i>)
49% and below	Poor (<i>Achieved below 50% of both outputs and outcomes</i>)

2.3 Limitations of the report

1. Inaccessibility to some respondents who were self-isolated due to COVID 19
2. Lack of performance data in districts due to late reporting and accountability by LLGs and poor data recording systems in the DLGs
3. Late granting of entry meetings and access to critical information by some implementing agencies leading to inadequate monitoring of some programmes including ACF and Improving Use of Agricultural Equipment and Mechanisation.



CHAPTER 3: SECTOR PERFORMANCE

3.1 Overall Sector Performance

Overall financial performance

The approved budget for the agriculture sector for FY 2020-21 excluding arrears and external financing was Ug shs 756.54bn of which Ug shs 412.940bn (54.6%) was released and Ug shs 270.524bn (65,5%) spent by 31st December 2020. This was very good release and fair expenditure performance (table 3.1).

Table 3.1: Agriculture Sector Financial Performance by 31st December 2020 (bns excluding arrears and external financing)

Vote/ Grant	Approved budget	Releases (Ug shs bn)	Expenditure (Ug shs bn)	% budget released	% release spent
	(Ug shs bn)				
MAAIF	162.860	89.681	60.844	55.1	67.8
DDA	10.016	3.417	2.670	34.1	78.1
NAGRC & DB	73.059	26.798	9.115	36.7	34.0
NARO	109.997	57.576	54.081	52.3	93.9
NAADS Secretariat	152.028	95.810	29.658	63.0	31.0
CDO	8.617	6.504	2.810	75.5	43.2
UCDA	105.884	63.113	41.727	59.6	66.1
LGs (District Production Services)	126.865	66.846	66.846	52.7	100
KCCA	7.188	3.195	2.773	44.5	86.8
Total	756.514	412.940	270.524	54.6	65.5

Source: MFPEd Approved Budget Estimates FY 2020-21; Budget Directorate, MFPEd; Integrated Financial Management System (IFMS); Field Findings

The primary reasons for low funds absorption in the sector were: suppressed implementation of planned activities that involved stakeholder training and community engagement in observance of COVID-19 restrictions; delayed initiation of procurements and importation of agro-machinery; human resource challenges such as in NAGRC&DB were two accounting officers and several high level technical officers were interdicted; unfavourable climatic conditions whereby procurement and distribution of some NAADS/OWC planting materials were differed to Q3.



Overall performance

The semi-annual overall performance of the agricultural sector in FY 2020/21 was fair rated at 63.45% (table 3.2). Performance was highest for NARO, Local Governments and DDA; and lowest for NAADS/OWC and MAAIF.

Table 3.2: Agricultural sector overall performance by 31st December 2020

Vote	Performance (%)
Cotton Development Organisation	70.98
Dairy Development Authority	73.46
Ministry of Agriculture, Animal Industry and Fisheries	53.88
National Agricultural Research Organisation	81.99
National Agricultural Advisory Services/Operation Wealth Creation	26.54
National Animal Genetic Resource Centre and Data Bank	60.30
Local Governments	74.99
Uganda Coffee Development Authority	65.47
Average sector performance	63.45
Agricultural Credit Facility	89.67

Source: Field findings

Performance was generally not good in various programmes as most planned outputs were scaled back due to budget cuts and suppression and inability to do field based activities in observance of the COVID-19 Standard Operating Procedures (SOPS). Most capital investments were not made and were at various stages of procurement. Understaffing and interdiction of some accounting officers in the sector affected programme implementation

Detailed Programme Performance

3.2 Agricultural Credit Facility

3.2.1 Introduction

The Agricultural Credit Facility (ACF) is a risk-sharing public-private partnership whose objective is to provide medium and long term financing to agricultural projects, agro-processing and grain trade at lower than market interest rates. Implemented since 2009, the GoU ACF leverages resources of Participating Financial Institutions (PFIs) to bridge the financing gap for commercialised agricultural production. The interest chargeable is 12% per annum while working capital for grain trade does not exceed 15% per annum. Block allocations of Ug shs 20 million are provided to micro borrowers without collateral.

In FY 2020/21, the Bank of Uganda (BoU) targeted to improve the efficiency of ACF loan processing, disbursement, utilization, recovery and reporting. The key performance indicators included: 10 working days for reviewing a loan; 5 working days to process a loan to disbursement; 100% increase in number of loans disbursed; 15% increase in loan applications and stakeholder satisfaction (BOU Annual Work plan 2020/21).



3.2.2 Performance

The cumulative number of loan applications received since 2009 totaled 1,091 amounting to the requested loan value of Ug shs 960.530bn. By 31st December 2020, cumulative disbursements to farmers and firms totaled to Ug shs 581.29bn given to 863 (79.10% of total applications) eligible projects country wide. The beneficiaries included 247 micro and smallholder farmer borrowers who had drawn Ug shs 3.86bn. Disbursements amounting to Ug shs 205.59bn were made to 140 eligible borrowers as working capital to purchase grain (BOU, 2020).

By 31st December 2020, 50 out of 61 loan applications received were processed and disbursed to beneficiaries all worth Ug shs 55.27bn. A total 23 projects with an outstanding GoU contribution amounting to Ug shs 5.51bn were declared delinquent (non-performing loans) representing 1.9 percent of the total loans refinanced up from 1.24 percent prior to the COVID-19 pandemic. The GoU target is to reduce loan arrears to 2% of the expected loan repayments. The Government should continue improving its loan recovery measures so that the delinquent loans reduce further.

Loan disbursements and utilisation was negatively affected by COVID-19 through reduced production and income at farm level. To address the challenges associated with the pandemic, the BoU issued the Credit Relief and Loan Restructuring Guidelines for Supervised Financial Institutions to mitigate liquidity shortfalls and allow loan restructuring. By 31st December 2020, the BoU had processed 87 project applications from PFIs with an outstanding amount of Ug shs 24.91bn for credit relief and loan restructuring facilities. With a total commitment and projects in pipeline totaling Ug shs 166.063bn, the ACF was operating at a cash deficit of Ug shs 72.452bn. Aggressive marketing of the ACF had improved loan utilisation, leaving no funds for future commitments.

By 31st December 2020, the monitored farmers had received the loan disbursements as reported by BoU. Investments were made in grain trade, livestock purchase and fattening, farm infrastructure improvements, procurement of tractors and other equipment. Illustrative examples of the benefiting farmers that were monitored are presented below:

Mr. Byaruhanga's farm in Buhimba Kigaaya village, Musajja Mukulu Parish, Buhimba Sub-county Kikuube District procured a tractor worth Ug shs 68m using the ACF loan. The loan processing period was one month and the tractor was of good quality.



Good quality working tractor on Mr. Byaruhanga's farm in Kikuube District



ACF supported banana plantation on Mr. Naturinda's farm in Bushenyi District

Mr. Naturinda's farm in Nyabitote Village Nyabubare, Parish Nyabubare Sub-county Bushenyi District benefitted from Ug shs 85m used to do infrastructure improvements to support the 15-acre banana plantation. Trenches were established and mulch applied. Loan processing was concluded in a two-month period. The main challenges were: the COVID-19 pandemic measures of closing schools that reduced market access and prices for agricultural produce and inadequate working capital to sustain the investments made.

Mr. Kabiike's farm in Wankata Village, Katwe Parish Nakisunga Sub-county, Mukono District accessed Ug shs 240m for construction of poultry houses and restocking birds. The funds were inadequate such that only 20,000 chicks out of the planned 40,000 were procured. One out of the three planned poultry houses was constructed; there was an underestimation of the cost of constructing a poultry house which was estimated at Ug shs 80m in the loan application but was established at Ug shs 120m. A key challenge was the delayed processing of the loan by five months attributed to lengthy processes of verifying and validating the collateral by the lending institution.

Mr. Kisakye and Ms. Sezibwa's farm in Koon Village Wakiso District accessed Ug shs 200m used to construct one poultry house, restock 10,000 poultry birds and procure three water tanks. The key challenges were: difficulty in accessing information from the commercial banks about the availability of ACF and the four months' delay in processing the loan.



ACF financed birds (left) and water tanks (right) in Koon Village, Wakiso District

Mr. Tumwesigye's farm in Nakuwade Village, Nakabugo Parish Mumyuka Sub-county, Wakiso District benefitted from Ug shs 140m used to restock 4,000 poultry birds, purchase key inputs and a feed mixer, and improvement of the water reticulation system. The birds increased from 1,000 to 4,000 which in turn led



to an increase in egg production from 30 to 110 trays per day. The key challenges were intermittent supply of water by National Water and Sewerage Corporation (NWSC) that negatively impacted on production; limited land for operations; high cost of security to reduce theft of produce; and fluctuating prices for feeds and eggs.



ACF financed poultry house that was constructed at Sako Fish Ltd Farm in Mukono District

Sako Fish Ltd in Katwa Village, Bukerere Parish, Goma Sub-county, Mukono District accessed Ug shs 108m used to construct a poultry house, instal cages, fence and restock fish. Some of the planned activities including restocking birds and purchase of feeds were not undertaken due to inadequate loan funds advanced compared to the amount that had been requested. The key challenge was the delayed processing of the loan by four months during which period the prices of key inputs escalated.

Mr. Wambedde's Farm in Nyedwe Malwa Village Bandali Ward, Nakifuma Town Council, Mukono District accessed Ug shs 500m used to construct two poultry houses fully furnished with electrical fittings, plumbing and water distribution systems to accommodate 15,000 birds. This infrastructure expansion led to an increase in production from 1,100 trays to 1,900 trays of eggs per day. The key challenges were the lockdown that affected operations and loan repayments were not made for eight months. Loan repayment had started again.



ACF financed poultry houses at Mr. Wambedde's farm in Mukono District

Mr Wangolo's farm in Busolo Village, Ntenjeru Parish, Kayunga District accessed Ug shs 85m at 15% interest rate for grain production. The farm planted 10 acres of maize. However, it was noted that the loan was also used to establish one acre of coffee nursery bed, 5 acres of pineapple and 4 acres of a coffee plantation. These were not grain commodities suggestive of diversion of ACF funds to other unplanned activities. The key challenge was the delayed processing of the loan by three months due to restrictions in movements to the bank during the COVID-19 lock down period.



ACF grain trade capital was diverted to produce coffee seedlings (left) and pineapple gardens (right) at Mr Wangolo’s farm in Kayunga District

Overall performance of the Agricultural Credit Facility

The performance of the ACF during FY2020/21 semi-annual as good rated at 89.67% (table 3.3). The farmers/firms accessed funds under the loaning scheme and generally applied them to the intended purpose except in isolated cases such as in Kayunga District were funds meant for grain trade where channeled to growing of coffee and pineapples.

Table 3.3: Performance of the Agricultural Credit Facility by 31st December, 2020

Output	Annual Budget (Ug shs)	Cum. Receipt (Ug shs)	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)
A tractor procured on Mr. Byaruhanga’s farm in Kikuube district (number)	68,000,000	68,000,000	1.00	1.00	3.98
Mulches, manures and fencing poles purchased and used and trenches dug in banana plantation at Mr. Maturinda’s farm in Bushenyi district (set of activities)	85,000,000	85,000,000	2.00	2.00	4.97
40,000 chicks procured and three poultry houses constructed at Mr. Kibiike farm in Mukono district (number of items)	240,000,000	240,000,000	40003.00	20001.00	7.02
Construction of one poultry house completed and 10,000 poultry birds restocked in Wakiso district (number of items)	200,000,000	200,000,000	10001.00	10004.00	11.69



Output	Annual Budget (Ug shs)	Cum. Receipt (Ug shs)	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)
Poultry birds restocked (3500), feeds, vaccines and drugs procured, feed mixer purchased and installed and water reservoir and collection system improved in Wakiso district (sets of interventions)	140,000,000	140,000,000	4.00	4.00	8.19
Poultry house completed, fish restocked, poultry cages installed, poultry birds procured and feeds purchased in Mukono district (number of interventions)	392,380,000	108,000,000	5.00	3.00	22.94
Fully equipped poultry houses constructed at Mr Wambembe's farm in Mukono district (number)	500,000,000	500,000,000	2.00	2.00	29.23
Working capital accessed for grain production for three commodities on Mr. Wangolo's farm in Kayunga district (number of commodities produced)	85,000,000	85,000,000	3.00	1.00	1.66
Programme Performance (outputs)					89.67%

Source: Field findings

3.2.3 Challenges

- i) Delayed processing of loans to disbursement by on average 100 days that is not in line with the planned 15 working days for reviewing and disbursing a loan as planned by BoU.
- ii) Lack of produce markets and reduced prices of farm produce due to schools and other service institutions being closed or operating at low levels in the COVID-19 pandemic period.
- iii) Fewer farmers were monitored due to lateness in BoU availing information on ACF beneficiaries.

3.2.4 Recommendations

- i) The BoU and PFIs should improve further the loan review and processing procedures with the aim to disburse funds within the planned 15 days from receipt of the applications.
- ii) The BoU Accounting Officer to ensure timely access to information that aids monitoring of the ACF.



3.3 Cotton Development Organisation

3.3.1 Introduction

The Cotton Development Organisation (CDO) Vote 155 is mandated to monitor the production, processing and marketing of high value cotton and its by-products. The CDO has one programme Cotton Development and two sub-programmes: 01 Headquarters and Project 1219 Cotton Production Improvement. The programme strategic objective is to increase cotton production and quality with the aim of contributing to the national economy through increased incomes. The intended outcome is increased cotton production, quality and domestic value addition.

Cotton Development Programme

The approved budget for the Cotton Development Programme in FY 2020/21, excluding arrears is Ug shs 8.617bn, of which Ug shs 6.504bn (75.48%) was released and Ug shs 2.810bn (43.20%) spent by 31st December 2020. This was good release and poor expenditure performance. The areas that were sampled for monitoring under the two sub-programmes are presented in Annex 1.

3.3.2 Headquarters

Background

The CDO provides services to 70 cotton-growing districts in the following regions: West Nile, Western, Mid-West, Lango, East Acholi, West Acholi, Bugisu /Teso, Pallisa, Pader Project, Tororo, Busoga. The CDO collaborates with Uganda Ginners and Cotton Exports Association (UGCEA) to procure, process and distribute cotton seeds and inputs (pesticides, herbicides, spray pumps, tractor hire services) to farmers. The approved budget for Headquarters sub-programme for FY 2020/21 was Ug shs 4.41 bn, of which Ug shs 2.29bn (51.93%) was released and Ug shs 2.11bn (92.14%) was spent by 31st December 2020. This was a good release and very good expenditure performance.

Performance

By 31st December 2020, the following inputs were distributed to farmers: 2,334 metric tonnes (Mt) of de-linted and graded cotton planting seed; 41 Mt of Foundation seed and 1st Generation seed; 1,435,509 one-acre units of pesticides; 4,740 spray pumps; 40.4 Mt of assorted fertilisers and 6,616 litres of herbicides were distributed to cotton farmers. In addition, 466.6 Mt of fertilizers, 220 spray pumps, 60,000 one acre units of pesticides and 486 litres of herbicides were distributed to seed growers. A total of 4,593 one-acre demonstration plots were established for training farmers on cotton production technologies; 1,368 acres were ploughed under CDO/UGCEA tractor hire service scheme.

With regard to cotton targeted extension services, 454 Field Extension Workers and 192 LG Extension Officers were trained on cotton production technologies. Although demonstration sites were established, farmers' attendance of training sessions was below target due to the COVID-19 SOPs and higher attention on food production to address the challenges associated with the lockdown. Cotton seed up-take was low due to late harvesting and land scarcity as most was used for planting food crops. Weak farmer group cohesion during and after the COVID-19 pandemic lockdown made provision of production inputs and recovery of credit difficult.



In observance of the COVID-19 SOPs, the number of extension workers in the field were scaled back in some areas which negatively impacted on access and cotton production. For example, in the West Acholi sub-region, the number of CDO sub-county coordinators were reduced from 36 in July to 24 by November 2020 and the Area Coordinators were scaled back from 8 to 6 during the same period.

