THE REPUBLIC OF UGANDA

Semi-Annual Budget Monitoring Report

Agriculture Sector

Financial Year 2014/15

April 2015

Ministry of Finance, Planning and Economic Development
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ABBREVIATIONS AND ACRONYMS

AC	Area Coordinators
AFO	Assistant Field Officer
ASYCUDA	Automated System for Customs Data
ATAAS	Agricultural Technology and Agribusiness Advisory Services
BBW	Banana Bacterial Wilt
BMAU	Budget Monitoring and Accountability Unit
Bn	Billion
BoQ	Bills of Quantities
CAO	Chief Administrative Officer
CABI	Centre for Agriculture and Bioscience
CDO	Cotton Development Organization
COE	Centres of Excellence (COEs)
CRCoE	Cassava Regional Centre of Excellence
DANIDA	Danish International Development Agency
DDA	Dairy Development Authority
DFA	District farmers Association
DLG	District Local Government
DSC	District Service Commission
DSIP	Development Strategy and Investment Plan
EAAPP	Eastern Africa Agricultural Productivity Project
EU	European Union
FAO	Food and Agricultural Organisation
FGD	Focus Group Discussion
FLP	Farmer Learning Platform
FFB	Fresh Fruit Bunches
FY	Financial Year
GoU	Government of Uganda
Ha	Hectare
IDA	International Development Agency
IFAD	International Fund for Agricultural Development
IFMS	Integrated Financial Management System
IIRR	International Institute of Rural Reconstruction
KaZARDI	Kachwekano Zonal Agricultural Research and Development Institute
Kg	Kilogram
KOPGT	Kalangala Oil palm Growers Trust
LG	Local Government
LLG	Lower Local Government
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MbaZARDI	Mbarara Zonal Agricultural Research and Development Institute
MDAs	Ministries, Departments and Agencies
MFPED	Ministry of Finance, Planning and Economic Development
MoPS	Ministry of Public Service
MoU	Memorandum of Understanding

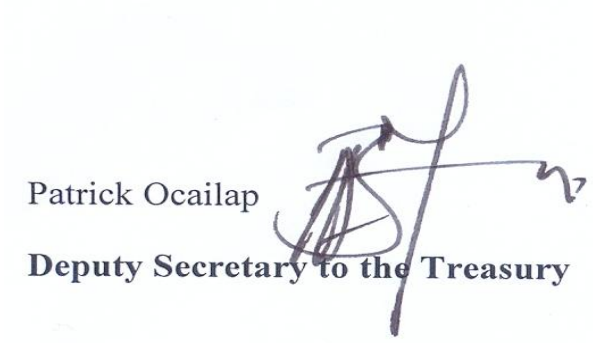
Msc	Masters of Science
MT	Metric Tonne
MuZARDI	Mukono Agricultural Research and Development Institute
NAADS	National Agricultural Advisory Services
NAEZ	Northern Agro-Ecological Zone
NARO	National Agricultural Research Organization
NACCRI	National Crop Resources Research Institute
NAGRC&DB	National Animal genetic Resource Centre and Data Bank
NARS	National Agricultural Research System
NSCS	National Seed Certification Services
NDP	National Development Plan
NGOs	Non-Governmental Organizations
NPA	National Planning Authority
NTR	Non Tax Revenue
OPUL	Oil palm Uganda Limited
Phd	Doctorate of Philosophy
PIP	Public Investment Plan
PMA	Plan for Modernization of Agriculture
PMG	Production and Marketing Grant
PPDA	Public Procurement and Disposal of Public Assets
PPP	Public Private Partnership
PVP	Plant Variety Protection Act
Q	Quarter
SLM	Sustainable Land Management
UBOS	Uganda Bureau of Statistics
UCDA	Uganda Coffee Development Authority
UCDO	Uganda Cotton Development Organisation
UDB	Uganda Development Bank
UGCEA	Uganda Ginners and Cotton Export Association
Ug shs	Uganda Shillings
UHT	Ultra Heat Treated
UNBS	Uganda National Bureau of Standards
UNHS	Uganda National Household Survey
US$	United States Dollars
VODP	Vegetable oil Development project
WB	World Bank
ZARDI	Zonal Agricultural Research and Development Institute

FOREWORD

The government has increasingly channeled resources into implementation of public programmes aimed at enhanced service delivery. Effective implementation of these programmes is critical and this calls for monitoring and evaluation.

The Budget Monitoring and Accountability Unit in the Ministry of Finance, Planning and Economic Development makes semi-annual performance assessments on the progress of implementation for selected programmes. This report reviews the half year performance in the priority areas of: Agriculture, Education, Energy, Health, ICT, Industralization, Public Sector Management, Roads, and Water and Environment for FY 2014/15.

The findings therein should inform implementation decisions in the last half of the year. I urge all institutions to follow up on the related implementation issues that have been identified. The implementation challenges and recommendations made will guide the relevant sectors to ensure enhanced effectiveness of programme implementation.



Patrick Ocailap

Deputy Secretary to the Treasury

EXECUTIVE SUMMARY

BACKGROUND

This report reviews selected key vote functions and programmes within the sectore, based on approved plans and significance of budget allocations to the votes. The focus is on nine sectors, including: agriculture, education, energy, health, industrialization, ICT, public sector management, roads; and water and environment. Attention is on large expenditure programmes with preference given to development expenditures, except in the cases of education, health, ICT, public sector management and roads where some recurrent costs are tracked.

Projects selected for monitoring were based on regional sampling, level of capital investment, planned quarterly output, and value of releases by the second quarter of FY 2014/15. The methodology adopted for monitoring included literature review of quarterly progress and performance reports; interviews with the respective responsible officers or representatives of programmes; and observations at site.

FINDINGS

Introduction

Nine projects/programmes were monitored namely: i) Crop Disease and Pest Control ii) Crop Protection Department iii) Farm Development iv) Increasing Mukene for Human Consumption v) Vegetable Oil Development Project – Phase 2 vi) Dairy Development Authority vii) Eastern Africa Agricultural Productivity Project/NARO viii) Agricultural Technology and Agribusiness Advisory Services/NARO ix) Uganda Cotton Development Organisation.

Overall sector performance

The semi-annual release (47.93%) and expenditure (78.24%) performance for the agriculture sector was excellent. The overall physical performance of the sector is rated as fair (54%). Some projects/programmes performed well while others underperformed. For example:

- Good performance was noted for the Vegetable Oil Development Project (VODP2), Dairy Development Authority (DDA), Uganda Cotton Development Organisation (UCDO) and National Agricultural Research Organisation (NARO). For example, the DDA achieved 75% of the planned outputs under the recurrent budget and 78% of the rehabilitation works under the development budget.
- Similarly, the level of achievement of targets for provision of cotton extension services, production inputs and cotton planting seeds by the UCDO was at 75% by 31st December 2014. And the VODP2 delivered 71% of the planned targets relating to maintenance of oil palm plantations in Kalangala district, valuation of land opening up of road boundaries in Buvuma district, and provision of inputs and extension services for the oil seeds in the four regional hubs.
- Poor performance was noted in the Crop Pest and Disease Control Project and Farm Development Department and Increasing Mukene for Home Consumption Project. Whereas 50% of the released funds were spent in the Crop Pest and Disease Control

Project, only three (38%) of the eight planned outputs were achieved. Similarly, the Farm Development Department had expended 100% all the released funds and achieved only two (22%) of the nine key planned outputs. Three (50%) out of the planned six key outputs were achieved for the Increasing Mukene project.

Implementation challenges

- Understaffing in the local government production departments.
- Delayed initiation of procurements, starting as late as October 2014.
- Low capacity of contractors leading to late completion of and payment for works.
- Overlap/duplication of outputs between the recurrent and development budgets; recurrent budgets were spent without achieving the outputs.
- Delayed disbursement of funds from MAAIF and semi-autonomous institutions to spending entities at local government or regional level.
- Lack of linkages/interface between MAAIF and district Production Departments' workplans and budgets. The districts had not planned or budgeted for implementing and following up MAAIF programmes.
- Insufficient prioritization and allocation of resources to lower level spending entities by MAAIF agencies. For example, the DDA regional offices achieved half of the planned outputs due to lack of operational funds. Similarly, some of the NARO Institutes underperformed in delivery of outputs due to lack of capital development funds.
- Wastage of inputs and equipment at farm level due to poor supervision and follow-up by MAAIF and the DLGs.