Torrential rains and bad roads limited outreach to some remote areas such as Apwoyo sub-county in Nwoya District and Palaro Sub-county in Gulu District. In South Eastern /Busoga region, crop failed due to floods and hailstorms that washed away the pesticides and herbicides thus leading to high pests and diseases especially in Buyende District that experienced 30% crop losses. Parts of Kaliro District, particularly in Gadumiko Sub-county and Bumaya Sub-county, experienced an estimated 10% loss of crop due to weather vagaries thus leading to lower yields. Cotton was destroyed along the River Nile that overflowed with the heavy rains.

Challenges

- i) Lower cotton production, productivity and quality due to multiple factors: extreme weather conditions; increased incidence of weeds, pests and diseases; inadequate pesticides; high costs of production inputs such as fertilizers; inadequate extension services and the collapse of the international price

Recommendations

- i) The MAAIF, CDO, NARO and LGs should work collaboratively to promote adoption of simple appropriate irrigation schemes by farmers.
- ii) The CDO should continue strengthening and supporting extension services and farmer group cohesion.

3.3.3 Cotton Production Improvement

Background

Since FY 2014/15, the CDO undertook construction a Government cottonseed processing plant on 16.5 acres of land in Akwara Village, Pajule Sub-county, Pader District. By 31st December 2020, key structures were completed, machinery from old sites was transferred and installed and new processing machinery was procured and installed. The approved budget for the sub-programme for FY 2020/21 was Ug shs 4.21bn which was fully released and Ug shs 0.71bn (16.86%) was spent by 31st December 2020. This was a very good release and poor expenditure performance.

Performance

The cottonseed dressing plant in Pader District was in operation by 31st December 2020. Construction of the mechanical workshop including roofing was at 80% completion; external works (drainage system, driveways and tarmac) was at 90% completion; architectural drawings and bills of quantities (BOQs) were finalised for the construction of staff quarters. The procurement process was on going for construction of the store where by solicitation documents were issued. Installation of the 8 gin stands was completed and the machines were tested. The delivery date for the supply of workshop machinery was extended to 15th April due to COVID-19 restrictions in India; the source country.



Construction of mechanical workshop at the Cotton Dressing Station in Pajule Sub-county Pader District at 80% completion



Bags of cotton seed under production at the Cotton Dressing Station in Pajule Sub-county Pader District

Some planned structures were not constructed due to inadequate funding. These were: multi-purpose hall; staff accommodation; offices; dining hall; kitchen and canteen. The dressing plant was operating at 50% due to limited cotton brought by ginneries; farmers had abandoned cotton growing due to Covid 19 related challenges hence leading to low production.

Challenges

- i) Lower functionality and productivity of the seed dressing station due to a) frequent power blackouts and lack of transport to procure fuel for the generators b) delivery by ginneries of cotton with high moisture content 10%-11% against recommended 6% that affects the motors that overheat and switch off c) inadequate cotton produced and delivered for processing
- ii) Staff inefficiency due to lack of key infrastructure such as staff quarters. Staff report late and were not easy to supervise when they lived far away from the dressing station.

Recommendations

- i) The CDO should prioritise funds for providing additional key infrastructure and equipment at the Seed Dressing Station, particularly stores for both processed and unprocessed cotton, staff accommodation facilities and a standby generator.
- ii) The CDO to collaborate with UMEME to provide a dedicated power line to the dressing station.
- iii) The CDO and UGCEA should step up monitoring to ensure improved quality of cotton seed produced.

Overall performance of the Cotton Development Programme

The overall semi-annual performance of the Cotton Development Programme in FY 2020/21 was good, rated at 70.98% (table 3.4). Farmers, seed growers, and extension workers were trained, demonstration plots established and cotton planted in various parts of the country.

**Table 3.4: Performance of the Cotton Development Programme by 31st December 2020**

Output	Annual Budget (Ug Shs)	Cum. Receipt (Ug Shs)	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)
Output: 02 Seed multiplication (No of Seedgrowers trained)	250,000,000	280,000,000	6,500.00	6,630.00	2.64
Output: 03 Farmer mobilisation and sensitisation for increasing cotton production and quality (No. of Demo Plots)	1,750,000,000	520,228,000	4,500.00	4,593.00	20.31
Output: 04 Cotton targeted extension services (No. of extension workers)	200,000,000	110,000,000	450.00	454.00	2.32
Output: 06 Mechanization of land opening (No. Of districts)	60,000,000	40,000,000	70.00	70.00	0.70
Output: 72 Government Buildings and Administrative Infrastructure (No. of constructions)	2,650,000,000	2,650,000,000	4.00	1.00	7.69
Output: 75 Purchase of Motor Vehicle and Other Transport Equipment (number)	423,730,000	360,000,000	2.00	-	0.00
Output 05: Provision of pumps - motorised (Number)	29,400,000	-	14.00	-	0.00
Output 05: Provision of pumps - Matabi (Pieces)	47,500,000	55,050,000	950.00	1,101.00	0.55
Output: 01 Provision of cotton planting seed (Bags)	803,600,000	378,364,000	279,700.00	138,079.00	9.33
Output 05: Provision of pesticides (Units)	2,088,500,000	1,476,568,000	617,000.00	444,405.00	24.24
Output: 02 Seed multiplication - herbicides (Litres)	24,800,000	20,320,000	1,240.00	1,016.00	0.29
Provision of fertilizer (Kg)	251,970,000	154,470,000	8,399.00	5,149.00	2.92
Motorcycles (Number)	37,500,000	5,000,000	15.00	2.00	0.00
Total	8,617,000,000	6,050,000,000			
Programme performance					70.98%

Source: Field findings



3.2.4 Challenges

- i) Lower cotton production and export due to COVID-19 lockdown and associated challenges including lack of demand from the China and USA the biggest consumers of lint; reduced export prices; inability of ginners to export about 50% of the crop; inadequate extension services and less investment by UGCEA as less cotton was harvest and ginned.
- ii) Lower Non-Tax Revenue (NTR) realised by CDO due to the reduced production and exports. This necessitated scaling back implementation of some of the planned activities.

3.3.5 Recommendations

- i) The MAAIF and MFPEd should consider prioritising increased resources to CDO to support entire value chain of cotton to orient towards agro-industrialisation. Most expenditures in the cotton sub-sector are met by the private sector partners that are gradually reducing funding of public services

3.4 Dairy Development Authority

3.4.1 Introduction

The Dairy Development Authority (DDA)'s mission is to provide sustainable dairy development and regulatory services for increased production, processing, marketing and consumption of milk and milk products in the country. The planned outcome is increased production of quality and marketable milk and milk products. The DDA has one programme Dairy Development and Regulation and two sub-programmes: 01 Headquarters and 1268 Dairy Market Access and Value Addition.

Dairy Development and Regulation Programme

The approved budget for Dairy Development and Regulation Programme for FY 2020/21, excluding arrears was Ug shs 10.016bn of which Ug shs 3.417bn (34.11%) was released and Ug shs 2.669bn (78%) was spent by 31st December 2020. This was poor release and good expenditure performance.

3.4.2 Headquarters

Background

The Headquarters sub-programme focuses on promoting dairy production and marketing through stakeholder training and group strengthening, provision of inputs and ensuring compliance to dairy standards and regulations. The approved recurrent budget for DDA for 2020/21 was Ug shs 6.373bn, of which Ug shs 2.266bn (35.55%) was released and Ug shs 2.082bn (91.88%) spent by 31st December 2020. This was poor release and very good expenditure performance for the recurrent budget.

Performance

The approved budget of the Dairy Development Programme was Ug shs 10.016bn, of which Ug shs 3.417bn (34.1%) was released and Ug shs 2.670bn (78.1%) spent by 31st December 2020. This was poor release and good expenditure performance. The severe budget suppression and COVID-19 restrictions led to scaling back implementation of some planned activities. By 31st December 2021, 1,146 milk handling premises were inspected countrywide; 852 new premises/equipment/exporters/importers were registered countrywide; 1,806 milk and milk product samples were analyzed; and 324 dairy farmers were trained.



In the Northern region, some coolers under the governance of dairy farmers' cooperatives were non-functional especially in Nwoya, Gulu, Amolator and Amolator districts. Examples were the 3,000-liter milk cooler at Alemelle Town, Amolator District belonging to Kioga Cattle Traders and Dairy Farmers Cooperative and faulty dairy equipment at Gulu Community Farmers' Cooperative Processing Facility. Although funding was not provided, analysis of milk samples continued in Northern Uganda where a total of 274 samples were analysed against the planned 252 samples. Most activities were deferred to FY2021/22 as funding was inadequate for the planned activities. Severe understaffing – three technical staff working in 17 districts – negatively affected programme implementation and outreach in the Northern region.

Milk production in the North-Eastern region was lower due to: poor breeds of animals that yielded two litres per day per animal lower than the expected 15 litres per day from good breeds; poor quality pastures; high prevalence of pests and diseases; and heavy rains that flooded the grazing areas making it difficult to feed the animals properly. About 78% of the milk samples that were tested had no added water. There were very few cases of adulterated milk and milk products. Most planned activities were not implemented due to limited funds that were disbursed.

In the South Western region, enforcement of dairy regulations and standards and market surveillance was undertaken in the districts of Mbarara, Kiruhura, Lyantonde, Kasese and Kabarole. Inspection and registration of milk handling premises and equipment was undertaken in Kiruhura, Mbarara, Mutukula and Isingiro. Milk quality was very good in most premises except in Kabarole and Kasese districts where adulteration with water was common. Milk production in the South Western region reduced due to the high prevalence of Foot and Mouth Disease (FMD) in cattle in Kiruhura, Ibanda and Kazo areas. Programme supervision was constrained by understaffing of the regional office.

Challenges

- i) Low milk production and productivity due to heavy rains and floods, high prevalence of pests and diseases and poor quality of animal breeds and pastures.
- ii) Scaled back procurements and poor implementation of planned outputs due to budget cuts and reprioritization and COVID-19 restrictions that limited community engagement.

Recommendations

- iii) The MAAIF should scale up routine vaccination of animals against the most common livestock diseases and strengthen surveillance
- iv) The MAAIF, NARO, NAGRC&DB, LGs and DDA should work collaboratively on research and promotion of improved dairy breeds and pastures.

3.4.3 Dairy Market Access and Value Addition

Background

The Dairy Market Access and Value Addition sub-programme focuses on revival of the Entebbe Dairy Training School (EDTS), rehabilitation of Milk Collection Centres (MCCs), establishment of regional offices and accreditation of the National Dairy Analytical Laboratory (NDAL). The approved development budget for DDA for 2020/21 was Ug shs 3.642bn, of which Ug shs 1.150bn (31.59%) was released and Ug shs 0.587bn (51.04%) spent by 31st December 2021. This was poor release and fair expenditure performance.



Performance

Rehabilitation of the Kitgum Milk Collection Centre (MCC) was at 80% completion with the substructures, walling, roofing and installation of water tanks done. The door and window frames were fixed and electrical wiring completed. Rehabilitation of Kyegegwa MCC delayed as land boundary issues had to be sorted first. Rehabilitation works at the National Dairy Analytical Laboratory (NDAL) were ongoing.

At the EDTS, tiling works were completed and more equipment was installed for milk reception, chilling, heat generation and milk processing. Training of students in quality control and production of yoghurt continued. Some planned activities were not implemented as the hostels at the EDTS were gazetted for treating COVID-19 patients from various Government institutions. These areas were out of boundaries for the trainers and students.



Milk cooling tank installed at the DDA Entebbe Dairy Training School in Entebbe Municipality Wakiso District

Challenges

- i) Delayed execution of works due to interruptions caused by observance of COVID-19 SOPs and land encroachment at the EDTS and Kyegegwa MCC.

Recommendations

- i) The DDA, Uganda Land Commission and LGs should ensure that land boundaries are properly opened and titles issued for Government properties and land cases concluded in courts of law.

Overall performance of the Dairy Development and Regulation Programme

The overall semi-annual performance of the Dairy Development and Regulation Programme in FY 2020/21 was good, rated at 73.46%. Market surveillance and enforcement of dairy standards and regulations was undertaken. Most procurements were in progress while rehabilitation of key infrastructure was ongoing.



Table 3.5: Performance of the Dairy Development and Regulation Programme by 31st December 2020

Output	Annual Output Budget (Ug shs)	Cumulative receipts (Ug shs)	Annual Planned Target	Cum. Achieved Quantity	Physical performance (%)
Milk cans procured (number)	32,409,790	-	83	0	0.00
Pasture seeds procured (Kgs)	81,532,931	-	1,600	0	0.00
Market surveillance undertaken (number of exercises)	23,126,982	9,378,250	22	11	0.00
Dairy standards and regulations enforced (number of exercises)	59,530,982	31,747,000	20	10	4.50
Dairy premises/equipment's/consignments inspected and registered (number of premises)	113,550,771	37,869,977	778	548	9.15
Quality and safety meetings held (number)	22,540,000	-	9	0	0.00
Meetings at Headquarters attended (number)	15,900,000	4,065,000	20	6	1.28
Youth and women groups supported to engage in commercial feed production (number of groups)	12,112,000	-	5	0	0.00
New and existing dairy farmer groups strengthened (number of groups)	21,692,000	1,540,000	8	2	1.75
Multi-stakeholder platforms organised (number of events)	22,060,000	-	8	0	0.00
Dairy farmer learning visits organised (number)	11,220,000	-	4	0	0.00
Farmers trained in good farming practices, quality control and value addition (number)	88,124,000	11,000,000	4,029	452	0.00
Milk and milk product samples analysed (number)	4,303,397	-	500	643	0.00
Chuff cutters procured and distributed to farmers (number)	21,727,016	-	3	0	0.00
Milk Collection Centre (MCC) in Kitgum rehabilitated and supervision undertaken (No. of facilities)	324,510,653	199,597,000	1	0.8	26.16
National Dairy Analytical Laboratory rehabilitated (number)	319,546,649	80,000,000	1	0.5	25.76
Entebbe Dairy Training School Rehabilitated and equipped (number)	46,140,454	11,000,000	1	0.6	3.72
BOQs for Kyegegwa and Katakwi MCCs developed (number)	20,577,670	14,930,000	2	1	1.14
Programme performance (outputs)					73.46%

Source: Field findings



3.4.4 Challenges

- i) Some procurements and farmer training and community engagements were not fully implemented due to budget suppression and low disbursements as well as observance of the COVID-19 SOPs.
- ii) Lower outreach to key stakeholders due to severe understaffing in the regional offices.
- iii) Lower milk production and productivity due to the high prevalence of pests and diseases and poor quality of livestock breeds.

3.4.5 Recommendations

- i) The DDA should prioritise increased staffing to the regional offices to enhance programme outreach.
- ii) The MAAIF, DDA, NARO, NAGRC&DB and LGs should collaborate on enhancing the quality of animal breeds for improved dairy production and promote their dissemination together with improved farming practices.
- iii) The MAAIF and LGs should scale up vaccination of livestock country wide against the most common diseases.

3.5 Ministry of Agriculture, Animal Industry and Fisheries

3.5.1 Background

The Ministry of Agriculture, Animal Industry and Fisheries (MAAIF)'s mission is to transform subsistence farming to commercial agriculture through six programmes: Crop Resources; Directorate of Animal Resources; Directorate of Agricultural Extension and Skills Management; Fisheries Resources; Agriculture infrastructure, mechanization and Water for Agricultural Production; and Policy, Planning and Support Services. Five programmes were monitored as presented below.

Agricultural Infrastructure Mechanisation and Water for Production Programme

3.5.2 Improving Use of Agricultural Equipment and Mechanisation

Background

The Government of Uganda (GoU) is implementing the Improving Access and Use of Agricultural Equipment and Mechanisation sub-programme that aims to enhance agriculture production and productivity through excavation of water for production facilities, bush clearing and opening of farm roads. The overall targets for the three-year period (07/01/2015-06/30/2018) were 500 valley tanks excavated/rehabilitated, 5,000 acres of bush cleared, 2000 farm roads opened up, fish ponds, markets and other structures established. In FY 2018/19, the project was granted a two-year extension to enable completion of the planned outputs.

The annual budget for the sub-programme for FY 2020/21 is Ug shs 44.401bn, of which Ug shs 28.47bn (64.12%) was released and Ug shs 14.62bn (51%) spent by 31st December 2020. This was a very good half year release and fair expenditure performance.