Recommendations

- The MAAIF, MoPS and DLGs should fast track implementation of the single spine extension system in LGs and recruit the requisite staff in the Production Departments at district and sub-county level.
- The MAAIF should initiate procurements early at the beginning of the financial year.
- The MAAIF should ensure that contractors hired to undertake civil works have adequate competence (staffing, equipment, sourcing materials).
- The MAAIF and MoPS should review and streamline the roles of the Crop Protection Department and Crop Regulation and certification Department to avoid duplication of outputs and misallocations.
- The MAAIF should review the outputs and targets under the recurrent and development budget of the Farm Development Department to remove the overlaps.
- The MAAIF should ensure adequate and timely disbursement of funds from all its agencies to the regional based institutions.
- The MAAIF should strengthen the interface of work-plans and budgets for the ministry and the District Production Departments.

- The NARO should allocate capital development funds to regional institutions.
- The MAAIF and districts should strengthen the regulation, supervision and monitoring of projects at the DLG level.

CHAPTER 1: BACKGROUND

The mission of the Ministry of Finance, Planning and Economic Development (MFPED) is *"To formulate sound economic policies, maximize revenue mobilization, 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 mobilization efforts and stepped up funds disbursement to Ministries, Departments, Agencies and Local Governments in the past years to improve service delivery.

Although significant improvements have been registered in citizens' access to basic services, their quantity and quality remains unsatisfactory, particularly in the sectors of health, education, water and sanitation, agriculture 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.

Although there are several institutions in the accountability sector mandated to monitor and audit public resources, they have not provided comprehensive information for removing key implementation bottlenecks to enhance transparency and accountability and consequently improve service delivery. It is against this background that the Budget Monitoring and Accountability Unit (BMAU) was established in FY 2008/09 in the Ministry of Finance, Planning and Economic Development, under the Budget Directorate, to address this challenge.

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. This is achieved through regular 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 service.

The BMAU prepares semi-annual and annual monitoring reports of selected government programmes and projects. The monitoring is confined to levels of inputs, outputs and intermediate outcomes in the following areas:

- Agriculture
- Infrastructure (Energy and Roads)
- Industrialization
- Information and Communication Technologies
- Social services (Education, Health, and Water and Environment)
- Microfinance; and
- Public Sector Management

CHAPTER 2: METHODOLOGY

2.1 Process

This report is based on selected programmes from the agriculture sector. The selection was based on a number of criteria;

- Programmes that submitted progress reports by the end of quarter two, FY 2014/15 were followed up for verification as they had specified output achievements.
- Priority expenditure areas in the budget strategy and ministerial policy statements for FY 2014/15 with focus being on large expenditure programmes.
- Regional representation to ensure that coverage of programmes is from varying parts of the country
- Programmes/projects with previously identified critical implementation problems.

2.2 Methodology

The key variables monitored were targets of inputs and outputs; implementation processes and achievement of intermediate outcomes and beneficiary satisfaction where feasible.

2.2.1 Data Collection

Data was collected through a combination of approaches;

- Review of secondary data sources including: Ministerial Policy Statements for FY 2014/15; National and Sector Budget Framework Papers; Sector project documents and performance reports in the Output Budgeting Tool (OBT), MFPED Budget Documents, Budget Speech, District Performance Reports; Q1 and Q2 Sector Quarterly Progress Reports, Work plans, and Public Investment Plans.
- Review and analysis of data in the Integrated Financial Management System (IFMS) and legacy system; progress reports (Performance Form A and B) and bank statements from implementing agencies.
- Consultations and key informant interviews with project managers in implementing agencies both at the Central and Local Government level.
- Field visits to project areas involving observations and discussions with beneficiaries. Photography was a key data collection tool during the monitoring exercise. In some cases call-backs were done to triangulate information.

2.2.2 Sampling

The projects/programmes monitored were purposively selected from information provided in the FY 2014/15 Ministerial Policy Statement and Quarterly Performance Reports for Q1 and Q2. Priority was given to outputs that were physically verifiable especially those categorized under GoU development expenditure.

Districts in different regions were selected so that as many regions of Uganda as possible are sampled throughout the year. Emphasis was also placed on programmes not monitored in previous quarters. For completed projects, monitoring focused on utilization, quality and beneficiary satisfaction.

2.2.3 Data Analysis

This was mainly simple descriptive statistics of comparing set targets and observed levels of achievement. Physical performance of projects and outputs was assessed through comparing a range of indicators and linking the progress to reported expenditure. The actual physical achievement was determined basing on (weighted) number of activities accomplished for a given output.

2.3 Limitations of the report

- Overstated absorption of some projects due to transfers to subventions being reflected as payments on the Integrated Financial Management System (IFMS).
- Assumption that warrants on IFMS are equal to the release. This also provides misleading information on financial performance.
- Difficulty in ascertaining financial performance of some donor projects due to unavailability of information from project managers. It was also equally difficult to ascertain financial performance of projects off the IFMS.
- Lack of clear indicators, in some programmes, hence difficulty in rating overall performance.
- Unavailability of some critical information. For example, a number of project recipients had limited information on scope of civil works, costs and contract period.
- Sampling of some projects/programmes was affected by misleading information from ministries. Some projects that were reported as implemented in FY 2014/15 had been done in FY 2013/14.

2.4 Assessment Criteria

For purposes of this report, the guide below is used to assess and rate performance.
Physical and financial performance was rated in percentages according to achievement of the planned set targets and the overall utilization of funds for multi-year projects. Table 2.1 shows the assessment criteria for measuring the achieved targets and expenditures.

Table 2.1: Assessment criteria for measuring achieved targets

SCORE	***COMMENT***
80% and above	*Excellent (All set targets achieved and funds well utilized)*
70% - 79%	*Very good (Most of the set targets achieved and funds absorption is 70% and above)*
60% - 69%	*Good (Some core set targets achieved and funds absorbed to 60%)*
50% - 59%	*Fair (Few targets achieved and funds absorption is average-50%)*
Less than 50%	*Below average (No targets achieved and funds absorption is less than 50%)*

Source: BMAU

CHAPTER 5: AGRICULTURE

5.1 Introduction

The agricultural sector is composed of the seven 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) National Agricultural Advisory Services (NAADS) Secretariat vi) Vote 155: Uganda Cotton Development Organisation (UCDO) vii) Vote 160: Uganda Coffee Development Authority UCDA. In addition, the local governments (Vote 500: 501-850) receive the Production and Marketing Grant (PMG) and NAADS funds.

5.1.1 Sector objectives and budget

The sector medium term objectives for FY 2010/11 to FY 2014/15 are to: a) enhance rural incomes and livelihoods b) improve household food and nutrition security[1]. Interventions focus on enhancing agricultural production and productivity through the commodity approach that prioritizes 11 commodities for public investment, namely: maize, beans, rice, bananas, cassava, cattle, meat, fish, coffee, tea, and market fruits and vegetables.

The approved budget for the agriculture sector in FY 2014/15 is Ug shs 497.52 billion (bn) exclusive of taxes and arrears[2]. The sector performance during July to December 2014 is summarized in Table 5.1. The semi-annual release and expenditure performance for the sector was excellent.

Table 5.1: Agricultural financial sector performance July – December 2014 (billions)

Institution	Approved budget (Ug shs)	Releases (Ug shs)	Expenditure (Ug shs)	% Budget released	% Release Spent
MAAIF	84.08	66.62	56.67	79.20%	85.10%
DDA	5.044	2.46	1.463	48.70%	59.50%
NAGRC & DB	4.05	2.17	1.863	53.70%	85.70%
NARO	157.472	40.96	38.275	26.00%	93.40%
NAADS Secretariat	160.703	87.17	21.236	54.20%	24.40%
UCDO	5.992	1.57	1.57	26.20%	100.00%
UCDA	22.187	10.54	10.494	47.50%	99.60%

[1] MAAIF, 2013.