Performance

By 31st December 2021, 168 valley tanks with a capacity of 15,000 cubic meters each were constructed/rehabilitated in the Eastern, Central and Western Regions; 9,258 acres of farmland were cleared and 267kms of farm roads were rehabilitated using the MAAIF heavy earth moving equipment. Procurement was still ongoing for tractors, heavy earth moving equipment and rehabilitation works at Namarele Mechanical Centre. A total of 25 local communities around the country were sensitised and trained on the maintenance and management of both the mechanisation centers and completed water facilities.

The overall semi-annual performance of the Improving Access and Use of Agricultural Equipment and Mechanisation sub-programme in FY 2020/21 was fair rated at 54.3% (table 3.6). The MAAIF constructed and rehabilitated valley tanks and dams and fishponds, cleared bush and ploughed farmers' and communities' fields across the country.

Table 3.6: Performance of Improving Use of Agricultural Equipment and Mechanisation by 31st December 2020

Output	Annual Budget (Ug shs)	Cum. Receipt (Ug shs)	Annual Target	Cum. Achieved Qty	Physical Performance Score (%)
Output 010583 Valley Tank and Other Facilities Construction: Valley tanks, dams and fish ponds constructed and de-silted (number)	7,689,568,000	7,689,568,000	300	168	10.82
Output 010583 Valley Tank and Other Facilities Construction: Bush cleared (acres)	480,000,000	480,000,000	5,000	7,310	1.21
Output 010583 Valley Tank and Other Facilities Construction: Farm Access Roads opened and improved (Kms)	465,432,000	465,432,000	370	494	1.17
Output 010583 Valley Tank and Other Facilities Construction: Opening and ploughing of bush cleared areas undertaken (acres)	25,000,000	25,000,000	5,500	10,500	0.06
Output 010577 Purchase of specialised machinery and equipment: Procurement and payment of the of six pcs of heavy equipment and accessories and drilling rigs, tractors/implements, Motor vehicles (no. of items)	18,450,000,000	9,930,149,382	6	1.50	21.54
Output 010572 Government Buildings and Administrative Infrastructure: complete 5 Regional Agricultural Mechanization Centers in Mbale, Kiryandongo, Greater Bushenyi, Agwata and Buwama constructed/rehabilitated (number)	11,500,000,000	6,800,000,000	5	2	19.55
Output 010577 Purchase of specialised machinery and equipment: Maintenance of equipment and vehicles (number)	1,181,835,678	500,000,000	60	-	0.00
Programme Performance (outputs)					54.3%

Source: Field findings



A well cemented water reservoir by MAAIF in Rwamabala village, Lyantonde District



Milk cooling tank installed at the DDA Entebbe Dairy Training School in Entebbe Municipality Wakiso District



MAAIF Excavator and bull dozer abandoned and not in use for more than a month due to lack of batteries in Kagarama subcounty Isingiro District



Landowners reported forceful takeover of their land with developments without full compensation by MAAIF for establishment of the above access road to an irrigation project in Kyabiba Village Rwampara District

Challenges

- i) Except in a few cases, all the dams and valley tanks were not in use due to lack of water pumps, pipes and troughs to draw and use the water from the deep structures.
- ii) Absence of protective gear (gloves, helmet, overall, gumboots) for the field staff and lack of a low bed to shift equipment from one farm to another which led to lesser work being done.
- iii) Delay in completion of infrastructure due to breakdown of the machines and poor maintenance.
- iv) Limited and fewer heavy earth (moving) equipment sets to support the construction, development, desilting, bush clearing services in the country thus limiting farmers access and utilisation.



Recommendations

- v) The MAAIF should complete installation of water pumps, piping and troughs on the water for production facilities that were established.
- vi) The MAAIF should fast track establishment of the regional mechanical workshops to reduce time and costs of maintaining the machines.
- vii) The MAAIF and MFPED should prioritise and allocate more funds and resources for the acquisition, utilisation and upscaling of agricultural mechanisation services in the country.
- viii) The MAAIF should promote testing, evaluation and certification of all the locally manufactured and imported agriculture mechanisation technologies, equipment, machinery, implements, and accessories before use and commercialisation.

Crop Resources Programme

3.5.3 Agriculture Cluster Development Project

Background

The Agriculture Cluster Development Project (ACDP) is a World Bank/GoU funded project that aims to raise on-farm productivity, production and marketable volumes of selected agricultural commodities (maize, beans, rice, cassava and coffee), in specified (12) geographic clusters (spanning over 42 districts, as of 2016 but they increased to 72). Implemented by MAAIF, the project is estimated to cost US\$ 248 million to be contributed as an International Development Association (IDA) Credit (US\$ 150 million) and GoU counterpart funding (US\$ 98 million) over the period 9th April 2015 to 31st March 2022.

The project was designed to start as a pilot in FY 2016/17 in five districts (Iganga, Amuru, Nebbi, Kalungu and Ntungamo) involving provision of subsidised agro-inputs to 450,000 farm households through electronic vouchers issued by an Electronic Voucher Management Agency (EVMG); provision of water for production to promote irrigated rice varieties and matching grants to farmers and infrastructure to enhance market linkages, post-harvest handling, storage and value addition. The target is to provide E-voucher subsidies to 450,000 households to promote the five strategic commodities (maize by 180,000 households (HH); coffee by 110,000 HH; beans by 95,000 HH; rice by 40,000 HH and cassava by 25,000 HH).

The project became effective on 23rd January 2017 and its approved budget for FY 2020/21 is Ug shs 298.57bn (Ug shs 296.26bn from donor and Ug shs 2.31bn from GoU). By 31st December 2020, Ug shs 2.09bn (90.48%) of the GoU contribution was released and Ug shs 0.68bn (32.45%) was spent. The donor released Ug shs 150.23bn, of which Ug shs 89.17bn (59.36%) was spent.

Performance

For FY 2020/21, the MAAIF targeted to provide E-Vouchers to 293,500 HH. By 31st December 2020, E-Voucher subsidies for inputs were provided to a total of 84,715 beneficiaries in the 12 clusters bringing the cumulative total number of beneficiaries to 156,765. The level of registration and enrolment of farmers on the programme remained low due to a combination of factors and more particular: network system failures and inconsistencies; stockouts and limited capacity of the agro-input dealers and lack of input distribution networks and channels.



In Nwoya District, 9,228 farmers were registered of whom 3,263 were trained on E-Voucher use and 217 farmer groups accessed beans, rice and coffee technologies. Inclusive of the farmers' contributions, 10 farmer groups had production stores and maize mills worth Ug shs 2.640bn established in their areas for handling beans and maize processing and storage. Most structures were between 35% to 99% completed.



ACDP supported rice production by TIC RYEMOCAN LSB Group Okir Village, Todora Parish, Anaka Sub-county, Nwoya District

Key challenges experienced in Nwoya District were system failures delaying access to inputs, delays in release of matching grants by MAAIF, late disbursement of ACDP funds to the district (by 19/02/2021, the Q1 and Q2 funds were still on the district account unutilised), road chokes not established as the estimated Ug shs 5.2bn was retained at MAAIF Headquarters; non-payment of community based facilitators who were recruited in June 2020 and incompetent contractors hired to establish the stores.



Abandoned site of the half built ACDP Rice Mill Shelter in Porongo Sub-county, Nwoya District

Construction of the rice mill shelter started in June 2020 and had an expected end date of August 2020. The project received a three-month extension to 28th November 2020. However, it remained at roofing stage because the contractor had inadequate funds and so abandoned the site in October 2020, despite receiving 50%-part payment of Ug shs 35m. The contract period had expired and it was being planned to get another contractor to finish the works.

In Mbale District, by 31st December 2020, a total of 8,980 farmers registered on the E-voucher system and 7,079 were enrolled. However, they were not able to access inputs in the first season due to system failures. The Maaka Timlim Farmers Group, received seeds very late, and this negatively affected their production. In addition, some of the inputs they received like maize seed was not of good quality with a 40% germination rate.



ACDP training session for farmer groups at Mbale District Local Government Headquarters

The district completed the designs and bills of quantities for construction of road chokes on 33 roads worth Ug shs 6.45bn. However, this activity was halted in July 2020 following information from MAAIF that works would be implemented centrally by the ministry.



In Hoima District, the ACDP funds for Q1 and Q2 were received late at the beginning of Q3. By 31st December 2020, the district had utilised funds from the Extension Grant to implement ACDP activities including farmer group sensitisation and training and farmer registration.

A consultant to develop an integrated Agricultural Management Information System (AMIS) was hired and development of the AMIS was ongoing. Popular versions of the E-Voucher manual were translated into eight local languages of Luganda, Lusoga, Lumasaba, Sabinayi, Runyakitara, Ateso, Sabinayi, Lugbara and five copies printed.

The semi-annual performance of the Agricultural Cluster Development Project in FY 2020/21 was poor rated at 57.4% (table 3.7). The programme efficiency and effectiveness was compromised by the e-voucher system inadequacies and non-functionality.

Table 3.7: Performance of the Agriculture Cluster Development Project by 31st December 2020

Output	Annual Budget (Ug shs)	Cum. Receipt (Ug shs)	Annual Target	Cum. Achieved Qty	Physical performance Score (%)
Beneficiary farmers (at least 30% female) provided with subsidized inputs through e-voucher system (number)	110,575,000,000	68,785,456,244	293,500.00	42,357.00	8.59
Stakeholder engagements and sensitization undertaken in the rollout districts (number of districts)	64,007,204,939	50,385,680,820	57.00	25.00	11.94
Road chokes on farm access roads identified, surveyed and approved for rehabilitation works (number)	72,775,049,536	15,315,083,649	53.00	15.00	24.37
Policy and Regulatory Function(activity)	6,178,208,000	1,419,689,500	10.00	2.00	1.80
Training provided to Tractor operators, artisans and technicians and selected farmers from 33 ACDP roll out districts in operation .(number)	614,156,000	539,156,000	160.00	45.00	0.07
Solar powered irrigation systems installed at ZARDIs (number of sites)	7,637,117,430	1,525,668,193	7.00	2.00	2.56
District officials trained in the Farmer register and data collection tool. (activity)	1,829,098,500	1,829,098,500	4.00	1.00	0.15
Assessment on efficacy and mass production of effective biocontrol agents for fall armyworm conducted.(activity)	1,780,000,000	780,590,000	12.00	4.00	0.45
Project implementation teams at national and district levels capacitated in M&E (quarterly)	9,650,455,595	3,626,548,595	16.00	4.00	2.15



Output	Annual Budget (Ug shs)	Cum. Receipt (Ug shs)	Annual Target	Cum. Achieved Qty	Physical performance Score (%)
Project operations supported and facilitated (activity)	12,523,710,000	2,609,357,500	12.00	4.00	4.19
Design and development of the Agriculture Geo Portal Platform undertaken (activity)	11,001,000,000	5,500,500,000	13.00	2.00	1.13
Programme Performance					57.4%

Source: Field findings

Challenges

- i) The unstable and inconsistent E-Voucher System largely affected the enrolment and redemption of inputs.
- ii) Poor programme implementation due to low absorption funds. Most disbursed funds at the DLGs were not utilised resources due to delayed disbursements and problems of transferring funds from special district project accounts to the Treasury Single Account before the district could access them for use.
- iii) Reluctance by potential beneficiary farmers to contribute to subsidised inputs especially since there were other government programs giving free inputs.
- iv) Delays with operationalisation of the e-payment gateway limiting end-to-end connection in the E-Voucher System. As a result, there were delays in automatic transfers of funds from the project account to the farmer's e-wallet as per the project design.
- v) Protracted procurement processes especially at the evaluation stage.
- vi) Low turn up of farmers for training due to poor mobilisation and COVID-19 associated problems; this led to fewer farmers being registered and enrolled into the programme

Recommendations

- i) The MFPED and MAAIF should engage the Accountant General on streamlining fund disbursement under the ACDP.
- ii) The NITA-U and MAAIF should do E-Voucher System testing for suitability and adaptability before use and fast track operationalisation of the e-payment gateway.
- iii) The MAAIF should link the input dealers and farmer groups to financial institutions to enhance their capabilities and increase the working capital; focus should be put on strengthening the input distribution networks in the country.
- iv) The MAAIF and LGs should enhance community awareness and mobilisation to improve farmer registration and enrolment into the programme.



3.5.4 National Oil Palm Programme

Background

The National Oil Palm Project (NOPP) is a government intervention that aims to sustainably increase rural incomes through opportunities generated by the establishment of an efficient oil palm industry. The 10-year programme (29th November 2018 to 26th August 2028) is financed through a loan from the International Fund for Agricultural Development (IFAD) amounting to US\$75.820 million with a grant element equivalent to US\$1.210 million.

The project has three components, namely: i) Scaling up smallholder oil palm development, ii) Livelihoods diversification and resilience; and iii) Oil palm development framework. The project operates in four hubs: Buvuma Island, Mayuge, Masaka/Rakai, and Mukono/Buikwe in addition to addressing spillover activities in Kalangala district. The FY 2020/21 the approved budget for the NOPP was Ug shs 43.787bn (Ug shs 36.19bn from IFAD and Ug shs 7.597bn from GoU) of which Ug shs 11.169bn (25.50%) was released and Ug shs 13.939bn (100%) spent by 31st December 2020. This was poor release and very good expenditure performance. Within the spent funds was an opening balance amounting to Ug shs 2.696bn from GoU and US\$ 5.7 million from the donors.

Performance

By 31st December 2020, the MAAIF had scaled up investment in smallholder oil palm development, including a cumulative harvest of 232,972 Mt, worth Ug shs 115.2bn.

Kalangala District

Farmer Organisations including Kalangala Oil Palm Growers Trust (KOPGT), Ssesse Oil Palm Growers Cooperative, and Ssesse Oil Palm Growers Savings and Credit Cooperative were supported. Two fertiliser stores on Bunyama and Bubembe islands were completed. Community roads were opened in Kalangala but their maintenance remained a challenge. The KOPGT continued supporting oil palm farmers with extension services, provision of fertilisers and transport services and recovery of credit.

Kalangala District LG received Ug shs 110m for promoting alternative livelihoods. By 17th February, 2021, these funds were still on the district collection account unutilised awaiting approval from the District Council and warranting by MFPED.

Studies for construction of two landing sites in Bunyama and Bubembe islands were completed in FY 2017/18 but works had not commenced. Construction of Bugala Ferry Landing Site in Nkusi Village, Bujumba Sub-county was behind schedule by more than two years and at 8% completion. The first contractor hired by MAAIF



Works at Bugala Ferry Landing site in Nkusi Village had stalled for more than two years and were at 8% completion

in 2018 abandoned the site. The second contractor hired in March 2020 had also failed to undertake the works satisfactorily, with the contractor attributing this to the rise in lake water levels, requiring review of the design, and adjustments to the layout plan for the access road and ancillary facilities.



A total of 490 households were enrolled for household mentoring in Kalangala, under the oversight of 49 household mentors. Three case study farmers highlighted the performance by 31st December 2020:



House built from oil palm proceeds by Ms. Nalutaaya in Kalangala District

Mr. Tibagirirwa of Kizira Village, Kayunga Parish, Mugoye Sub-county in Kalangala District was maintaining 16 acres of oil palm plantation and had established other commodities to provide food security including cassava, ovacado, fruit trees and bananas. The farmer and his household got frequent guidance from the KOPGT extension workers and the district. Key challenges were lower yields due to unaffordability of fertilisers; loan recovery was still implemented on his proceeds when he had completed the loan more than a year ago; and the poor quality of fruits leading to high volumes of rejects and loss of profits.

Ms. Nalutaaya of Bweza Village, Mulabana Parish, Bujumba Sub-county, Kalangala District was farming 16 acres of oil palm plantation. She procured fertiliser and farm equipment from KOPGT. She had also accessed extension services. The proceeds from the oil palm sales that she used to construct her house.

Key challenges were: delayed transportation of fruits from farms to the processing factory by four days on average leading to lower quality of the fresh fruit bunches (FFB); lack of factory to process fruits as the one in near proximity had broken down; low production due to limited fertilizer application as the inputs were too expensive.



An increasing trend is the rotten and poor quality of oil palm fruits on many farms which is rejected by the processing factory. This could be attributed to the farmers harvesting non-ripe fruits and failure to apply fertilisers in outgrower plantations in Kizira Village, Mugoye Sub-county, Kalangala District

Mr. Semanda residing in Buyindi Village, Kayunga Parish, Mugoye Sub-county in Kalangala District is an oil palm farmer and an extension worker in the DLG. He was farming 20 acres of oil palm plantation, pineapples, pasture, coffee, piggery, poultry, bananas, rabbit and trees. His farm was used as a model farm by the district for demonstrating different technologies that can be combined with oil palm growing. Key challenges to the extension service were: inadequate facilitation to extension workers, dilapidated and expensive to maintain motorcycles, lack of demonstration materials, poor road network and the reducing price of FFB due to the poor quality of fruits delivered by farmers.



Buvuma District

The process of establishing the nucleus estate in Buvuma District started; 339 tenants on 956.7 hectares (ha) were valued and cleared for payment. The GoU paid for 7,875.4 Ha of which 5,043.48 Ha was handed to BIDCO by the Uganda Land Commission of which 1,885 Ha was formerly leased by Oil Palm Buvuma Limited (OPBL). A total of 264 farmers on 404.69 hectares were registered and surveyed for oil palm growing.

Other activities implemented were: boundary opening, grading and land clearing for the nucleus estate, setting up of basic farm infrastructure and the oil palm nursery, and community mobilisation and sensitisation. By 19th February 2021, 385,000 seedlings were being maintained and other consignments were under procurement.



Well established oil palm nursery at Buvuma District; seedlings were ready for transplanting to outgrower plantations

Key challenges were: inadequate funds to compensate farmers for the land allocated to the nucleus estate; delayed processing of land titles and most estates belong to absentee landlords; difficult of mobilising, sensitising and verifying farmers due to the COVID-19 restrictions.



Kofa dam being established at Kiyindi landing site in Buikwe District to hold back water from the building site

Overall progress for the construction of two landing sites at Buikwe and Buvuma was at 8%. For Kiyindi site in Kiyindi Town Council, Buikwe District, a quarry in Kidokolo Village was acquired and the permit was still being processed from the National Environment Management Authority (NEMA); the machines were fully mobilized, geo surveys were completed and a kofa dam was built to remove the water so that the foundation could be established. Works had not commenced in Buvuma landing site as geo surveys were still being undertaken.

Mayuge District

Mayuge hub, the Mayuge Oil Palm Growers Association (MOPGA) was registered at the district, with 6,221 potential oil palm farmers registered from 13 Sub-counties.

Masaka District

A total of 34,000 ha were identified in Sango Bay in Kyotera District, as suitable for oil palm plantations.

The overall semi-annual performance of the National Oil Palm Programme in FY 2020/21 was good, rated at 68.5% (table 3.8). Progress was made in acquisition of land, maintenance of oil palm plantations and farmer mobilisation. However, some construction works lagged behind schedule.

**Table 3.8: Performance of the National Oil Palm Programme by 31st December 2020**

Output	Annual Budget (Ug shs)	Cum. Receipts (Ug shs)	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)
100% completion for the Hub set up. (no .of staff recruited)	1,055,617,000	146,582,000	14.00	0.50	1.61
Nucleus estate established in Buvuma (hectares)	3,391,400,000	3,482,284,684	500.00	404.00	15.81
Rapid Physical Planning Assessment (RAPPA) report for the 3 hubs of Mayuge, Kalangala and Buvuma established. (exercises)	309,953,000	128,943,000	12.00	3.00	1.10
Staff and lead farmers trained in specialized Oil Palm and harvesting in both Kalangala and Buvuma.(number)	400,430,000	322,066,000	1,400.00	595.00	1.25
2 trust deeds registered one in Kalangala and the other in Buvuma respectively.(number)	140,500,000	56,736,000	2.00	1.00	0.83
Operational PMU and routine monitoring(quarterly)	6,732,268,000	4,436,670,667	4.00	2.00	30.26
Construction of 3 landing sites in Kalangala, Buvuma and Buikwe districts, 25km of access roads and 75km of farm roads in Buvuma district (number of interventions)	1,859,506,000	144,411,000	3.00	0.50	11.02
monthly site supervisory meetings and weekly technical meetings executed in Buvuma and Kiyindi, Bunyama, Bubembe, Bugala (number of intervention)	1,784,804,000	2,257,436,000	3.00	1.00	2.79
Sensitization engagements and learning tours undertaken in Kalangala, Buvuma, Mayuge and Masaka. (number of visits)	461,400,000	282,622,000	21.00	7.00	1.49
Environmental supervision inspections executed in 3 hubs	235,000,000	107,727,000	4.00	1.00	0.76
Management and supervision of office activities. (number of activities)	263,672,000	134,236,000	22.00	9.00	1.26
Purchase of Vehicles and Equipment.(number)	188,500,000	188,500,000	8.00	2.00	0.28
Construction of office canteen and gate man room (number)	55,000,000.00	5,000,000	1.00	0	-
Total	16,878,050,000	11,693,214,351			
Programme performance					68.5%

Source: Field findings



Challenges

- i) Civil works delayed, due to: Rise in lake water levels; change in size of ferry from 500MT to 604MT, necessitating review of designs for Kiyindi and Buvuma landings; Delayed payment for ferry construction works using LC; Unforeseen underground physical conditions at Buvuma landing.
- ii) Poor maintenance of oil palm plantations in Kalangala, including failure of farmers to apply fertilizers due to costs associated.
- iii) Slow implementation of key activities due to the COVID-19 pandemic SOPs; there were intermittent working breaks whenever there was a positive case or a contact among the office and field workers.
- iv) Recommendation
- v) The MAAIF should collaborate with private sector to find a mechanism of availing fertilisers to farmers at subsidised rates.
- vi) Directorate of Agricultural Extension and Skills Management

3.5.5 Department of Agricultural Extension and Skills Management

Background

The Department of Agricultural Extension and Skills Management (DAES), following the National Agricultural Extension Policy (NAEP) and the 2016 National Agricultural Extension Strategy (NAES), is mandated to support and guide Local Governments in planning and budgeting for extension services; set standards for service delivery; provide agricultural production information to MAAIF; and monitor and evaluate agricultural extension services in order to strengthen accountability and transparency in agricultural extension service delivery.

The approved budget for the DAES sub-programme for FY 2020/21 was Ug shs 0.789bn, of which Ug shs 0.282bn (35.8%) was released and 64.6% spent by 31st December 2020. This was a poor release and fair expenditure performance. The areas sampled for monitoring under this sub-programme are presented in Annex 1.

Performance

The MAAIF coordinated extension service delivery at the Local Government (LG) level. The MAAIF undertook compliance monitoring, supervision and technical backstopping of extension service providers in districts. The Ministry continued to mobilise Village Agent Model (VAM) in order to enhance value chain development in the agricultural sector in view of the existing gap between the extensions: farmer ratio. The Ministry trained a total of 1,711 village agents, traders and extension staff across the country.

The Ministry updated the list of the recruited agriculture extension workers to facilitate planning and coordination of the extension activities at the district local governments; mapping of non-state across local government in agriculture extension services by looking at the quality of farmers and capacity of extension workers.



The performance of the Department of Agricultural Extension and Skills Management in FY2020/21 was poor rated at 35.2% (table 3.9). By 31st December 2020, the department had not implemented most activities due to insufficient budget on the planned output.

Table 3.9: Performance of the Department of Agricultural Extension and Skills Management by 31st December 2020

Output	Annual Budget (Ug shs)	Cum. Receipts (Ug shs)	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)
Output: 01 Strategies, Policies, Plans and guidelines: Agricultural extension training manuals for priority commodities developed and disseminated (No. of activities)	295,895,000	152,947,500	3	0.80	19.32
Output: 02 : 02 Administration, HRD, and Accounting - Extension service delivery in the DLGs by public and private providers supervised in all the regions (No. of activities)	59,080,000	0	3	0	0.00
Output: 03 Agricultural extension co-ordinations strengthened -Linkages with private sector, research and training institutions, strengthened. (No. of activities)	304,000,000	60,000,000	5	1.00	0.38
Output: 04 Provision of Agricultural production extension service-Awareness messages on crosscutting issues (Climate change, Nutrition, Gender and HIV Aids) developed and disseminated	131,000,000	70,000,000	6	3.00	15.52
Programme performance					35.2%

Source: Field findings

Challenges

- i) Budget cuts and late disbursements to the implementing department led to limited implementation of most planned activities.
- ii) Inadequate farmer access to extension services due to under staffing in local governments.
- iii) Lack of field operational tools and equipment such as vehicles, motorcycles, GPS and weather forecast tools to do field work in local governments

Recommendations

- i) The MFPED and MAAIF should increase funding to extension service delivery and supervision.
- ii) The MFPED and MAAIF should review and revise the budget ceiling for extension services to cater for increased staff recruitment and their operational expenses at the LG level.



Directorate of Animal Resources Programme

3.5.6 Meat Export Support Services

Background

The Meat Export Support Services Sub-programme aims at establishing a credible national veterinary meat export support service with four core intervention areas: a) construct, equip and operate veterinary export holding grounds and quarantine stations, b) provide startup capital to facilitate purchase of beef animals for quarantining and sale to abattoirs, c) establish and operate a livestock identification and traceability system, and d) establish adequate meat export technical capacity in the meat export value chain.

The expected outputs over the five-year period 2015/16 to 2019/20 are: six quarantine stations and holding grounds established in selected farms; 4,000 beef animals purchased for each holding station; about 1,000 farmers organized in 33 cooperative organisations with a total of at least 100 ranches; and infrastructure development in six Government stock farms to build capacity to supply 250 ready to slaughter export grade cattle to the Egypt Uganda Food Security Company (EUFS) at Bombo, Luwero district. The MAAIF is the implementing agency that undertakes infrastructure development through tendering services to the National Enterprise Corporation (NEC).

The implementation plan aimed at fast tracking establishment of the sub-programme at the National Leadership Institute (NLI) ranch in Kyankwanzi District and NEC ranch in Gomba District during FY 2015/16 and FY 2016/17. Starting FY 2017/18, the sub-programme would be rolled out to Nshaara Ranch and Ruhengyere Stock Farm in Kiruhura District; Kasolwe Farm in Kamuli District; Maruzi Ranch in Apac District; Lusenke Ranch in Kayunga District.

The revised budget for the Meat Export Support Services sub-programme for FY 2020/21 is Ug shs 14.607bn, of which Ug shs 7.71bn (52.7%) was warranted and Ug shs 5.69bn (73.7%) spent by 31st December 2020. This was fair release and good expenditure performance.

Performance

The Ministry completed the construction of Nshaara Holding Ground, which is waiting for commissioning. Construction of Ruhengyere Holding Ground was at 5% by 31st December 2020. These efforts were intended to support the private sectors that are engaged in the sale of high-end beef products. Funds were transferred to NEC to support infrastructure works NEC and NALI farms. Construction of quarantine station and holding ground at Ruhengyere field station was ongoing though work was stalled due to land wrangles where part of the land were occupied by an individual (5 square miles) and the barracks (10 square miles) hence could not finish the activities and project is no longer accessible.

Ongoing procurement of fertilisers for pasture seed and animals to stock the livestock centres and supervision of project activities on the two animal holding grounds were utilized. The Ministry conducted routine enforcement along the major stock routes where 330 cattle traders licenses were issued to regulate the animal movement which is crucial in controlling the prevalence of animal pests and diseases; Undertook sample collection, testing and vaccination of the infected animals around the project area; The project finalized the Memorandum of Understanding (MOU) to undertake goat breeding in order to upscale the achievements in Sembabule to the greater Luwero and Nakasongola sub region.

The overall semi-annual performance of the Meat Export Support Services sub-programme in FY2020/21 was fair (59.8%).



Table 3.10: Performance of Meat Export Support Services by 31st December 2020

Output	Annual Planned Quantity or Target	Annual Output Budget (Ug shs)	Cumulative receipts (Ug shs)	Cum. Achieved Quantity	Physical performance Score (%)	Remark
Policies, Laws, guidelines, Plans and Strategies (number of activities)	12.00	913,628,000	411,773,548	3.00	3.47	The activity of Promoting adoption of value addition and build capacity in agro based Industrialisation with focus on establishing Public-Private Partnerships was postponed to the third quarter.
Improved market access for livestock and livestock products (number of activities)	16.00	3,000,000,000	850,000,000	4.00	18.12	Finalised the Memorandum of Understanding (MOU) to undertake goat breeding in order to upscale the achievements in Sembabule to the greater Luwero and Nakasongola sub regions.
Promotion of priority animal products and productivity (number of cattle's purchased)	500.00	3,683,750,000	2,650,000,000	-	0	The process of procuring cattle for Nshaara and Lusenke holding ground through National Enterprise Cooperation was on going by the end of the quarter
Livestock infrastructure constructed (number of quarantine centres)	2.00	6,010,400,000	3,500,000,000	1	35.33	Completed the construction of Nshaara public animal handling ground to support the private sector that is engaged in sale of high end products.
Vector and disease control measures (number of activities)	2.00	500,000,000	300,000,000	1	2.85	Undertook sample collection, testing and vaccination of the infected animals around the project area.
Acquisition of other capital assets (number)	4.00	500,000,000	-	-	0	Funds were not released
Programme performance					59.8%	

Source: Field findings



Challenges

- i) Delayed disbursements where approvals take 1-2 months thus leading to delayed implementation of activities.
- ii) Land wrangles mostly in Ruhengyere Field Station where five square miles were occupied by a senior citizen and 10 square miles by barracks; the animal holding ground and quarantine station were no longer accessible.

Recommendations

- i) MAAIF should ensure timely fund disbursement to the implementing entities to fast track programme implementation
- ii) The MAAIF, NAGRC&DB, Ministry of Lands, Housing and Urban Development and Uganda Land Commission should ensure that all NAGRC&DB public lands are demarcated and titled and the land wrangles resolved.

Fisheries Resources Programme

3.5.7 Promoting Commercial Aquaculture in Uganda Project

Background

The Promoting Environmentally Sustainable Commercial Aquaculture sub-programme is a four year (June 2018 to July 2022) intervention by GoU aimed at improving food and nutrition security, household incomes and livelihoods through promotion of an environmentally sustainable, inclusive and climate resilient socio-economic development, focusing on a market oriented aquaculture value chain targeting national and regional markets, small holders and smallholder associations.

The sub-programme four-year budget is Ug shs 36.478 billion to be financed through a grant under the European Development Fund (EDF) from the European Union (EU) amounting to 35.343bn (96.89%) and GoU counterpart funding totaling Ug shs 1.135bn (3.11%). A key conditionality of the grant is that all funds must be 100% committed by January 2020; any funds not committed by that due date will not be spent. However, the Multi-Annual Operational Programme Estimate (MAOPE) has recently been extended until 13th January 2024.

The MAAIF targets achievement of three key outputs over the project period: a sound policy and regulatory environment that promotes gender equality, women empowerment and mitigation of climate change established and enforced; two aquaculture parks established – land based park in Apac district and a water based park in Kalangala district; and post-harvest losses reduced and market opportunities for aquaculture fish and fish products created.

The approved budget in FY 2020/21 for PESCA was Ug shs 5.98bn (Ug shs 5.39bn donor and Ug shs 0.87bn GoU). By 31st December 2020, Ug shs 0.599bn (68.85%) of the GoU contribution was released and fully spent. The donor released Ug shs 4.77bn of which Ug shs 0.89bn (18.69%) was spent.



Performance

The Ministry initiated procurement of 1,500,000 fingerlings and 750,000kgs of fish feed. So far, 1,109,000 fingerlings and 32,562kgs of fish feed have been received and ready for distribution to fish farmers to promote aquaculture. The procurement of aquaculture inputs to support riparian communities on out grower schemes in Apac and Mwena-Kalangala was on going by the end of second quarter and training for fish farmers on cage management aspects, record keeping, marketing and how to prevent disease outbreak in Mwena Kalangala was undertaken. Land was acquired 526 acres (200 hectares) for pond aquaculture in Apac District and 22 acres of hatchery land in Kalangala. Contractors have just given in final design before construction.