[2] MFPED, 2014.

PMG	14.25	7.12		50.00%	
NAADS (Districts) - Wage	22.96	-	-	-	-
NAADS (Districts) - Development	20.79	10.92	10.92	52.55%	100.00%
TOTAL	**497.52**	**211.50**	**131.57**	**47.93%**	**78.24%**

Source: IFMS; MFPED Budget Directorate.

5.1.2 Scope

The report presents semi-annual financial and physical performance of selected agricultural sector programmes and projects for FY 2014/15. The monitoring work covered nine selected programmes/projects in four out of the nine votes in the sector and 32 out of 112 districts (Table 5.2).

Table 5.2: Agricultural programmes monitored

Vote	Project/Programme	Sampled districts/institutions
010	Project 0970: Crop Disease and Pest Control	Crop Protection Department MAAIF, Iganga, Kabale, Kisoro, Masaka, Mbale, Mitooma, Mukono, Nakasongola, Rukungiri
	Programme 04: Crop Protection Department	Crop Protection Department MAAIF, Iganga, Kabale, Kisoro, Masaka, Mbale, Mitooma, Mukono, Nakasongola, Rukungiri
	Programme 03: Farm Development	Farm Development Department MAAIF, Buikwe, Buvuma, Luwero, Mitooma and Masaka
	Project 1165: Increasing Mukene for Human Consumption	Department of Fisheries Resource Management and Development MAAIF, Buikwe, Nakasongola
	Project 1195: Vegetable Oil Development Project – Phase 2	VODP Secretariat MAAIF, Amuru, Arua, Buvuma, Gulu, Iganga, Jinja, Kalangala, Kitgum, Lira, Mayuge, Mbale, Nebbi, Soroti, Yumbe, Zombo
121	Dairy Development Authority	DDA, Mbarara, Soroti, Tororo, Wakiso
142	Project 1138: Eastern Africa Agricultural Productivity Project (EAAPP) in NARO	Arua, Dokolo, Kabale, Kalangala, Kisoro, Lira, Lwengo, Masaka, Mbarara, Mukono, Oyam, Soroti, NARO Secretariat, National Crop Resources Research Institute (NACCRI)
	Project 1139: Agricultural	Arua, Dokolo, Kabale, Kalangala, Kisoro,

	Technology and Agribusiness Advisory Services (ATAAS) in NARO	Lira, Lwengo, Masaka, Mbarara, Mukono, Oyam, Soroti, NARO Secretariat, National Crop Resources Research Institute (NACCRI)
155	Uganda Cotton Development Organisation	Uganda Cotton Development Organisation (UCDO), Arua, Kitgum, Kumi, Lira, Nebbi, Ngora, Pader, Zombo

Source: Authors' compilation

5.2 Crop Pest and Disease Control (Project 0970)

5.2.1 Background

Anecdotal evidence at MAAIF shows that crop losses due to pests and diseases average 10%-20% during the pre-harvest period and 20% - 30% during the post harvest period[3]. This problem leads to increased food insecurity and poor nutrition among many households in Uganda. To address this challenge, the GoU is implementing the Crop Disease and Pest Control project. A summary project profile is presented in Box 5.1.

Box 5.1: Crop Disease and Pest Control Project Profile

Implementing agency: Ministry of Agriculture, Animal Industry and Fisheries

Objective: To reduce the crop losses from the 50% in 2006 to 10% by 2015; equip staff with knowledge and skills to control pests and diseases and strengthen the surveillance, forecasting and diagnostic system.

Scope: Control of epidemics including Banana Bacterial Wilt (BBW), Coffee Wilt Disease (CWD), Coffee Leaf Rust and several others.

Project Components: (i) Capacity building of staff of MAAIF and Local Governments (LGs) (ii) Technical backstopping of LGs (iii) Capacity development of Laboratories (plant health diagnostics and pesticide residue analysis) (iv) Control of epidemic pests and diseases.

Implementation period: 4th January 2006 to 30th June 2015

Project outputs: (i) Crop losses minimized from the current 50% to less than 30% of the yields during the first two years and to less than 10% in 5 the year. (ii) Crop yields increased by at least 20% - 30% (iii) MAAIF and LG staff trained, skilled and equipped (iv) Efficient analytical and diagnostic laboratory in place at referral and border posts (v) Mobile Plant Clinics and Mini-labs established

Funding: Government of Uganda funded: FY 2010/2011 – Ug Shs 1.015 billion; FY 2011/2012 UShs1.30 billion; FY 2012/2013 Ug Shs 1.965 billion.

Source: MFPED PIP 2013/14-2015/16; Discussion with MAAIF project implementers

[3] Public Investment Plans (PIPs) for various years

The key annual outputs for the project for FY 2014/15 are:

- A total of 120 district staff trained on pest and disease control
- A total of 60 MAAIF staff trained on disease and pest control
- Assorted pesticides, traps and spray pumps procured for demonstration and emergency
- A total of 38 mobile plant clinics equipped
- A total of 80 plant clinic staff trained
- Assorted laboratory supplies and equipment for Kawanda and Namaleere procured
- Surveillance and control of 11 pests and diseases in at least 60 districts

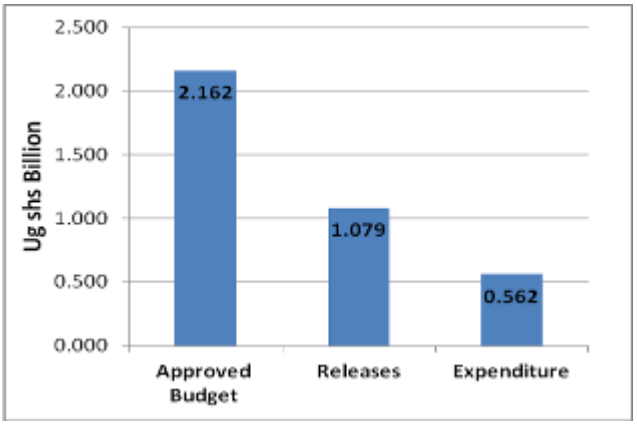
5.2.2 Findings

i) Financial performance

The financial performance of the Crop Pest and Disease Control project is presented in Figure 5.1. The project exhibited excellent release (49.9%) and poor resource absorption (50%) performance.

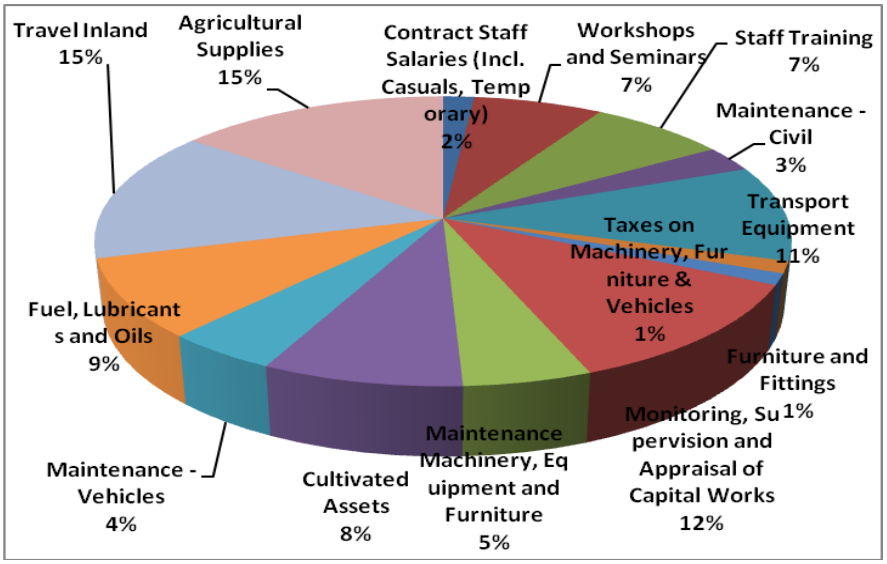
The low absorption was due to delays in initiating procurements and implementation arising from the ongoing re-alignment of department mandates in the ministry. Implementation of planned activities started late in November 2014. The key expenditures incurred are shown in Figure 5.2.

Figure 5.1: Financial performance of Crop Pest and Disease Control project by 31st December 2014



Source: IFMS

Figure 5.2: Expenditure performance of the Crop Pest and Disease Control project by 31st December 2014



Source: IFMS

The project exhibited fairly good allocative efficiency as 53% of the funds were spent on items that are key to delivery of the stated outputs namely: agricultural supplies, travel inland, workshops and seminars, training and transport equipment.

ii) Physical Performance

a) Past performance

The following achievements were registered by MAAIF for the project during FY 2013/14[4]:

- Trained 40 staffs in operationalisation of plant clinics
- A total of 74 mobile plant clinics were supported to remain operational.
- A total of 60 MAAIF staff were trained in pest and disease control
- Trained 44 plant doctors from 21 districts and equipped them with complete sets of plant clinic equipments. The districts were: Kisoro, Kabale, Kanungu, Rukungiri, Sheema, Mitooma, Buhweju, Bushenyi, Lyantonde, Sembabule Lwengo, Bukomansimbi, Mpigi, Gomba, Butambala, Kiboga, Masaka, Rakai, Nakaseke and Retrained staff from Hoima, Kayunga, Buikwe, Mukono and Soroti districts.
- A total of 120 district staff were trained in various aspects of pests and diseases
- Conducted surveillance and backstopping in various districts

a) Field Findings

The overall physical performance of the Crop Pest and Disease Control project during July to December 2014 is summarized in Table 5.3.

Table 5.3: Physical performance of the Crop Pest and Disease Control project by 31st December 2014

Annual output	Achievement	Remark
A total of 120 district staff trained on pest and disease control	No progress	*Requisitions for training funds had been made to the Finance Department but not yet honoured.*
A total of 60 MAAIF staff trained on disease and pest control	No progress	*Requisitions for training funds had been made to the Finance Department but not yet honoured.*
Assorted pesticides, traps and spray pumps procured for demonstration and emergency	Procurement process was still ongoing	*Target was not achieved because of late initiation of the procurement process in October 2014.*

[4] MAAIF, 2014; Discussions with MAAIF staff

A total of 38 mobile plant clinics equipped	Eight sets of plant clinic equipment were delivered to MAAIF stores	*About 42% of the half year target was achieved.*
A total of 80 plant clinic staff trained	Trained 58 plant clinic doctors in 50 districts in Eastern, Central and Western Uganda.	*Half year target achieved*
Assorted laboratory supplies and equipment for Kawanda and Namaleere procured	Procurement process was still ongoing	*Target was not achieved because of late initiation of the procurement process in October 2014.*
Surveillance and control of 11 pests and diseases in at least 60 districts	Surveillance was conducted for 1 pest (False Coddling Moth) in six districts – Mpigi, Mukono, Luwero, Gomba, Mityana and Masaka. 20 districts were backstopped on reviewing Banana Bacterial Wilt disease bye-laws	*Target was partially achieved*
Two green houses constructed at Namaleere	The contract for one green house was partially signed	*Target was not achieved.*

Source: Field findings

The project underperformed in terms of delivering the planned outputs during the first half of FY 2014/15. Only three (38%) out of eight performance targets were substantially achieved by December 2014.

The field monitoring focused on plant clinics and Crop Pest and Disease control that were substantially achieved. The target was to train at least one agricultural officer in each district for one week to undertake plant clinics. The clinics involve setting up equipment such as tables, tents and audio visual materials at designated venues where the plant doctors diagonise crop pests and diseases presented by farmers.

Nine districts were randomly sampled from the 50 that benefited from the programme. These included: Masaka, Jinja, Iganga, Mbale, Kisoro, Mitooma, Rukungiri, Kabale and Mukono. The findings are presented below.

Iganga district

In FY 2013/14, the district received a table, two chairs, tent and audio visual materials for the plant clinics. In FY 2014/15, two district staff in the Production Department received training on pests and diseases management from MAAIF. By 16th February 2015, the plant clinics were not yet operationalized.

Challenge: Understaffing in the production department limited ability to undertake the plant clinics.

Recommendation: The district should recruit more staff in the production department to implement government programmes effectively.

Jinja district

Two production department staff were trained by MAAIF for one week as plant doctors in September 2014. The training was conducted in Kumi district focusing on identification of disease, crop pests and diagnosing them. The district officials received materials for identifying the diseases including reading materials, magnifying lenses, T-shirts, a tent, two chairs, a plastic table, a dustbin, prescription books, a microscope and data bank. By 16th February 2015, the plant clinic was not yet operational.

Challenges:

i) Lack of transport means to carry the equipment to working sites.
ii) Understaffing in the production department to undertake the plant clinics.

Recommendations:

i) The district should incorporate MAAIF activities in the district work plans and budgets.
ii) The district should recruit more staff in the production department.

Kabale district

In FY 2013/14, the Production Department staff were trained and provided with plant clinic equipment. By 31st December 2014, sites were selected for holding the plant clinics with backstopping by MAAIF: a permanent site at KDA yard and one mobile plant clinic per quarter at weekly market locations in Hamurwa TC (Karukaka market), Rwamucucu (Rushebeya market) and Muko (Muko Market). However, no further activities were implemented thereafter.

Challenges

i) Lack of resources in the district budget to implement the plant clinics as this activity was not captured in the FY 2014/15 workplan.
ii) Lack of transport to carry the plant clinics equipments to the identified.

Recommendations

i) The district should incorporate the plant clinic operations in the worplan and budget and allocate resources for the activity.
ii) The district should provide a vehicle to effectively organize plant clinic activities in the district.

Kisoro district

In August 2014, the district identified and implemented the plant clinics during market days and at the sub-county headquarters with support from MAAIF. Farmers were advised through local radio to come with samples of diseased crops for diagnosis. The diagnosis and advice was provided to the farmers.

However, the turn up for the farmers was very low, as the farmers were not well sensitized about the plant clinics before the radio announcements were made. Only four farmers from three sub-counties of Nyabushenya, Nyakinama, Muramba out of 13 sub-counties participated in the exercise by 31st December 2014.

Challenge: Lack of funds to facilitate this activity under the production department budget.

Recommendation: The MAAIF should prioritise and allocate more funds to the Production and Marketing Grant (PMG) to enable implementation of plant clinic activities at local government level.

Masaka district

The district in collaboration with CABI-plant wise and MAAIF had two staff trained in plant clinics during September 2014. CABI-plant wise is a non-government organization (NGO) that collaborates with MAAIF to control BBW in highly affected local governments. The trained plant doctors received plant clinic equipment including a tent, chair, baskets and diagnostic books.

By 31st December 2014, a number of plant clinics were held in market places and radio talk programs were aired to sensitize farmers on the diseases that affect the plants. Table 5.4 shows the most common diseases that were identified during five plant clinics in various sub-counties.

Table 5.4: Most prominent diseases reported by farmers in plant clinics in Masaka district

Sub County	**Farmer attendance by sex**		**Diseases identified**
	Males	**Female**	
Katwe-Butego	08	05	BBW control measures, Dumping off especially in tomatoes, Coffee twig borer Thrips in pineapples, Aphids. Cassava mosaic, and Deficiency Symptoms in vegetables
Nyendo-Senyange	05	02	
Kabonero	05	00	
Kyanamukaaka	03	01	
Buwunga	01	00	
Total	**22**	**08**	

Source: Field findings

Challenges:

i) Low staffing at the district level to effectively carry out this activity. The district deploys former staff of the NAADS program to follow up the program.
ii) Low outreach and insufficient follow up of the plant clinics due to inadequate operational funds and transport.

Recommendations:

i) The district should recruit agricultural officers in every sub county.

ii) The MAAIF/MFPED should allocate a larger budget to the production department for meeting operational expenses.

Mbale district

In July 2014, the district received a tent, a table, two plastic chairs and a bucket for operationalizing the plant clinics.

A complementary activity was undertaken by the district using the PMG to scale up the efforts by MAAIF. During June 2014, the district spent Ug shs 2.00 million on training agricultural advisory services providers and extension staff in 20 LLGs on plant clinics. Diagnostic kits costing Ug shs 10.40 million were procured for the 20 LLGs including 20 hand lenses, pairs of gloves, masks, dissecting kits, thermometers, alcohol solution (17 liters), diagnostic fact sheets, two measuring cylinders, test tubs, cotton wall and test tub rakes.