The project under took quarterly technical backstopping and monitoring of setting up a ‘One –stop-shop’ advisory service for potential investors. A technical team carried out an assessment of the existing facilities in the country to establish what the project can provide to enhance marketing of the farmed fish in Busia, Gulu and western Uganda.

The socio-economic Baseline studies for both Apac and Kalangala have been completed guiding the project on how to address the aspects affecting the two communities. Implementation plan completed and published for fisheries and Aquaculture policy and gazetted. The semi-annual performance of the sub-programme during FY 2020/21 was fair at 57.16 % (table 3.11).

Table 3.11: Performance of the Promoting Commercial Aquaculture in Uganda Project by 31st December 2020

Output	Annual Planned Quantity or Target	Annual Output Budget (Ug shs)	Cumulative receipts (Ug shs)	Cum. Achieved Quantity	Physical performance Score (%)
Preparatory activities in readiness for enactment of two aquaculture related legislations (consultative meetings)	3.00	111,226,893	4,871,001	0.5	1.86
Review or development of Rules & Regulations (consultation meetings)	4.00	76,019,736	-	-	0.00
Development and updating of aquaculture Guidelines (validation meetings)	9.00	373,781,451	124,651,030	2.00	4.16
Conduct Environmental Social Impact Assessment of aquaculture activities to establish the current situation in order to inform policy dialogue with other sectors (consultative meetings)	5.00	174,645,011	40,172,000	1.00	2.54
Institutional capacity building including on-the-job training for women and men to respond to the skills (Internship placements)	348.00	1,442,126,017	21,500,000	-	0.00



Output	Annual Planned Quantity or Target	Annual Output Budget (Ug shs)	Cumulative receipts (Ug shs)	Cum. Achieved Quantity	Physical performance Score (%)
Support pertinent applied research to solve sector-related issues in collaboration with academia and the private sector (missions)	3.00	457,615,266	265,564,936	1.00	4.39
Cage-based Aqua Park; preparation of detailed engineering designs and supervision of construction (consultative meetings)	4.00	1,467,128,272	262,596,400	0.50	17.13
Attracting and negotiating with partners/ mobilising the investors and associated activities to support construction in Apac district (consultative meetings)	3.00	385,840,311	187,007,290	1.00	4.44
Steering committee meetings and PMM (meetings)	2.00	449,904,920	29,029,200	0.50	7.52
PMU and staff missions (missions)	3.00	131,815,080	4,738,464	0.30	2.20
Office operating expenses and fuel lubricants (quarterly)	4.00	912,518,423	215,459,536	0.80	12.92
Programme performance					57.16%

Source: Field findings

The activities implemented by 31st December 2020 included: studies and surveys to establish availability of land and suitability of sites; sensitization of stakeholders in Kalangala and Apac districts; initiation of contracting processes for various service providers and hiring of consultants for the regulatory impact assessment.

Implementation challenges

- i) Slow project execution and resource absorption due to delayed approvals of consultancy, tender dossiers and related evaluation reports.
- ii) Work contracts were also affected conditionality from donor for pre-financing guarantees. This was due to covid restriction hence went beyond the mandatory 180 days because of lockdown; circumstance of failure to pay which took them too much to access the funds
- iii) Limited funds for implementation of the two public investments for instance 60 hectare of land in Apac is all can be done with available funds and 850 cages can only pond 78 cages.



Recommendation

- i) The MAAIF and MFPED should increase on the funding to implement the plan

Overall MAAIF Vote Performance

The overall performance of MAAIF was fair (53.88%) as presented in table 3.12. The budget cuts, COVID-19 restrictions, adverse climatic conditions and late releases and disbursements of funds to implementing agencies and departments slowed programme implementation.

Table 3.12: Overall MAAIF Performance by 31st December, 2020

Vote	Performance (%)
Agricultural Infrastructure Mechanisation and Water for Production Programme	54.30
Crop Resources Programme	62.95
Directorate of Agricultural Extension and Management Programme	35.20
Directorate of Animal Resources Programme	59.80
Fisheries Resources Programme	57.16
Average MAAIF performance	53.88%

Source: Field findings

3.6 National Agricultural Advisory Services/Operation Wealth Creation

3.6.1 Introduction

The Government is implementing the National Agricultural Advisory Services/Operation Wealth Creation (NAADS/OWC) intervention to increase food and nutrition security and incomes of farming households. The programme aims to contribute to the transformation of the agricultural sector through the provision of agricultural inputs, agribusiness and value chain development for improved household food security and incomes. The NAADS/OWC has one programme - Agricultural Advisory Services with two sub-programmes: 01 Headquarters, and 0903 Government Purchases. Both sub programmes were monitored.

Agricultural Advisory Services Programme

The approved budget for the Agricultural Advisory Services Programme for FY 2020/21 was Ug shs 172.808bn, of which Ug shs 116.590bn (67.47%) was released and Ug shs 38.167bn (32.74%) spent by 31st December 2020. This was a very good release and poor expenditure performance.

Performance

3.6.2 Government Purchases

Background

The Government Purchases sub-programme mainly focuses on provision of strategic inputs and commodities to farmers. The approved budget for the Government Purchases sub-programme for FY 2020/21 was Ug shs 148.499bn, of which Ug shs 94.184bn (63.42%) was warranted and Ug shs 28.262bn (30.11%) spent by 31st December 2020. This was very good release and poor absorption performance of the development budget.



Performance

The National Agricultural Advisory Services/Operation Wealth Creation (NAADS/OWC) completed procurement and distribution of assorted of inputs to farmers as shown in table 3.13.

There was evidence of farmers and special interest groups having received the inputs. For example:

- **Buvuma District:** Received 10 heifers distributed to the National Resistance Movement (NRM) Women's League. Other inputs such as fruit seedlings were distributed to farmers but not through the district offices. This approach of distributing inputs through private entities or politicians made it difficult to quality assurance the inputs before delivering and providing accountability for them.
- **Hoima District:** A total of 5,488kgs of bean seed, 13,028kgs of maize seed and 25 heifers were received and distributed to farmers by 31st December 2020. The key challenge was the poor coordination and information flow from NAADS Secretariat to the district with regard to the time when the inputs would be delivered. Inputs were delivered abruptly by the transporters and could not be subjected to the germination tests as the Production sector officers were away on other field duties.
- **Iganga District:** The district 100 heads of cattle that were distributed to Friends of Media in the districts of Jinja, Buyende, Tororo, Bugwere, Mayuge, Bugiri, Buikwe and Luuka. An additional 10 cows were given to the Women League Executives and Women Councils. Inputs for food security against COVID-19 distributed to farmers included: 5,000kgs of bean seed; 5,000 kgs maize seed; 10kgs of onion seed; 600 packets of vegetable seed; 1 million coffee seedlings
- **Kalangala District:** Received and distributed to farmers 11,000 banana tissue culture suckers, 8,589 kgs of maize seed and 4,000 kgs of bean seeds and banana suckers that were fairly of good quality. The average germination rate for crop commodities was 80%. Ten heads of cattle were received and distributed to the Women Council and League. It was not possible to reach remote islands due to inadequate staff and funds for water transport.
- **Kasese District:** Inputs received included those for addressing food insecurity caused by COVID-19 pandemic including 26,844 kgs of maize seed; 7.5 million coffee seedlings; 6,400 kgs of bean seeds; 1,600 bags of cassava cuttings, 400 packets of vegetable seed and 20,000 apple seedlings. The prolonged dry spells, high prevalence of pests and diseases such as the fall army worm, declining soil fertility and floods led to low germination of seedlings and survival of the crops. Some inputs were not distributed to farmers due to absence of staff due to the COVID-19 pandemic, leading to input wastage.



Good quality heifer received by Ms. Nakagolo Jesca in Kyebando Village Mayuge Town Council, Mayuge District

- **Mayuge District:** Received 6,718kgs of bean seed, 1,828kgs of maize seed and 10 incalf heifers that were distributed to 10 members of the Women League and Women Council.



- **Mbale District:** Received and distributed inputs including those to alleviate household food insecurity during COVID-19 pandemic including 14,466kgs of maize seed; 5,000kgs of bean seeds; 278 bags of irish potatoes; 3,760 Sackets of onion seed; 200 Sackets of Sukuma wiki seed; 180 Sackets of egg plant seeds; and 200 Sackets of Amaranths seed. Some maize seed delivered by NASECO (1996) Ltd failed the germination test as the seeds were expired. Other inputs were delivered later when rains had ceased and were still in storage at household level awaiting the next rains.
- **Soroti District:** Received and distributed to farmers 13,850kgs maize seeds and 5,291kgs of bean seeds. The seeds were of good quality and delivered in time for the rain season.

Challenges

- i) The quantities of inputs provided where grossly inadequate to address the food security problem.
- ii) Some of the inputs procured and distributed were not requested for by the beneficiaries leading to wastage as farmers refused to allocate land and labour to these enterprises;
- iii) Limited provision of inputs to farmers located in islands due to the high cost reaching them.
- iv) Failure to conduct farmer mobilisation and training due to COVID-19 restrictions.

Recommendations

- i) The MAAIF and NAADS Secretariat should consider gradually phasing provision of inadequate quantities of inputs to farmers and instead channel the funds to value addition equipment, storage facilities and addressing climatic conditions;
- ii) The NAADS Secretariat should factor in additional transportation costs in the contracts of service providers to enable them deliver inputs in remote hard to reach areas such as Islands.

3.6.3 Headquarters

The Headquarters sub-programme focuses on the administration and management of the Government Purchases sub-programme. The approved budget for FY 2020/21 was Ug shs 24.308bn, of which Ug shs 22.405bn (92.17%) was warranted and Ug shs 9.805bn (43.76%) was spent by 31st December 2020. This was very good release and poor expenditure performance of the recurrent budget.

Performance

Coordination and supervision of the procurement processes for agricultural inputs and value addition equipment by the NAADS Secretariat continued during the reporting period. Support was extended for sugarcane production in Northern Uganda, particularly in Lamwo district. The support included provision of 14.982 tonnes of seed cane, 9,760 bags of fertiliser, establishment of 123.8kms of farm roads and implementation of chemical weeding.

Most strategic inputs, vegetative planting materials and value addition equipment were still under procurement by 31st December 2020. The call of orders was issued for 2.25 million hand hoes. The procurement process for the supply and installation of fruit processing equipment in Namunkekera, Kapeeka Industrial Park was ongoing; architectural and engineering designs and tender documents for establishing the Kapeeka and Kasese Rural Farm Service Centres were developed; and the establishment of multi-fruit processing equipment in Nwoya District and a mango processing factory in Yumbe District were at bid evaluation stage.



Overall performance of the Agricultural Advisory Services Programme

The overall performance of the Agricultural Advisory Services Programme was poor rated at 26.54%. Poor performance was largely attributable to slow or halted procurement of capital equipment and implementation processes that led to low funds absorption. The COVID-19 pandemic and associated restrictions affected importation of capital equipment, construction works and procurement of some planting and stocking materials.

Table 3.13: Performance of the Agricultural Advisory Programme by 31st December 2020

Output	Annual Budget (Ug Shs)	Cum.Receipt (Ug Shs)	Annual Planned Quantity or Target	Cum. Achieved Quantity	Physical performance Score (%)
Designs for Fruit processing factory in Masaka completed (number)	200,000,000	134,940,000	1	0	0.00
Mango processing plant Yumbe completed	3,000,000,000	2,024,100,000	1	0	0.00
Civil works of Fruit facility in Nwoya completed (number of activities)	5,000,000,000	3,373,500,000	1	0	0.00
Large scale grain milling equipment (number)	3,000,000,000	2,024,100,000	1	0	0.00
Rural Farm Service Centres established (number)	3,200,000,000	2,159,040,000	2	0	0.00
Maize (kgs)	9,500,000,000	6,409,650,000	2000000	1257650	10.19
Cassava (bags)	6,620,000,000	4,466,514,000	165500	0	0.00
Sorghum (kgs)	900,000,000	607,230,000	300000	77000	0.39
Tea seedlings (number)	13,000,000,000	8,771,100,000	32500000	4780450	3.26
Citrus seedlings (number)	6,556,000,000	4,423,333,200	2622400	0	0.00
Mango seedlings (number)	6,699,998,700	4,520,489,123	2481481	0	0.00
Heifers/dairy cattle (number)	4,581,500,000	3,091,138,050	1666	2520	5.27
Improved pigs (number)	2,900,000,000	1,956,630,000	7250	1302	0.89
pineapple suckers (number)	2,000,000,100	1,349,400,067	6666667	0	0.00
Apple seedlings (number)	999,999,000	674,699,325	111111	102123	1.15
Irish potatoes (bags)	1,154,400,000	778,873,680	4810	3354	1.33
Bean seed (tonnes)	3,512,010,000	2,369,553,147	585335	534628	4.04
Programme performance					26.54%

Source: Field findings



Challenges

- i) Low funds utilisation and poor programme implementation due to: a) drought that led to rescheduling of payments and differing distribution of inputs to quarter 3 and 4; b) disruption of importation of agro-machinery and value addition equipment, training and farmer mobilisation due to COVID 19 restrictions; and c) lengthy complex procurement processes involving international competitive bidding.

Recommendation

- i) The NAADS Secretariat should fast track procurements and programme implementation processes.

3.7 National Animal Genetic Resources Centre and Data Bank

3.7.1 Introduction

The National Animal Genetic Resources Centre and Data Bank (NAGRC&DB) was established under the Animal Breeding Act, 2001 to conserve and ensure continuous supply of animal genetic resources and breeding materials in the country. The NAGRC&DB implements its mandate through 11 farms/ranches and satellite centres. The institution is implementing Project 1325: Strategic Intervention for Animal Genetic Improvement Project (SAGIP) during 2016 to 2020 with the purpose of increasing livestock productivity, through sustainable utilisation of animal genetic resources and strengthening institutional capacity.

The revised budget for NAGRC&DB for FY 2020/21 was Ug shs 63.774bn, of which Ug shs 22.209bn (34.82%) was released and Ug shs 6.208bn (28%) spent by 31st December 2020. This was very poor release and resource absorption. The NAGRC&DB has one programme Breeding and Genetic Development Programme and 10 sub-programmes implemented through ranches and stock farms. The programme and selected ranches and stock farms that were monitored are presented in Annex 1.

Breeding and Genetic Development

Performance

By September 2020, 11,147 doses of bull semen and 13,833 litres of liquid nitrogen were produced and dissemination was ongoing. Schronization and artificial insemination for dairy cattle breeding was done at the National Agricultural Genetic Resource Centre and Data Bank (NAGRC&DB) farms. Multiplication and conservation of cattle, pigs, poultry and goat breeds continued at these farms. Bush clearing and pasture management was undertaken on some farms.

3.7.2 Animal Breeding Centre/Bull STUD

This is located in Lunnyo village Entebbe Division A, Entebbe Municipality in Wakiso District. By September 2020, 11,147 doses of bull semen and 13,833 liters of liquid nitrogen were produced and dissemination was ongoing. Schronization and artificial insemination for dairy cattle breeding was done at the National Agricultural Genetic Resource Centre and Data Bank (NAGRC&DB) farms. There was a challenge in semen production, the centre didn't produce any semen because the materials were not supplied by suppliers in France due to COVID-19 and order was placed in June 2020 though production was stopped in October 2020.



The bull stud imported two liquid nitrogen in April 2020 however; they could not be installed until October 2020. (1 installed in Mbarara October and second one in Njeru December 2020). The Entebbe liquid nitrogen plant became faulty in February 2020.

Fewer people (18 people) from KOICA were trained in December in observance of COVID-19 SOPs. A total of 25 animals (new bulls) were procured from South Africa however procurement was stalled and there were issues with suppliers. Performance of the animal breeding centre and community breeding programme was low due low uptake of AI services; slow procurements and delivery of equipment and materials by suppliers.