The District Agriculture Officer (DAO) started operating plant clinics in Kimwanga market in Bumasikye sub-county in September 2014. Three plant clinics were held, on average, 30 farmers were supported at every plant clinic; the major diseases identified in the region are; coffee leaf rust, BBW, Coffee berry diseases and cassava brown streak virus.

Challenges:

i) Ineffective implementation of plant clinics activities due to staffing shortage; 17 NAADS staff who had been trained as plant doctors were laid off. By 17th February 2015, the district had six field officers assigned three to four sub counties each, diagnosing diseases and advising farmers on plant disease.
ii) Inability to transport equipment to venues for the plant clinics due to lack of funds for fuel and vehicle maintenance.

Recommendations

i) The district should recruit more agriculture extension staff in production department, and facilitate them adequately to reach more farmers in plant clinics.
ii) The district should incorporate the budget for fuel and car maintenance under PMG.

Mitooma district

By 31st December 2014, the MAAIF had trained staff of Mitooma district and provided them with equipment for operating plant clinics. Plant clinics were set up by the district staff. During the reporting period, the district received 15 cases of pests and diseases; the common problems in farmers' fields were black coffee twig borer, BBW and coffee wilt diseases. The plant clinics were held once a week at the district headquarters.

Challenges

i) Limited outreach of programme due to lack of trained staff to undertake/scale up this activity.

ii) High crop failure due to diseases as farmers lack chemicals and staff lack funds to follow up on the programme.
iii) Limited awareness and use of plant clinics by farmers due to inadequate sensitization.

Recommendations

i) The district should recruit more staff in the production department to enhance reach of plant clinics to farmers.
ii) The MAAIF should provide funds for procuring chemicals to control the diseases and enabling agricultural staff to follow up the farmers.
iii) The district in corroboration with MAAIF should sensitize farmers about the existence and usefulness of plant clinics at the district.

Mukono district

Two staff from Mukono districts were trained by MAAIF in collaboration with CABI-plant wise as plant doctors in August 2014. The district received a set of plant clinic equipment that included; one tent, audio visual materials, one plastic table, two plastic chairs, one dustbin, record books, two logbooks and one memory stick to facilitate plant clinic operations in the district. The district complemented the MAAIF support with two sets of plant clinics equipments that were procured using PMG funds.

By 31st December 2014, the three plant clinic equipment were stationed in three sites in Ntenjeru, Kimmenyedde and Ntunda sub counties. Plant clinic services were carried out twice a month in each of these sub counties. The major diseases identified were pests and diseases affecting tomatoes and other vegetables, coffee wilt disease and leaf rust and BBW.

Challenges

i) Limited outreach of the plant clinics due to inadequate operational funds for transport and allowances for the plant doctors.

Recommendation:

i) The MAAIF should increase allocations to the PMG to cater for operational expenses of plant clinics.

Rukungiri district

In April 2014, two NAADS services providers were trained in Masaka district by MAAIF to operate the plant clinics in Rukungiri district. The district received plant clinic equipment including; two chairs, a table, a tent, prescription books and a bucket in July 2014.

By 4th February 2015, there was no progress on operationalization of the plant clinics.

Plant clinic equipment (bucket, record books, table) stored in the office of the Production Coordinator in Rukungiri district

Challenge: Lack of staff to transfer knowledge and implement programme as those who received the training were laid off

Recommendation: The district should recruit more staff in the production department and ensure that they are trained on operation of plant clinics.

5.2.3 Analysis

Link between financial and physical performance

The link between the financial and physical performance of the Crop Pest and Disease Control project during July to December 2014 was weak. Whereas 50% of the released funds were spent, physical performance was poor with only three (38%) of the eight key performance indicators satisfactorily achieved. Field evidence on the plant clinics indicated that four out of the nine sampled districts failed to operationalise the programme.

Achievement of set targets

The semi-annual project performance was below average. Only three (38%) out of the eight performance targets were substantially achieved by 31st December 2014. Five out of nine sampled districts had operationalised the plant clinics.

Comparative analysis

Despite having received the equipment and training from MAAIF, the districts of Iganga, Jinja, Rukungiri and Kabale failed to operationalise the plant clinics. The lack of staffing in the production departments, transport to carry the equipment to sites and operational funds constrained implementation.

The districts of Mbale, Kisoro, Mukono, Masaka and Mitooma implemented the project despite the above constraints. They circumvented the challenges by setting up the plant clinics at district headquarters to minimize expenses and complemented operational expenses through the district budget. Mbale district incorporated plant clinic activities in the PMG which enabled it to implement the project.

Implementation Challenges

i) Delayed initiation of procurements in October 2014 led to slow implementation of planned activities.
ii) Understaffing at local government level limited scaling up of intervention at LG level.
iii) Lack of operational funds to conduct plant clinics at district level
iv) Inefficiencies reported in the MAAIF Finance department that led to delayed handling of requisitions for fund.
v) Low turn up of farmers to the plant clinics due to limited publicity of the project

5.2.4 Conclusion

The Crop Pest and Disease Control project is rated as having performed below average (38%). Most planned activities were not fully implemented both at central and local government level, despite 50% of the resources that were released being spent.

5.2.5 Recommendations

i) The MAAIF should initiate procurements early at the beginning of the financial year and address the causes of inefficiencies in handling requisitions in the Finance department.
ii) The District Service Commissions (DSCs) should recruit adequate staff for the production department, including at sub-county level.
iii) The MAAIF/MFPED should re-prioritise the sector budget to allocate more funds to the PMG to increase funding the plant clinic operations at local government level.
iv) The MAAIF top management should ensure that the ministry Finance Department expedites payments for departments in a timely manner.
v) The MAAIF and districts should sensitize farmers on the importance and usefulness of plant clinics.

5.3 Crop Protection Department (Vote 010, Program 04)

5.3.1 Background

The overall objective of the Crop Protection Department in MAAIF is to support sustainable crop pests and disease control for improved food security and household incomes. The specific objectives of the Department are to;

1) Formulate polices plans and strategies for controlling the spread of crop pest and disease.
2) Ensure, access to and use of improved seed and planting materials by smallholder farmers.
3) Ensure seed quality in order to protect the farming community against use of poor seed and the planting materials, through effective seed regulatory services.

The long term outputs are: 1) Polices, plans and strategies for controlling the spread of crops pest and diseases formulation; 2) Crop pests and disease outbreaks investigated; 3) Crops pest and disease controlled; and 4) Outbreaks and prevalence of crops pests and disease. The department oversees/backstops the implementation of the Crop Pest and Disease Control Project (see above section 5.2).

The planned annual outputs for FY 2014/15 for the Department are:

- Various laws and bills finalized
- 10,000 phytosanitary certificates issued after inspection of consignments.
- 800 import permits issued after a pest risk analysis.
- 50 staff trained in control of epidemic pests and diseases.

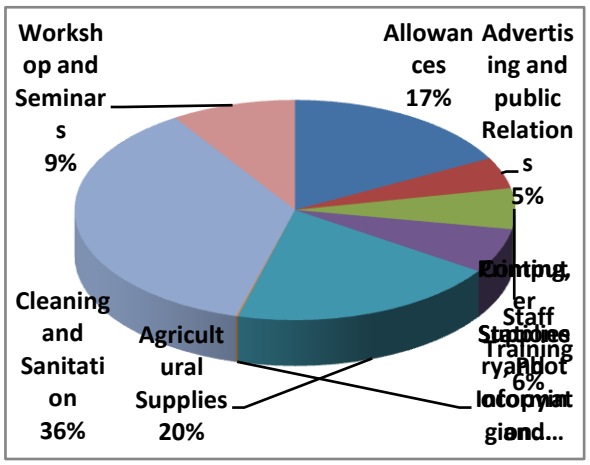
- 10,000 litres of assorted pesticides and 100 spray pumps procured and distributed to farmers.
- 12,000 farmers trained on control of coffee leaf rust.
- 60 district local governments sensitized on BBW.
- 100 soil testing kits procured.

5.3.2 Findings

i) Financial performance

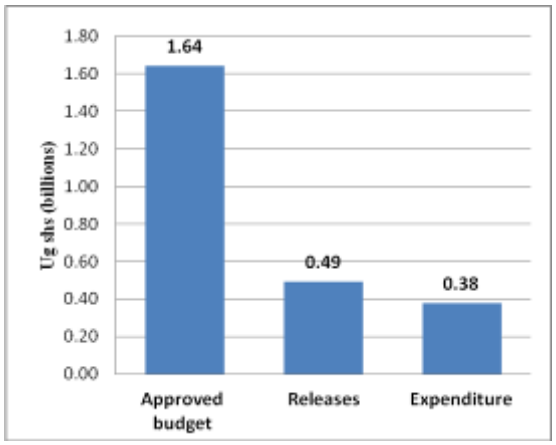
The financial performance of the Crop Protection Department is summarized in Figure 5.3. The release performance was poor (29.9%) while the funds absorption was very good (76.7%) by 31st December 2014. The low release performance was associated with lack of clarity/overlaps in mandate and performance indicators of the Crop Protection Department and the newly created Department of Crop Regulation and Certification. Funds were withheld until there was clarity on the activities to be funded. The key expenditures that were incurred are shown in Figure 5.4.

Figure 5.3: Financial performance of the Crop Protection Department by 31st December 2014



Source: IFMS

Figure 5.4: Expenditure performance of the Crop Protection Department by 31st December 2014



Source: IFMS

The sector exhibited good allocative efficiency for this programme as 56% of the resources were used on agricultural supplies and ensuring sanitation in banana plantations through BBW control measures.

However, part of the resources spent on agricultural supplies partly paid for arrears for chemicals that were purchased in June 2014 and rolled over into Q1 FY 2014/15.

ii) Physical performance

a) Past performance

The following achievements were registered by the Crop Protection Department during FY 2013/14[5]:

- Three hundred soil testing kits were procured for distribution in FY 2014/15.
- Plant Variety Protection Bill/Law was passed by Parliament.
- Plant Protection Health Bill was to Parliament.
- The Fertilizer Policy was awaiting approval by Cabinet.
- 12,732 pytosanitary certificates were issued after inspection of various crops
- 74 plant clinics were maintained
- 60 MAAIF staff were trained in disease and pest control
- 17 districts were supported with chemicals to control maize and coffee diseases
- Agricultural officers from 21 districts were trained in management of plant clinics.

Observation: There was an overlap/duplication in the planned outputs and achievements for the Crop Protection Department and the Crop Pest and Disease Control Project (0970). Discussions with MAAIF staff indicated that there was lack of clarity on which resources (either the Department or the Project) were used to deliver these outputs. There is need to separate the performance indicators and finances for the Department from those for project 0970 to avoid ambiguity in expenditures.

b) Field Findings

The overall physical performance of the Crop Protection Department during July to December 2014 is summarized in Table 5.5. The performance of the Department was fair as four (44%) of the nine outputs were fully achieved; three outputs were partially achieved (33%) and two outputs were not achieved by 31st December 2014. The outputs that were not achieved by half year were associated with delayed initiation of procurement processes.

Table 5.5: Physical performance of the Crop Protection Department by 31st December 2014

Annual output	Achievement	Remark
Plant Variety Protection Bill finalized	The Plant Variety Protection Act 2014 was passed	*Target achieved*
Plant Protection Health Bill discussed by Parliament and Cabinet and passed	The bill was passed by Parliament in November 2014 and was awaiting assent by the President	*Half year target was achieved*
Fertilizer policy finalized	Fertilizer policy, regulations and strategy were still with MFPED awaiting certificate of financial implications before submission to Cabinet	*The policy was submitted to MFPED in June 2014; the process of accessing the certificate had stalled.*

[5] MAAIF, 2014; Discussions with MAAIF Staff.

10,000 phytosanitary certificates issued	2,500 certificates were issued to stakeholders including farmers, importers, and processers.	*50% of the half year target was achieved*
800 import permits issued after a pest risk analysis	200 import permits issued to importers of agricultural inputs.	*50% of the half year target was achieved*
10,000 litres of assorted pesticides, 100 spray pumps and 100 soil testing kits procured	Procurement process was still ongoing. Districts were collecting chemicals and soil testing kits that were procured in FY 2013/14;	
50 staff trained in control of epidemic pests and diseases	Two trainings were held in Eastern and Western Uganda on fertilizer use involving 60 district staff from 50 districts; the staff were given soil testing equipment. Trainings held in November to December 2014	*Performance was at 120%*
60 district local governments sensitized on BBW	20 districts backstopped on controlling BBW	*Performance was at 67% of the half year target.*
12,000 farmers trained on control of coffee leaf rust	No progress	*Procurements were still ongoing for the training materials*

Source: Field findings

Eight districts that benefited MAAIF interventions under this programme during the half year were sampled to assess progress in programme implementation. The sampled districts were: Kabale, Kisoro, Rukungiri, Masaka, Mitooma, Jinja, Mbale and Iganga. The findings are presented below.

Iganga district

One district officer from Iganga district was trained by MAAIF on fertilizer soil amendments during November 2014. The officer received a soil testing kit and a training manual. By 16th February 2014, the district had not started using the kit. The demand for soil testing services was low in the dry season.

Challenge:
Inadequate staff in the district Production Department to implement the programme.

Recommendation: The district should recruit more staff for the district production department.

Jinja district

The DAO received training from MAAIF on fertilizer application and received two soil testing kits during November 2014. The DAO was expected to train other staff in the district. By 16th February 2015, no training had been conducted for other staff.

Challenge: Inability to implement the programme due to understaffing in the district.

Recommendation: The district should fast track the ongoing process of recruiting and training new staff in the production department in using the soil testing kits.

Kabale district

The DAO received training on soil amendments in December 2014 and a soil testing kit in January 2015 from MAAIF. The training was conducted in Kabarole district. By 3rd February 2015, the kit was not yet in use and the knowledge from the training had not been shared with other district staff.

Kisoro district

The DAO showing the MAAIF soil testing kit and farmers 'soil samples in polythene bags awaiting analysis

The DAO received training on soil amendments and a testing kit from MAAIF in December 2014. By 3rd February 2015, he had trained seven district staff and collected several soil samples from various farms for analysis as follows:

- A farm in Nyakabande sub-county: soil tests revealed absence of Nitrogen, low organic matter and high acidity. The farmer was advised to apply UREA fertilizer, composite manure and agricultural lime to correct the soil nutrient deficiencies.

- Three soil samples were collected from Mr. Bizoza Bashaka's farm in Nyabwishenya sub-county. The soils were very acidic with high levels of Nitrogen; Phosphorus was moderate; some areas did not have potassium and organic matter. The farmer was advised to apply agricultural lime and Muriate of potash in the field.

- A total of 15 soil additional samples were collected from the sub counties of Muramba, Nyakabande, Nyarusiza and Murora and were awaiting analysis by 3rd February 2015.

Challenges:

i) Late implementation of planned activities due to delayed requisition and release of funds from the district finance department. The DAO applied for the funds on 2nd January 2014 to undertake his planned activities. By 3rd February 2014, the funds were not yet released by the finance department.
ii) Lack of funds to purchase chemicals for refilling the soil testing kits as the activity was not in the district workplan.

iii) There was no facilitation to collect samples from the farmers` fields.
iv) Low yields as farmers could not afford to purchase the chemicals and fertilisers to address the soil nutrient deficiencies.

Recommendations

i) The Chief Administrative officer (CAO) should ensure that departments enhance timeliness and efficiency in requisition and processing funds.
ii) The district should incorporate the chemicals to refill the kits and operational expenses in the workplan and budget for the production department.
iii) The MAAIF work with the districts to scale up sensitization of farmers in soil amendments.