NAGRC&DB Headquarter structures under construction in Entebbe Municipal Council Wakiso District

3.7.3 Aswa Ranch

Located in Burlobo Village, Burlobo Parish, Angagura Sub-county in Pader District, Aswa Ranch is mandated to breed and conserve Ankole, Boran and Zebu cattle. By 31st December 2020, 380 cattle from Aswa Ranch Farm were disposed off to different companies and traders of which 110 were given to NEC and 124 by UMPCU so far 146 bulls remained. Planting of fodder crops around the apiary site to improve on feed availability to bee was done; deworming and vaccination of all animals at the farm were finished. The key challenge was the weather whereby December was too hot for the animals to move long distances looking for green grasses and water for drinking and most of weak animals got stacked in the mud.

A decrease (349) in the animal herd was realised from 2,494 cattle on 1st July 2020 to 2,145 cattle on 31st December 2020. The growth of animal herds and the breeding programme was negatively affected by lack of fencing wire to work on kraal and most of the night paddocks are down, long distances to water sources, too much charcoal burning in the ranch.

Key challenges: i) lack of clear physical land boundaries which has increased the ranch vulnerability to encroachment by cultivators ii) Inadequate accommodation for employee and poor housing condition. iii) Lack of computer and internet access for quick and efficient communication. Shortage of salt at the farm leading to miscarriage of animals due to struggling for the little one put in the salt trough.

3.7.4 Livestock Experimental Station

The station is located in Old Entebbe Village, Katabi Sub-county Entebbe Division in Wakiso District. Initially the station used to be a quarantine centre for imported animals and those exported later it was handled over to MAAIF and brought in to NAGRC.

The station was working on different enterprises such as poultry, piggery, diary, goat section and regional gin bank. The cattle herd decreased slightly by (5) from 82 animals on 1st July 2020 to 77 animals by 31st December 2020, and 15 were disposed off to generate revenue. The goats herd remained the same 24 within the same period.



The pigs herd reduced by (29) from 53 to 24 as disposal was done for the rest and the growth of chicks decreased by (556) from 4,211 to 3,655 by 31st December 2020. Key challenge at that period was land grabbing and encroachment initially the station had 105 acres in 2016 however 47 acre of land was given to Civil aviation and there are still 3groups claiming for it (NEC 25 acres, Ntebbe Zamugula Buganda group 10-15 acres, Nile group 5 acres) thus the station was left with no animal structures, administration and staff quarters due to land issues.



Egg sorting trays in an old hatchery unit Katabi Sub-county, Wakiso District

3.7.5 Njeru Stock Farm

The farm is located in Kiryowa Village, Bukaya Parish, Njeru Town Council in Buikwe District and mainly focuses on dairy development.

There was low growth in animal herds at Njeru stock farm: dairy cattle reduced by (59) animals from 259 animals on 1st July 2020 to 200 animals on 31stDecember 2019; the goat herd declined by a net of 29 animals from 97 to 68; and the pig herd reduced by a net 12 animals from 57 to 45 animals over the same period.

Liquid nitrogen plant was installed and its working, animals were disposed successfully and NEC bought 47 animals but they were still on farm castrates and steers, continuous bush clearing done, planting of maize, weeding and spraying was on going.



Nitrogen plant installed and in operation at Kiryowa Village, Njeru Municipal Council

Performance of the breeding programme was constrained by land encroachers, where they have reached to the extent of planting mark stones up the middle of the farm, next to the dairy house, at the water tanks and fencing almost three quarters of the farmland. Lack of fencing materials (barbed wire and poles) leads to fallen fences in all corners. This has led to trespassers of both animals and encroachers easy; Infertility by most boars due to age has caused low production in pigs (among seven boars only one is active).

3.7.6 Nshaara Ranch

Located in Karengo Village, Nyakashashara Sub-county, Kiruhura District, it shares boundaries with Lake Mburo National Park. A total of 230 pure Ankole Long Horned cattle were selected for the conservation programme at the ranch and this was achieved in corroboration with the Ankole cattle keepers; 900 acres of land were improved with Chloris Gayana by broadcasting or over sowing; 52 students were exposed to practical aspects of animal husbandry practices;5 new kraal constructed.



The cattle herd increased modestly (197) from 3,012 animals on 1st July 2020 to 3,209 animals by 31st December 2020. The goats herd reduced by 63 animals from 591 animals to 528 animals within the same period. The high goat mortality was due to inadequate housing leading to overcrowding and high prevalence of diseases; and poor quality pastures that had poisonous plants.

3.7.7 Rubona Stock Farm

Rubona Stock Farm is located in Buhuna Village, Buhuna Parish, Rubona Town Council Bunyangabo District. The farm completed construction of the administration block and managers house, 250 acres of bush cleared, weeding of maize for silage phase 2 was done.



NAGRC&DB new administration block at Rubona Stock Farm in Buhuna Village, Rubona Town Council, Bunyangabo District

The farm growth decreased by 11 in cattle herds from 207 animals on 1st July 2020 to 196 animals on 31st December 2020 and negative growth (69) for the goat herds from 212 to 143 animals during the same period. Milk production reduced from 11,512 litres on 1st July 2020 to 7,457 litres on 31st December 2020. The factors that contributed to the small growth were low production due to lack of enough grazing pasture; lack of water troughs for animals to drink the water; and liver fluke infestation in both cattle and goats and East coast fever.

3.7.8 Ruhengere Field Station

The station is located in Kayonza Village, Kayonza Parish, Kikatsi Sub-county in Kiruhura District. The cattle herd decreased by (109) from 3,884 animals on 1st July 2020 to 3,775 animals by 31st December 2020. There were significant cattle births (449 animals) during the period; however, there were also large animal sales (453) during the period. During the same period, the goat herd reduced negatively from 1786 to 1773 animals, a net decrease of 13 animals. A high level of goat mortality (135) was noted due to inadequate housing, poor quality pastures and high prevalence of diseases.



Cattle in poor health experiencing starvation at NAGRC & DB Ruhengere Field Station in Kiruhura District

By 31st December 2020, it was observed that the station was in poor health condition as they were kept on pastures that were of poor quality having bushes. For example, the holding grounds that were constructed were no longer accessible as they were fenced off by an encroacher; the station had 3,770 animals on land that could only carry about 2,000 animals.

Plans were underway to decongest some farms through transfers to other farms with larger land; but the general challenge was that all farms lacked adequate water and pastures. Key challenges included: high mortality of goats and cattle on some farms due to old age associated with delayed disposal; starvation of animals due to inadequate water and pastures as significant proportions of the farms were encroached upon by public officials; overgrazing due to over stocking.



Overall performance of the Breeding and Genetic Development Programme

The overall semi-annual performance of the Breeding and Genetic Development Programme in FY 2020/21 was fair rated at 60.3% (table 3.14). Some key outputs especially in the area of infrastructure development were achieved, while procurement for equipment and other consumables was ongoing. Planned activities at the ranches were partially implemented due to inadequate disbursements from NAGRC&DB Headquarters. Low performance of the breeding programme was noted as many animals were of old and low quality and animal disposal was not done in the absence of a functional board. The mortality of goats and cattle on some farms due to old age associated with delayed disposal and high prevalence of diseases. Land encroachment on most stations by public figures and Government officials was constraining the breeding programme.

Table 3.14: Performance of the Breeding and Genetic Development Programme by 31st December 2020

Output	Annual Output Budget (Ug shs)	Cumulative receipts per output	Annual Planned Quantity or Target	Cum. Achieved Quantity	Physical performance Score (%)
Human Resource management & development (no.of staff trained)	390,000,000	188,475,000	10.00	0.50	0.06
Financial management, management accounting & Financial accounting (number of assets)	1,050,000,000	447,150,000	40,000.00	0.50	0.00
Monitoring and evaluation(quarterly)	750,000,000	474,950,000	4.00	2.00	0.93
Promotion of dairy cattle breeding(number)	484,000,000	284,000,000	7.00	2.00	0.37
Dairy breeding, promotion of Dairy breeds associations and Dairy breeder societies(number)	930,000,000	613,450,000	4.00	1.00	0.55
Multiplication of pure Dairy animals & appropriate crosses(number)	1,050,000,000	333,250,000	2,500.00	209.00	0.43
Industrial production of milk and allied product(metric tons)	430,000,000	193,950,000	50.00	54,010.00	0.67
Conservation and utilization of indigenous Animal Genetic resources. (no. of breeds)	360,000,000	239,400,000	5.00	3.00	0.51
Promotion of beef cattle breeding(number)	300,000,000	149,500,000	3,500.00	1,104.00	0.30
Beef breeding, promotion of beef breeds associations and beef breeder societies. (number)	1,500,000,000	767,500,000	6.00	2.00	1.53
Multiplication of pure beef breeds & appropriate crosses(number)	260,000,000	142,900,000	3,500.00	1,104.00	0.23
Promotion of the identified, established and economically viable poultry genetic resources(number)	4,430,000,000	3,532,960,000	1,000,000.00	260,959.00	2.27
Training of poultry breeders & farmers(number)	280,800,000	79,700,000	20.00	4.00	0.31



Output	Annual Output Budget (Ug shs)	Cumulative receipts per output	Annual Planned Quantity or Target	Cum. Achieved Quantity	Physical performance Score (%)
Breeding & multiplication of meat goats(number)	415,000,000	67,019,000	2,300.00	571.00	0.00
Breeding & multiplication of pigs(number)	650,000,000	466,616,000	2,500.00	387.00	0.22
Evaluation and multiplication of improved pasture and fodder germ-plasm (number of acres)	1,130,000,000	736,450,000	1,250.00	375.00	0.82
Industrial production of animal feeds(number)	570,000,000	347,050,000	1,250.00	375.00	0.44
Development and maintenance of a National Livestock Registry and National Data Bank(number)	500,000,000	382,500,000	1.00	0.50	0.51
Develop National herd/milk/beef recording schemes Performance & progeny-testing schemes(number)	1,306,000,000	572,932,500	1.00	0.50	2.05
Promotion of the identified, established and economically viable fish breeds. (number)	300,000,000	199,500,000	2.00	1.00	0.35
Training, refreshing and facilitating AI and MOE Technicians (number)	520,000,000	346,800,000	240.00	36.00	0.18
Providing breeding-training to farmers and other stakeholders along the ARTs value chain(number)	1,146,000,000	329,500,000	80,000.00	3,269.00	0.26
Production, procurement and sale of semen, eggs, ova, embryos and their associated equipment(doses of semen)	1,347,500,000	820,337,500	72,000.00	18,389.00	0.89
Production, procurement and sale of liquid nitrogen and associated equipment.(liter)	1,000,000,000	512,300,000	80,000.00	25,887.00	0.99
Government Buildings and Administrative(number)	28,982,616,570	4,668,549,234	28.00	10.00	45.45
Acquisition of Other Capital Assets(number)	13,692,300,002	5,312,256,552	40,000.00	0.20	0.00
Programme performance					60.3%

Source: Field findings

Overall NAGRC&DB Performance

The performance of NAGRC&DB by 31st December 2020 was fair (60.3%). Breeding and genetic development continued at the National NAGRC&DB stations involving conservation and multiplication of beef and dairy cattle, goats, pigs and poultry breeds. However, the growth in animal herds was modest and sometimes low as a result of inadequate breeding infrastructure, land encroachment, sales and give away of animals for various functions, climate related problems such as high prevalence of diseases, and low disbursement of funds from NAGRC&DB Headquarters.



3.7.9 Challenges

- i) Land encroachment in Aswa Ranch, Nshaara Ranch, Njeru Stock Farm, Livestock Experimental Station and Ruhengyere Field Station by Government/public officials due to lack of demarcation of boundaries, absence of land titles, and parceling out of land to individuals, private investors and other entities by Government.
- ii) Low absorption of released funds due to delayed initiation and concluding of procurement processes for infrastructure works; inadequate disbursements to the ranches and stations.
- iii) Slow growth in the animal herds due to several factors: a) increased animal death due to weather related catastrophes b) shortage of pastures due to land grabbing and encroachment c) loss of animals due to lack of a governing body to authorize disposal of old, blind, lame or non-productive animals.

3.7.10 Recommendations

- i) The Uganda Land Commission, MAAIF and agencies should expedite undertaking surveying of all NAGRC&DB lands, demarcate boundaries and ensure that they are all titled. Land cases of encroachment should be followed up in courts of law, concluded and the illegal encroachers evicted.
- ii) The NAGRC&DB should decentralise funding to provide higher disbursements to the stations and ranches for emergencies and operational expenses.
- iii) The NAGRC&DB should reduce/eliminate giving away animals for other reasons other than for breeding purposes.

3.8 National Agricultural Research Organisation

3.8.1 Introduction

The National Agricultural Research Organisation (NARO) was established by Government in 1995 to generate and disseminate appropriate, safe and cost effective agricultural technologies for increased production and productivity of strategic commodities. NARO is constituted by one programme 51 Agricultural Research with 21 sub-programmes namely: 01 Headquarters; 0382 Support for NARO; 07 National Crops Resources Research Institute (NaCRRI); 08 National Fisheries Resources Research Institute (NaFIRRI); 09 National Forestry Resources Research Institute (NaFORRI); 10 National Livestock Resources Research Institute; and 11 National Semi Arid Resources Research Institute (NaSARRI).

Other sub-programmes are: 12 National Laboratories Research; 13 Abi Zonal Agricultural Research and Development Institutes (ZARDI); 14 Bulindi ZARDI; 15 Kachwekano ZARDI; 16 Mukono ZARDI; 17 Ngetta ZARDI; 18 Nabuin ZARDI; 19 Mbarara ZARDI; 20 Buginyanya ZARDI; 21 Rwebitaba ZARDI; 26 NARO Internal Audit; 27 National Coffee Research Institute (NaCORI); and 1560 Relocation and Operationalisation of the NALIRRI.

The approved budget for NARO for 2020/21 was Ug shs 110.030bn, of which Ug shs 57.609bn (52.35%) was released and Ug shs 54.114bn (94%) spent by 31st December 2020. This was a very good release and expenditure performance. The NARO institutions monitored are listed in Annex 1.



Agricultural Research Programme

By 31st December 2020, various agricultural technologies were either under experimentation or generated for strategic commodities including bananas, maize, beans, coffee, tea, cotton, livestock, catfish, potato, cassava, rice, apiary, pastures, fertiliser and pesticide use, agro-forestry, animal feeds, aquaculture, horticulture and vaccines. The research and extension interface was promoted, although some planned activities in field could not be implemented due to lack of funds and COVID-19 restrictions. Agricultural research capacity was continuously strengthened through continuous training and equipping of scientists.

Key challenges included: partial or non-implementation of planned research activities due to budget cuts, high domestic arrears, land encroachment, staff absence due to COVID-19 restrictions and lack of transport; intermittent power that affected laboratory experiments; some long term experiments were lost during absence of staff and others were severely affected by the climate vagaries; inadequate budget allocation to priority outputs of NARO due to lack of a dedicated code for research in the chart of accounts. The detailed performance of selected NARO sub-programmes is presented below.

3.8.2 Headquarters and Support for NARO

The Headquarters and Support for NARO sub-programmes were directly implemented by the NARO Secretariat (NAROSEC) in the various institutes and ZARDIs. Assorted equipment, furniture and agricultural supplies were at varying stages of procurement, some having been delivered by 31st December 2020. These included specialized embryology equipment, fish feed equipment, fish capsulation machine and vaccine equipment.

Outstanding payments for contracts that were carried forward from FY2019/20 were honoured in the current year. Examples of civil works under construction or near completion were: staff houses, hay barn, silage bank, milking parlour and road network in NaLIRRI; Incubation centre and seed cleaning facility in MUZARDI; multi-purpose office blocks at Maruzi and NAROSEC; and multipurpose laboratory at NaCORI. Insufficiency of funds constrained procurements and the delivery of planned works and consultancy services.

3.8.3 Mukono ZARDI

Mukono ZARDI operates in two stations – one which serves as the Headquarters is located in Ntawo Village, Ntawo Parish, Mukono Municipality in Mukono District; and the second is located in Kamenyamiggo, Lwengo District. Applied research was undergoing at the ZARDI on the following commodities – coffee, cocoa, vegetables, cassava, maize, beans, hass ovacado pineapples, fruit trees, fish farming, aquaculture, piggery, cattle and poultry. Works had commenced on an incubation centre, hatchery unit and a storage facility. Key challenges were the budget suppression that led to scaling back of planning outputs; staff inadequacy especially the technicians; high cost of security services in the two stations and inadequate infrastructure at Kamenyamiggo station.