Masaka district

The MAAIF is collaborating with the Food for Agricultural Organisation (FAO) to pilot a BBW control intervention in Masaka district. In FY 2014/15, the most affected area Kabonera sub-county was selected to host the pilot. The district received Ug shs 22.038 million during September to November 2014 for BBW control. The following activities were undertaken by 27th January 2015:

- Farmers were trained in preventing and controlling the BBW.
- A total of 3000 banana suckers from NARO were distributed to 60 farmers; each farmer received 50 banana suckers.
- The byelaw on BBW control for Kabonera sub-county was passed by the Council and was awaiting ratification by the district. Arising from lessons drawn from this sub-county, the district had drafted an ordinance for BBW control for all sub-counties in Masaka district.
- Warning letters were sent to errant farmers who were not adopting BBW control measures.
- Routine visits by the district and sub county task force on BBW were carried out in the sub counties of Kasango and Kabonera.
- Table 5.6 shows BBW interventions undertaken during the period.

Table 5.6: BBW control in Masaka district in November – December 2014

No. of farmers visited	Month	No. of infected banana stools	No. of stools cleared	Action to be taken and farmers to be followed up
61	November	773	656	9 needed follow up, 5 were reluctant and needed use of byelaws.
77	December	1602	1287	30 needed follow up, 3 were reluctant and needed use of byelaws.

Source: Field findings

Mbale district

Two sets of interventions were undertaken in Mbale district with support from MAAIF as presented below:

a) Training and soil testing kits

The DAO received training and a soil testing kit from MAAIF in November 2014. He trained other Agriculture Officers in the district in the use of soil testing kits. The kit was kept at the district headquarters where staff would collect it from for any soil analysis at field level. By 17th February 2015, the soil testing kit had been used eight times on the farmer fields. A number of farmers, mainly horticulture farmers, were advised on the fertilizers that were needed to correct nutrient deficiencies on their farms.

Implementation challenges

1) Inadequate reach at farm level as only one soil testing kit was provided to district.
2) Low capacity among the trained staff to analyse the soils effectively and provide appropriate advice on fertilisers.

Recommendation

1) The MAAIF/MFPED should enhance allocations to the PMG so that soil testing kits are provided to all sub-counties.
2) The MAAIF should regularly train the district officials on how to analyse the soils appropriately.

b) Control of BBW measures

In November 2014, the district received Ug shs 45.378 million from MAAIF for the control of the BBW disease. The funds were fully spent by the sub-counties to control the BBW. Table 5.7 shows the activities that were implemented by February 2015.

Table 5.7: Achievements in control of BBW in Mbale district by 17th February 2015

No.	Achievements	Amount spent (Ug shs)
1	One hour radio talk show on BBW control targeting community members was held	220,000
2	Re-launched the BBW disease campaign at the district headquarters. Four leaders from each of the 20 LLGs, two staff from Buginyanya Zonal Agricultural Research and Development Institute (ZARDI) and eight district task force members were involved in the exercise.	3,810,000
3	Twenty three LLGs were supervised and monitored by the BBW district task force.	5,318,000
4	Twenty sub-counties and three Divisions implemented BBW activities (sensitizations, formation of BBW task forces and adoption of BBW Byelaw. *(each sub-county received Ug shs 1,575,000; each division received 1,510,000)*	36,030,000
	Total	**45,378,000**

Source: Field findings

The district reported that the BBW incidence was minimized in Mbale district as a result of the intervention. This was evidenced by the increase in volume of bananas that was sold to neighboring districts due to increased production. Farmers could easily identify infected banana plantations and ask for advice from the district or sub-county head quarters. The sub counties prepared BBW byelaws.

Challenges

i) Delayed implementation of this activity due to;
    a. The upgrading of the IFMS system that was always on and off; it was reported that sometimes they could fail to make payments.
    b. Delayed feedback from the MAAIF in authorizing adjustments in the guidelines.
ii) Risk of the BBW to re-emerge as there were no follow up interventions.
iii) Inability of district staff to diagnose the BBW disease as training was insufficient.

Recommendations

1) The MAAIF should sustain the intervention outcomes by supporting the district with funds for BBW control at least once every year.
2) The MFPED/district should ensure that the IFMS system is fully functional at all times.
3) The MAAIF should continuously train the district staff in BBW control.

Mitooma district

The Senior Agriculture Officer was trained by MAAIF on soil management and received a soil testing kit in December 2014. The intervention was scaled up by the district through procurement of 14 similar soil testing kits for sub-counties and town council, using the PMG. The district hired staff from Mbarara Zonal Agriculture Research Institute (MBAZARDI) to train the all agricultural offices in the sub-counties and town council. Most of the trained staff were laid off.

By 4th February 2015, the soil testing kit received from MAAIF was not yet used, as the district was using the kits procured under the PMG. By 31st December 2014, two soil samples were collected from the coffee/fruits farm of Mr. Asafu Bamusiima of Kagati Village in Kiyanga sub-county. The soils were found to be lacking Nitrogen and potassium. The farmer was advised to apply NPK fertilizers.

Implementation challenge; Outreach of the programme was limited by understaffing in the production department.

Recommendation: The district should recruit and train more agriculture officers to manage the soil testing component.

Rukungiri district

The Agriculture Officer received training and a soil testing kit in November 2014. In December 2014, she carried out two tests in Nyakabungo LC1 in Buyanja sub-county at Mr. Bwiko

Emmanuel`s garden. The findings were; the soils were not acidic and not suitable for tea growing. The farmer was advised to grow other crops that were appropriate for that piece of land.

By 4th February 2015, no other tests had been carried out in the district. It was noted that all the nine Sub Counties in Rukungiri district had soil testing kits that were procured in FY 2011/12 under the PMG. The cost of refilling the soil testing kits was incorporated in the district budget for FY 2015/16.

Challenges

i) Limited adoption of fertilisers by farmers
ii) Poor outcomes associated with abundance of fake fertilizers on the market.
iii) Poor implementation of planned activities due to understaffing in the district.

Recommendations

i) The Uganda Bureau of Standards should strengthen quality assurance for fertilisers on the market.
ii) The MAAIF should support districts to procure kits that test fertilizer quality.
iii) The district should recruit and train more agriculture officers in soil testing and management.

5.3.3 Analysis

Link between financial and physical performance

There was a good link between the financial and physical performance of the Crop Protection Department during July to December 2014. Whereas the release performance was low (22.9%), the department performance was fair as four (44%) of the nine planned outputs were fully achieved by 31st December 2014. The relatively high performance compared to the release was because some outputs, such as finalization of regulations, did not require major resource outlays to be implemented.

Achievement of targets

Four (44%) of the nine outputs were fully achieved; three outputs were partially achieved (33%) and two outputs were not achieved by 31st December 2014. Four out of the seven sampled districts implemented that MAAIF programmes during the reporting period.

Comparative analysis

Of the seven sampled districts for this programme, Kisoro, Rukungiri, Mitooma and Mbale showed good progress in the utilization and application of knowledge gained from MAAIF in training more district staff in soil amendments. The key constraint of lack of operational funds was addressed by incorporating the soil management practices that were introduced by MAAIF in the district work plans and budgets. The districts were still using former NAADS staff on hire basis to implement the programme. They also scaled up the intervention using the PMG funds.

Other districts like Kabale, Iganga and Jinja neither utilized the kits nor applied the knowledge gained from the training; these districts were understaffed and lacked operational funds.

Implementation Challenges

i) Some activities were not implemented arising from confusion of mandates between the Crop Protection Department and the Crop Regulation and Certification Department.
ii) Delays in initiating the procurement processes.
iii) Understaffing in the district and sub-county production departments.
iv) Lack of linkages between MAAIF and District Production Department plans and budgets; MAAIF programmes were communicated abruptly to the districts in the middle of the FY.
v) Duplication the planned outputs and targets for the Crop Protection Department and the Crop Pest and Disease Control Project. For instance staff training on control of epidemic diseases, backstopping on BBW and procurement of chemicals. It was not clear which funds had been used to achieve the targets.

5.3.4 Conclusion

The performance of the Crop Protection Department during the first half of FY 2014/15 is rated as good (65%). The department achieved fully or partially many of the planned outputs despite having a low funds release performance. Some outputs such as finalization of policies and regulations where achieved with minimal resource outlays. The districts that implemented and scaled up the MAAIF intervention incorporated the key activities and budgets in the PMG.