3.8.4 National Coffee Research Institute

The National Coffee Research Institute (NaCORI) is located in Kizuza Village, Ssaayi Parish, Ntenjeru Sub-county in Mukono District. Construction of a multi-purpose laboratory for genetics and breeding, agronomy and biochemistry, pathology and entomology was 80% complete. The Directors House was renovated. The UCDA support enabled acquisition of various equipment including a Fumehood; construction of a screen house that was 60% complete; seed production and establishment of a coffee mother garden. Production of coffee based cosmetics had commenced in the cosmetics laboratory.

The USAID Feed the Future enabled acquisition of a machine for quality monitoring of cocoa and coffee, a coffee cakes baking machine and repair of screen houses. Research continued on on coffee wilt disease resistant and drought tolerant varieties in the tissue culture laboratory, onstation and off station. Performance was lower due to: understaffing whereby the Institute was operating at 30% capacity; slow shipment of research materials during the COVID-19 pandemic period; and old dilapidated vehicles. Many staff had retired but had not been replaced.



Coffee cakes baking machine (left) and multi-purpose laboratory under construction at NACORI in Mukono District

3.8.5 National Crop Resources Research Institute

Located in Namulonge Village, Kikoko Parish, Busukuma Sub-county in Wakiso District, the National Crops Resources Research Institute (NaCRRI) continued to produce breeder and early generation seed for cereals, root crops, legumes and horticultural crops; 300kgs of bean and 1,200kg of maize foundation seed was produced. Five acres of sweet potatoes and 15 acres of cassava were established at Kigumba for basic seed multiplication. Trials were set up to evaluate cassava varieties that were resistant to mosaic disease and sweet potato lines resistant to weavils. Experiments to evaluate hybrid rice varieties for climate resistance and cooking taste were established.



Hybrid rice trials (left) and nurseries of horticulture at NACCRI in Namulonge Village

3.8.6 National Forestry Resources Research Institute

The National Forestry Resources Research Institute (NaFORRI) is located in Namirembe Village, Kiyunga Parish, Kyampisa Sub-county in Mukono District. Research was ongoing on agro-forestry, best practices of forest conservation and management, value addition to forest products and improvement of tree species. Hass ovacado seedlings were maintained in the nursery and construction of a screen house for this crop



had commenced. Breeding work was undertaken on shea butter trees, jackfruit trees and calliandra. A total of 16 acres of multi-locational shea butter tree trails were established and maintained.

Many planned activities were not implemented due to inadequate releases, staffing gaps especially relating to the COVID-19 pandemic, lack of field vehicles and ICT infrastructure and lack of critical forestry research infrastructure and equipment such as the tissue culture laboratory. Erratic weather affected tree trial establishment, Low salaries led to poor staff retention.

3.8.7 National Laboratories Research

The National Laboratories Research (NARL) is located in Kawanda Village, Nansana Municipality in Wakiso District. Partnerships to commercialise the NARO PAHSafe Fish Smoking Kiln were at different stages of development. Four units of the fish smoking kilns were fabricated and given to 4 private processors.

Work was ongoing for developing cereal, legume and vegetable based processing products for the agro-industry. Designs were in advanced stages of development for manual and motorized coffee pulpers, farm power technologies and shredding machines for producing brickets.



Oven for agro-processing trials at NARL in Kawanda Village

Tissue culture systems for high value aromatic and medicinal plants such as ginger and lemon and food processing technologies were also under were under trial. The NARL work was interrupted by the COVID-19 pandemic as staff continued to work from home and performance was lower due to general understaffing and inadequate funds for research.

3.8.8 National Livestock Resources Research Institute

The National Livestock Resources Research Institute (NALIRRI) is located in Namulonge Village, Sukuma Sub-county Nansana Municipality, Wakiso District. Focus was on obtaining ethical approvals to conduct multi-locational anti-tick vaccine research for the four vaccines that were developed in 2019/10. The NARO contracted Nairobi Medical Stores to supply specialized equipment to enable the production of 2,000 doses of NARO-RA vaccine trial batch. Research on the Foot and Mouth Disease vaccine and African Swine Fever vaccine continued.

Construction of a modern vaccine research and production facility was ongoing. Technologies to control aflatoxins while the crop is still in the field were developed. Construction of the facility to produce these technologies, the Alfasafe plant was 25% complete. About 500 metres of the planned 3km road network were completed at the Institute. Research on market oriented beef production and nutrition of beef cattle was being implemented in nine districts (Nakasongola, Nakaseke, Kiboga, Kyankwanzi, Mbarara, Kiruhura, Isingiro, Sembabule and Masindi). Key infrastructure was under construction at Maruzi Stock Farm in Apac District where 30 heads of cattle were being maintained.

Key challenges were inadequate funding, infrastructure and staffing for livestock research and breeding at NALIRRI and Maruzi Stock Farm.

3.8.9 National Semi-Arid Resources Research Institute

The National Semi-Arid Resources Research Institute (NASRRI) is located in Iglo Village, Iglo Parish, Serere Town Council, Serere District. In addition to the GoU funds (Ug shs 0.551bn) that were spent by 31st December 2020, the Institute had donor funds of Ug shs 2.919bn that was half spent by half year. Part of the donor funds (Ug shs 1.160bn) were a balance brought forward from FY 2019/20.

Research was being undertaken to generate high yielding cotton varieties with strong long threads. Twenty cotton strain lines were evaluated in Serere, Lira, Arua and Kasese trail sites. Other research was on sorghum, millet, sunflower, cowpea and ground nut varieties. 18 seed granaries (stores) were constructed in farmers' communities and 600 project beneficiaries were identified for receiving improved seed of all the crops under research.



Groundnut, sorghum and millet breeding in the newly constructed screen house at NASRRI in Serere District

A screen house was built and was in use for developing varieties for the latter crops. Key challenges were: understaffing especially with the COVID-19 restrictions leading low research output; loss of experiments due to harsh weather conditions; intermittent power affecting laboratory activities; inadequate vehicles and staff accommodation.

3.8.10 Rwebitaba ZARDI



Fish breeding ponds at Rwebitaba ZARDI

Rwebitaba ZARDI is located in Kyembogo Village, Buruhya Parish, Rwengaju Sub-county Kabarole District. The ZARDI focuses on tea research in Uganda undertaken at two stations: Rwebitaba Tea Research Centre in Fort Portal, Kyenjojo District and the ZARDI in Kabarole District.

The ZARDI was implementing the Agro-Industrialisation for Local Economic Development (AGRI-LED) pilot zonal project in Rwenzori region. Technology promotion and outreach under the AGRI-LED intervention focused on seven priority enterprises namely: dairy, banana, coffee, aquaculture, potatoes, beans and maize. Adaptive trials and demonstration sites were set up for these strategic commodities throughout the target region.



The ZARDI was involved in seed production for beans and potatoes to provide quality seed for demonstration farms. A total of 3,666kgs of bean foundation seed for four bean varieties were disseminated to 20 farmer groups in Kamwenge, Kyenjojo, Kyegegwa, Kabarole, Bunyangabu and Kasese districts. Seven acres of foundation seed for two bean varieties (NAROBAN 1 and NABE 16) were established. A total of 3,000 tissue culture potato plantlets for NAROPOT 1 were acquired from KaZARDI and planted in the screen house.

Tea research continued and 169 on-station tea clones were characterised. A total of 6,050 avocado seedlings were raised to serve as root stocks for grafted hass avocado, of which 1,300 were grafted. Breeding of fish fingerlings was being undertaken using non-tax revenue (NTR). Key challenges were: late releases of funds that incapacitated implementation; non-prioritization of some subsectors like agro-forestry in resource allocation by NAROSEC; vandalism of fish in the aquaculture experiments; land encroachment by Mountains of the Moon University, Industail Park which negatively impacts on research experiments; and understaffing.

Overall performance of the Agricultural Research Programme

The overall semi-annual performance of the Agricultural Research Programme in FY 2020/21 was good rated at 81.99% (table 3.15). NARO had very a good release and expenditure performance. Most planned activities were implemented. Good performance is also attributable to significant off budget funding and other partners that complement the Government efforts, especially through the Competitive Grant System (CGS).

Table 3.15: Performance of the Agricultural Research Programme by 31st December 2020

Output	Annual Budget (Ug Shs)	Cum receipt (Ug Shs)	Annual Planned Qty/ Target	Cum. Achieved Quantity	Physical performance Score (%)
Improved cotton varieties developed (number of interventions)	35,500,000	13,750,000	3	2.5	0.00
Elite lines of sesame and sunflower varieties identified (number of interventions)	36,400,000	-	3	0	0.00
High yielding drought tolerant millet, cowpea, mungbean and sorghum varieties developed and processing technologies identified (number of interventions)	574,850,000	106,728,000	14	8	2.48
Seed delivery system for dryland cereals and legumes strengthened (number of interventions)	357,435,000	145,427,000	9	7	1.54
Research on bio fertilizers, agro-chemicals in crops undertaken (number of interventions)	20,302,000	20,302,000	6	5	0.07
Propagation materials produced for horticultural crops - Hass Avacado, Oranges, passion fruits, papaya, guava (number of seedlings)	23,359,000	11,679,500	5000	7550	0.10



Output	Annual Budget (Ug Shs)	Cum receipt (Ug Shs)	Annual Planned Qty/ Target	Cum. Achieved Quantity	Physical performance Score (%)
Tea product diversification, nursery establishment and propagation of seedlings undertaken (number of interventions)	-	-	0	0	0.00
Equipment, furniture, agricultural supplies, computers and accessories procured and installed (number of lots)	9,809,442,000	2,997,768,460	18	6	42.39
Consultancy services for feasibility studies, infrastructure designs and short term studies undertaken (number of lots)	1,615,250,000	300,000,000	4	1	6.98
Outstanding payments for contracts for works for 2019/20 paid (number of contracts)	725,000,000	717,000,000	5	4	2.53
Construction works undertaken at NARO Institutes and ZARDIs (number of lots)	3,076,000,000	3,478,394,849	24	13	6.37
Forage and silage produced (tonnes)	240,000	75,000	4150	1000	0.00
Fertilized eggs of elite indigenous chicken produced (number)	48,000,000	36,000,000	20000	0	0.00
Livestock vaccines developed (number of interventions)	5,000,000,000	3,708,237,000	6	4	19.42
Forest research trials managed (hectares)	9,200,000	1,352,000	10	2.6	0.04
Shea butter tree breeding trials established (acres)	12,400,000	9,693,000	16	16	0.05
Pulp and paper production developed (number of interventions)	23,140,147,000	12,361,309,309	0	0	0.00
Safe fish smoking kilns commercialised (number of interventions)	500,000,000	342,000,000	7	4	1.81
Prototypes for extracting/pulping products for the agro-food industry designed and developed (number of interventions)	250,000,000	49,518,000	6	3	0.00
Coffee Wilt Disease Resistant and drought tolerant varieties developed (number of interventions)	463,150,000	231,575,000	15	8	0.00
Hybrid rice varieties developed and evaluated for climate resilience, disease tolerance and cookability (number of interventions)	383,619,000	191,809,500	9	6	0.00
Programme performance					81.99%

Source: Field findings



Challenges

- i) High levels of domestic arrears amounting to Ug shs 1.70bn due to failure to pay fully contributions to national and international organisations and for utilities.
- ii) Slower implementation of some sub-programmes due to; a) staffing gaps associated with working from home to observe COVID-19 SOPs; low staff retention due to low pay scales; difficulty in attracting high trained staff to remote regions b) lack of field vehicles c) inadequate research and breeding infrastructure d) delayed disbursements
- iii) Land wrangles on some of NARO stations affecting research work.
- iv) Recommendations
- v) The MFPEd should ensure that Accounting Officers comply with the PFM laws and regulations, minimising arrears.
- vi) The MoPS, NARO and MFPEd should review the staffing status in the institution and prioritise resources to ensure that all key departments are sufficiently manned and equipped.
- vii) The Uganda Land Commission, MAAIF and agencies should expedite undertaking surveying of all NARO lands, demarcate boundaries and ensure that they are all titled. All land wrangles should be resolved through arbitration with the affected parties.

3.9 Sectoral Conditional Grant to Local Governments

3.9.1 Introduction

The Local Governments (LGs) have the responsibility for all decentralized services in the production including crop, animal and fisheries husbandry extension services; entomological services; and vermin control. The services are budgeted under one program the District Production Services. The districts receive the transfers as a Sector Conditional Grant (wage) and Sectoral Conditional Grant (Non-wage) that addresses two sub-programmes - Agricultural Extension and Production. The extension grant is intended to mobilise and organize farmers so that they benefit from advisory services.

The overall purpose of the transfers to LGs is to support services that increase the level of production and productivity of priority agricultural commodities. The grant is spent as follows: 25% as a development grant and 75% for recurrent operational expenses at the district and sub-county level. The approved budget for the Local Government (LG) Production Sector in FY 2020/21 was Ug shs 126.865bn, of which 66.846bn (52.7%) was released and fully spent by 31st December 2020. The districts that were monitored to assess program performance are presented in Annex 1.

District Production Services

3.9.2 Performance

The overall semi-annual performance of the District Production Services in FY 2020/21 was good at (74.99%) as shown in table 3.15. By 31st December 2020, key activities that were implemented in the LGs included provision of agricultural advisory extension services to farmers; establishment of agricultural infrastructure; pest and disease surveillance and control; establishment of demonstrations; promotion of mechanisation at parish level; and coordination and supervision of agricultural extension activities.

**Table 3.15: Performance of the District Production Services by 31st December 2020**

Output	Annual Budget (Ug Shs)	Cum. Receipt (Ug Shs)	Annual Planned Quantity or Target	Cum. Achieved Quantity	Physical Performance Score (%)
Fish equipment procured, distributed and maintained (No)	57,000,000	37,500,000	68,000	15,000	0.34
Fish fry center/Fish Ponds Operationalised/maintained (No. of centers)	8,000,000	8,000,000	4.00	4	0.14
Fish /Bees/ Dairy Demonstrations constructed/maintained (No.)	92,855,772	1,494,542	294	6	0.14
Farmers/farmer groups trained (No)	484,826,618	184,296,741	20,033	2,065	2.33
Irrigation schemes established/maintained (No)	238,577,915	161,577,194	8	2.00	1.56
Demonstration gardens set up or maintained (No.)	213,050,364	31,880,000	94	26.00	3.77
Animal and crop disease surveillance done (No. of visits)	41,710,362	4,942,000	100	20.00	0.74
Plant clinics established and maintained (No.)	8,500,000	500,000	64	2.00	0.08
Tsetse fly traps procured and distributed (No.)	46,358,626	13,318,297	2,203	1,041.00	0.82
Bee hives procured and installed.(No.)	11,473,033	11,473,033	20	0.00	0.00
Sensitisation/Backstopping/inspection and Monitoring undertaken (quarterly)	558,155,494	248,089,484	102	29.00	6.32
Farm Agricultural inputs distributed/animals (No.)	54,564,000	33,233,000	1,113	1,006.00	0.97
Slaughter slab /Market stalls constructed and rehabilitated (No.)	19,950,000	15,000,000	51	0.00	0.00
Animal Vaccination (No. of animals vaccinated)	7,965,850	14,027,319	34,000	8,221.00	0.02
Vaccination doses procured (Number of doses)	11,740,000	9,550,000	9,540	7,000.00	0.19
Data collection done (No. of visits)	241,950,492	95,739,199	146	45.00	3.34
Equipment for field work procured (No.)	36,446,500	36,358,000	37	4.00	0.07
Vehicle/Motor cycle procured and maintained (No.)	328,666,235	103,788,982	107	39.00	5.82
Office equipment procured and maintained (No.of equipment sets)	202,352,160	67,274,671	89	14.00	1.69
Programme Coordination (Quartely meetings)	2,978,479,728	946,291,005	80	22.50	46.66
Programme performance					74.99%

Source: Field findings



Implementation of planned activities was delayed due to the COVID-19 pandemic and the need to observe the SOPs. Farmer training was at a low level given the restrictions on gatherings. There was laxity in farmer mobilisation by the Community Based Facilitators who had not been facilitated since they were recruited. High farmer-to-extension staff ratio was continuously overwhelming, which limited access to advisory services by most farming households. Key challenges were: high cost of inputs especially for fisheries sector; poor accountability and reporting on grant use by LGs; high operational costs in hard to reach areas, especially in subcounties that were in islands. Climate change, delayed release of funds, budget cuts and lack of field operational vehicles were the other challenges to programme implementation.



Laboratory constructed including internal walls, ceiling, and flooring, internal and external doors at Jinja District Production Office



Demonstration garden in Kalangala District, Bweza Village

3.9.3 Challenges

- i) Non-compliance with Public Financial Management (PFM) laws and regulations – delayed approval and disbursement of funds by Accounting Officers and commitment of GoU above the funds available in a financial year.
- ii) Inadequate extension services due to under staffing and limited transport means for the available staff.
- iii) Loss of crop and animal production due to extreme weather conditions including drought, floods, hailstorms, exacerbated by the rising incidence of pests and diseases
- iv) Limited allocations to development grants towards capital investment in production and marketing.

3.9.4 Recommendations

- i) The MFPED and MoLG should ensure compliance of LGs to PFM laws and regulations.
- ii) The MFPED, MoPS, MAAIF and LGs should prioritise recruitment and equipping more extension workers.
- iii) The MAAIF and LGs should promote irrigation and mechanisation at farm level and promote dissemination of climate smart technologies.
- iv) The MAAIF and MFPED should increase allocation to development grants towards capital investment in production and marketing.



3.10 Uganda Coffee Development Authority

3.10.1 Introduction

The Government established the Uganda Coffee Development Authority (UCDA) in 1991 to promote and oversee the development of the coffee industry through support to research, propagation of clean planting materials, extension, quality assurance, value addition and timely provision of market information to stakeholders. The GoU's focus is on increasing production and productivity through coffee replanting in Coffee Wilt Disease (CWD) affected areas, replacement of the aged unproductive trees, promoting coffee consumption and supporting introduction of commercial coffee production in new areas especially Northern Uganda. The Government plans to accelerate national coffee production from 4.2 million bags of 60kgs each to 20 million bags by 2025.

The approved budget for UCDA for FY 2020/21 is Ug shs 105.884bn excluding arrears, of which Ug shs 63.113bn (59.6%) was released and Ug shs 41.782bn (66.2%) spent by 31st December 2020. This was good release and fair expenditure performance.

The UCDA has one programme Coffee Development and three sub-programmes: 01 Development Services; 02 Quality and Regulatory Services; 03 Corporate Services 04 Strategy and Business Development. Two sub-programmes were monitored as presented below. The districts that were visited are presented in Annex 1.

Coffee Development Programme

3.10.2 Development Services

By 31st December 2020, the Uganda Coffee Development Authority had distributed 147,613 CWD-r plantlets for establishment of mother gardens (45,500 CWDR plantlets to Central; 1,400 plantlets to Eastern; 42,000 plantlets to Northern; 10,800 plantlets to Rwenzori; 13,410 plantlets to South Western; 29,603 plantlets to Western and 4,900 plantlets to Greater Masaka).

The UCDA also distributed 1,022,110 CWD-r plantlets for the establishment of demo gardens; a total of 31,672,000 million coffee seedlings were allocated to farmers in various parts of the country. A total of 6,293,480 coffee seedlings were specifically distributed to West Nile Arabica growing districts of Zombo, Nebbi and Arua; 3,672,503 coffee seedlings were distributed in Mid North. Farmers were encouraged to do tree stumping and desuckering; Coffee seedling arrears amounting to Ug shs 87.006 bn were paid to nursery operators. The main challenge was the high outstanding arrears for coffee seedlings delivered by private nurseries in previous financial years.

In West Nile and Mid Northern, there were no major outbreak of pests and diseases in the region. However, isolated cases of Coffee leaf rust, Coffee berry Disease and termites were experienced by farmers in Kasese district where many floats of pest damaged berries because few farmers were buying and spraying their coffee fields.



Ms. Ninsiima's coffee seedlings planted from 70kgs of elite seed received from UCDA in December FY 2020/21

In Mbarara District, the nursery operators were happy with the good viability of coffee seeds supplied by UCDA. For example, Ms. Ninsiima of Ruharo Village, Kamukuzi Sub-county got Arabica coffee seedlings through Ankole Diocese in December and started planting in January 2021. There was no problem with the quality.



Installed fume hood purchased by UCDA with weak legs and a structure is being put up to be as base at NaCORRI

The UCDA tenovated one screen house with permanent bins and cages, and commenced construction of a new screen house about 60% complete and established 4-acre mother garden to boost production of CWD-r Robusta plantlets and procurement of plant growth chamber was on going at National Coffee Resources Research Institute. 17,590 tissue culture plantlets were generated, of which 8,600 plantlets are ready for planting, while 8,990 are under hardening.

3.10.3 Quality and Regulatory Services

In line with the MoH SoPs to mitigate the spread of COVID-19, a total of 757 extension missions were conducted to 2,713 individual farmers (2,091M, 622F) focused on Good Agricultural Practices (GAPs) and good post-harvest handling practices in all regions. However, most trainings could not be achieved as planned since field based activities and farmers training were suspended due to COVID 19 restrictions. The main challenge was the inadequate staff to assure quality in all coffee growing regions.

Overall performance of the Coffee Development Programme

The overall semi-annual performance of the Coffee Development Programme in FY 2020/21 was fair rated at 65.47 % (table 3.17).



Table 3.17: Performance of the Uganda Coffee Development Authority by 31st December 2020

Output	Annual Planned Quantity or Target	Annual Output Budget (Ug shs)	Cumulative receipts per output	Cum. Achieved Quantity	Physical performance Score (%)
Promoted coffee production in Northern Uganda (number of banana suckers)	60,000	240,000,000	-	-	0.00
Produced coffee planting material / Robusta seed procured (quantity)	2,129,457	764,609,950	458,765,970	9,965,983.0	2.38
Produced coffee planting material / Arabica seed procured (kg)	383,500	153,075,000	60,750,000	7,172,950.0	0.48
Conducted stakeholders M&E and coffee advocacy (number)	62	573,572,200	228,587,920	19.0	1.37
Output: 01 Coffee knowledge disseminated (number of promotional events)	95	483,772,000	275,863,200	46.0	1.28
Produced practical and visual aids and guide materials on coffee stumping(number)	6,000	95,000,000	57,000,000	6,000.0	0.30
Farmer organisations trained in coffee rehabilitation and fertilizer application(number)	180	756,500,000	453,900,000	56.0	1.22
Procurement and distribution of bags of Fertilizers to farmers (kg)	118,500	8,807,660,000	5,284,596,000	146,000.0	27.44
Stumped old, less productive coffee trees and fertilizer application in 300 acres in each of the 30 Robusta districts and 15 Arabica districts(number)	7,964,286	5,017,500,180	3,010,500,108	1,421,571.0	4.65
Carried out farmer registration in 2 regions (Elgon and Eastern) covering 24 coffee growing districts (number of districts)	24	3,240,000,000	-	-	0.00
Procured and distributed assorted chemicals and equipment (number of items)	18	2,915,694,000	1,749,416,400	4.0	3.36
Procured and distributed cover crops seed for soil management improvement on drought prone coffee farms(kg)	20	10,000,000	6,000,000	100.0	0.03
Established Farm Demonstration Gardens (number)	30	66,000,000	39,600,000	30.0	0.21



Output	Annual Planned Quantity or Target	Annual Output Budget (Ug shs)	Cumulative receipts per output	Cum. Achieved Quantity	Physical performance Score (%)
promoted research technologies to NaCORI(number)	4	2,287,935,000	1,372,761,000	2.0	5.94
Procured and distributed CWDR plantlets (Number of CWDR mother plantlets)	380,000	570,000,000	342,000,000	147,613.0	1.15
Printed and issued out seed, seedlings and KR Clonal Plantlets distribution booklets(number of booklet printed)	1,000	140,637,500	84,382,500	259.0	0.19
Coordinated Coffee Extension Liaison (Number of Trainings)	12	675,778,000	405,466,800	6.0	1.75
Coordinated Program /Activities ofnOffice Rental and Utilities payments.(Number of offices facilitated)	360	610,768,096	366,460,858	350.0	1.90
Carried out multi-stakeholder task forces(number)	30	536,650,000	321,990,000	10.0	0.93
Carried out monthly field monitoring and supervisory missions (number)	96	2,975,416,000	1,785,249,600	48.0	7.72
Conducted laboratory proficiency tests in 2 international & 2 local labs for inter lab comparisons of test results. (number of tests)	4	581,692,162	349,015,297	2.0	1.51
Analyzed coffee samples for OTA and other contaminants (number)	333	83,000,000	49,800,000	192.0	0.25
Evaluated the quality of coffee in the field in10 regions and samples for proficiency testing (number)	800	129,704,290	77,822,574	480.0	0.40
Undertook quarterly process monitoring of UCDA activities in the field and spot checks of the auto data submission(quarterly)	4	387,906,700	232,744,020	2.0	1.01
Programme performance					65.47%

Source: Field findings



3.10.3 Challenges

- i) Outstanding arrears in UCDA amounting to Ug shs 39.627bn, despite GoU having disbursed Ug shs 80.373bn at the start of FY 2020/21 for clearing arrears to nursery operators who had supplied coffee seedlings to farmers.
- ii) Delayed and partial implementation of planned field activities due to slow disbursement of operational funds and inputs from the UCDA Headquarters to the regional offices and inadequate staff in the regional offices.
- iii) Reduced sector, public sensitisation and training activities due to restrictions on gatherings as a measure to control spread of COVID-19.
- iv) Breakdown of the IT system in December 2020 which affected the database hence delay in cess computation and monthly report

3.10.4 Recommendations

- i) The UCDA should decentralise some of the finances and administrative roles to the regional offices to enable faster implementation of planned activities.
- ii) The UCDA should increase trainings, promotions and campaigns and adopt training of small groups for demonstration and practical activities.
- iii) The MFPED and UCDA should prioritise payment of outstanding arrears in the coffee sector.



CHAPTER 4: CONCLUSION AND RECOMMENDATIONS

4.1 Conclusion

The overall performance of the Agricultural Sector was fair rated at 63.45%. Performance was generally not good in various programmes as most planned outputs were scaled back due to budget cuts and suppression and inability to do field based activities in observance of the COVID-19 Standard Operating Procedures (SOPs). Most capital investments were not done and were at various stages of procurement. Understaffing and interdiction of some accounting officers in the sector affected programme implementation. Performance was highest for NARO followed by Local Governments and DDA; and lowest for NAADS/OWC and MAAIF.

By 31st December 2020, a number of key outputs were delivered in the sector. Cumulative disbursements to farmers and firms under the ACF totaled to Ug shs 581.29bn given to 863 eligible projects countrywide. Delayed processing of loans by an average of 100 days was a major challenge to access to the ACF.

Agricultural production increased as a result of distribution of inputs distributed to farmers. For example, the following inputs were distributed: 2,334 metric tonnes (Mt) of de-linted and graded cotton planting seed; 41 Mt of Foundation seed and 1st Generation seed; 1,435,509 one-acre units of pesticides; 4,740 spray pumps; 40.4 Mt of assorted fertilizers and 6,616 litres of herbicides were distributed to cotton farmers; 466.6 Mt of fertilisers, 220 spray pumps, 60,000 one acre units of pesticides and 486 litres of herbicides were distributed to seed growers.

E-Voucher subsidies for inputs were provided to a total of 84,715 beneficiaries in the 12 clusters bringing the cumulative total number of beneficiaries to 156,765. The level of registration and enrolment of farmers on the programme remained low due to a combination of factors and more particular: network system failures and inconsistencies; stockouts and limited capacity of the agro-input dealers and lack of input distribution networks and channels. Coffee seedlings, livestock breeding materials and other strategic inputs and equipment were provided by the various sector programmes.

The following key challenges were noted:

- Persistent encroachment on land belonging to agricultural sector institutions, especially NAGRC&DB and NARO especially by public officials; the institutions were involved in court cases that had not been concluded for many years
- Significant non-implementation of planned activities due to budget suppression, COVID-19 restrictions, delayed releases and disbursements from MAAIF and sector agencies, morbidity and absence of/inadequate staff.
- Poor health, starvation and increasing death of animals on NAGRC&DB stations due to inadequate pastures and water, land encroachment and loss of established infrastructure to the encroachers, inadequate herdsman, delayed disposal of old, lame and blind animals.



4.2 Recommendations

- i) The Uganda Land Commission, Judiciary and Sector institutions should ensure speedy conclusion of land encroachment cases in court and evict the encroachers. All land belonging to Government sector institutions should be surveyed and boundaries marked.
- ii) The NAGRC&DB should prioritise provision of water and focus on pasture improvement; and also consider selling productive animals to farmers for genetic improvement.



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ANNEX 1

Annex 1: Agriculture Sector Programmes Monitored for FY 2020/21

Vote	Programme	Sampled sub-programmes	Sampled districts/ Institutions
008 MFPED	Agricultural Credit Facility	Agricultural credit facility projects	Bank of Uganda, Wakiso, Kikuube, Mukono, Kayunga, Luuka
152 NAADS	Agricultural Advisory Services	01 Headquarters	NAADS Secretariat, Nwoya, Kalangala, Soroti, Serere, Mbale, Jinja, Mayuge, Kasese, Iganga, Hoima
		0903 Government purchases	
142 NARO	Agricultural Research	01 Headquarters	NARO Secretariat, Serere, Kabarole, Mukono, Kawanda, Namulonge, Kayunga
		0382 Support for NARO	
		11 National Semi and Resources Research Institute (NASRRI)	
		16 Mukono ZARDI	
		12 National Research Laboratories	
		10 National Livestock Resources Laboratory (NALIRRI)	
		09 National Forestry Resources Research Institute (NAFFORI)	
		07 National Crop Resources Research Institute (NACRRI)	
		21 Rwebitaba ZARDI	
		27 National Coffee Research Institute (NACORI)	
Vote 155 CDO	Cotton Development	01 Headquarters	CDO Headquarters, West Acholi and East Madi, South Eastern/Busoga, Central, Mid-Western and Pader district
		1219 Cotton Production Improvement	
Vote 121 DDA	Dairy Development and Regulation	01 Headquarters	DDA Headquarters, Northern Region, Northern Eastern Region, Entebbe Dairy Training School, South Western region
		1268 Dairy Market Access and Value Addition	



Vote 125 NAGRC	Breeding and Genetic Development	01 Headquarters	Aswa Ranch – Pader; Livestock Experimental Station (LES) – Wakiso;– Njeru Stock Farm – Buikwe; Nshaara– Kiruhura; Ruhengere Field station –Kiruhura; Rubona Field Station –Bunyangabo; Animal Breeding Centre –Entebbe Wakiso.
		02 Dairy Cattle	
		03 Beef cattle	
		04 Poultry	
		05 Small ruminants and non-ruminants	
		06 Pasture and feeds	
		08 National Animal Data Bank	
		09 Fish breeding and production	
		10 ARTs	
		1325 NAGRC Strategic Intervention for Animal Genetics Improvement Project	
Vote 010 MAAIF	01 Crop Resources programme	1508 National Oil Palm project	MAAIF, Kalangala, Buvuma
		1263 Agriculture Cluster Development Project	MAAIF, Nwoya, Serere, Soroti, Mbale, Iganga, Jinja, Hoima, Kasese
	03 Directorate of Agricultural Extension and Skills Management	23 Department of Agricultural Extension and Skills Management	MAAIF
	02 Directorate of Animal Resources	1358 Meat Export Support Services	MAAIF, Ruhengere ,Nshaara
	04 Fisheries Resources Programme	1494 Promoting Environmentally Sustainable Commercial Aquaculture in Uganda Project	MAAIF
500 LGs	District Production Services	0100 Production Department – Agricultural Extension Grant	Nwoya, Kalangala, Mbale, Jinja, Mayuge, , Kasese, , Iganga, Soroti, Serere, Hoima
		04 Production and Marketing	

Source: Author's Compilation



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