5.3.5 Recommendations

1) The MAAIF and Ministry of Public Service (MoPS) should review and streamline the roles of Crop Protection Department and the Crop Regulation and Certification Department to avoid duplication of outputs and misallocations.
2) The MAAIF and MoPS should properly delineate the performance indicators and outputs of the Crop Protection Department and the Crop Pest and Disease Control project to reduce overlaps and ambiguity in resource use.
3) The MAAIF and districts should fast track implementation of the single spine extension system and recruit the requisite staff in production departments at district and sub county level.
4) The MAAIF should initiate the procurement processes for assorted chemicals and equipments early at the start of the financial year.
5) The districts should incorporate and fund the BBW control and soil testing practices through the PMG.

5.4 Dairy Development Authority (Vote 121)

5.4.1 Background

The GoU prioritized dairy as one of the strategic commodities for enhancing rural incomes and household food and nutrition security in the medium term[6]. The dairy industry is regulated by the Dairy Development Authority (DDA), established by the Dairy Industry Act (1998). The DDA is mandated *"to provide development and regulatory services that will ensure increased production and consumption of milk, and a sustainable and profitable dairy industry sector that will contribute to economic development and improved nutritional standards in Uganda"*[7].

The annual national milk production has increased from 1.337 billion litres in 2009 to 1.930 billion litres in 2013. However, consumption of milk in Uganda is low at 56 (28%) litres per person per year, far below the World Health Organisation recommended level of 200 litres per person per year. The country faces challenges relating to poor milk handling; lack of value addition infrastructure; and inadequate market access[8].

To address these challenges, the DDA is implementing interventions to enhance dairy development, quality assurance and regulation, market access and value addition. Since FY 2013/14, additional support to fast track the interventions is being provided in a phased manner through Project 1268 Dairy Market Access and Value Addition. The expected outputs from the project by June 2017 are: i) Entebbe Dairy Training School rehabilitated and equipped ii) Three milk collection centres rehabilitated and equipped ii) Two regional offices established iv) The DDA Analytical laboratory accreditated.

The key annual planned outputs/targets for FY 2014/15 are:

Vote 121 DDA (Recurrent)

- 1,600 farmers, 50 small processors and 400 milk traders trained on various aspects along the value chain.
- 1,500 dairy premises inspected and registered.
- 250 quality assurance exercises undertaken.
- 2,000 products analysed for quality and safety.
- Dairy quality standards enforced and dairy national laboratory accredited.

[6] MAAIF, 2010.

[7] Dairy Industry Act 1998; DDA, 2012.

[8] UBOS, 2014a; DDA, 2013.

- Seven chuff cutters, 200 milk cans and two metric tonnes of pasture seeds procured and distributed to farmers.

Project 1268-Phase one

- Two regional offices opened in Northern and Eastern Uganda.
- Hostels, laboratory and classroom block rehabilitated and fencing completed at Entebbe Dairy Training School.
- Processing equipment (mini dairy) for Entebbe Dairy Training School procured.

5.4.2 Findings

i) Financial performance

On average, the DDA has been receiving Ug shs 5.04 billion annually since FY 2010/11 for programme implementation. The financial performance of the DDA for half year of FY 2014/15 is presented in Table 5.8. The performance of the recurrent budget was excellent in terms of release and funds utilisation; the development budget performance was below average as only 35% of the approved budget was released and 55% of the available funds were utilised. The low absorption of development funds was due to: i) slow progress of rehabilitation works at Entebbe Dairy Training School ii) delayed initiation of procurement process for the mini-processing plant.

Table 5.8: Financial performance of DDA by 31st December 2014

Item	Approved budget (Ug shs)	Release (Ug shs)	Expenditures (Ug shs)	% of approved budget released	% release utilized (Ug shs)
Recurrent	4,044,202,000	2,107,546,967	1,807,563,573	52%	86%
Development Project 1268	1,000,000,000	350,451,210	193,904,343	35%	55%
Total	5,044,202,000	2,457,998,177	2,001,467,916	49%	81%

Source: IFMS data

Table 5.9 shows the key expenditures incurred by DDA during the reporting period. The recurrent budget was mainly spent on staff salaries while the development budget was expended on buildings, gratuity and machinery and equipment.

Table 5.9: DDA expenditures by 31st December 2014

Item	Amount spent (Ug shs)	Proportion of expenditure (%)
Recurrent expenditure		

Contract staff salaries	916,525,193	50.71
Gratuity payments	205,714,308	11.38
Allowances	72,033,945	3.99
National Social Security Fund	73,632,189	4.07
Medical and veterinary supplies	117,700,639	6.51
Travel abroad	109,169,373	6.04
Maintenance civil	68,689,824	3.80
Fuel, lubricants and oil	65,002,988	3.60
Welfare and entertainment	25,714,861	1.42
Other expenses	153,380,253	8.49
Total	**1,807,563,573**	**100**
Development expenditure – Project 1268		
Non-residential buildings	67,457,749	34.78
Machinery and equipment	24,526,962	12.65
Gratuity payments	37,276,655	19.22
National Social Security Fund	12,661,840	6.53
Printing, stationery and photocopying	9,234,000	4.76
Welfare and entertainment	8,305,047	4.28
Other expenses	34,442,090	17.76
Total	**193,904,343**	**100**

Source: IFMS data

ii) Physical performance

a) Past performance

Between FY 2011/12 and FY 2013/14, the following key outputs and outcomes were achieved by the DDA[9]:

- The total premises and equipment inspected increased from 564 premises/equipment in FY 2011/12 to 723 premises/equipment inspected in FY 2013/14.
- The number of rural milk collection centres countrywide increased from 308 in FY 2011/12 to 1,107 in FY 2013/14;

[9] DDA, 2014; DDA, 2014a; DDA, 2013; DDA, 2012.

- Two regional offices were set up in Mbarara district for the Southwestern region and Malaba/Busia for the Eastern region; an office was set up at Entebbe airport to monitor dairy exports and imports.
- Various milk handling equipment were distributed to cooperatives and associations for quality assurance including 700 stainless buckets, 700 strainers and scoops, 10 portable milking machines.
- Dairy stakeholders trained in hygienic milk production and handling, silage making and value addition increased from 1,551 in FY 2011/12 to 3,479 in FY 2013/14.

b) Field Findings

The overall physical performance of the DDA during half year FY 2014/15 is summarized in Table 5.10. Three (75%) out of the four key outputs for the recurrent budgeted were substantially achieved; good performance was noted for the development budget.

Table 5.10: Overall performance of Vote 121 DDA and Project 1268 Dairy Market Access and Value Addition by December 2014

Annual Output/target	Achievement	Remarks/challenges
Vote 121 – recurrent		
About 1,600 farmers, 50 small scale processors and 400 milk traders trained on various aspects along the value chain	A total of 31 small scale processors (124 %) In Lyantonde Town Council and 893 (112%) farmers from various districts were trained. No Milk traders were trained (0%).	*The half year target was achieved for processors and farmers and no progress was registered for milk traders.*
Seven chuff cutters, 200 milk cans and two metric tonnes of pasture seeds procured and distributed to farmers.	Two milk cans, one milk cooler and four chuff cutters were distributed to farmers in Isingiro, Ntungamo and Rukungiri; 165 bags of napier stems and 125 kgs of centrosema were procured.	*Target was partially achieved.*
A total of 1,500 dairy premises/equipments inspected and registered	A total of 877 dairy premises/equipments were inspected; out of which 700 premises were licensed and registered. And 100 road milk tankers were inspected.	*Half year target was achieved.*
Dairy quality standards enforced and dairy national laboratory accredited – 500 milk product samples analysed	A total of 1,087 milk and milk products samples were analysed	*Target was achieved*
Project 1268 – development		
Two regional offices opened in Northern and Eastern Uganda	One regional office opened in Eastern Uganda in Soroti district.	*Due to funding constraints, opening of the Northern regional office was differed to FY*

		2015/16
Hostels, laboratory and classroom block rehabilitated and fencing completed at Entebbe Dairy Training School	Rehabilitation works that started in FY 2013/14 were still ongoing focusing on roofing, fencing and the water and sewer systems.	*The rehabilitation works were behind schedule by one year.*
Processing equipment (mini dairy) for Entebbe Dairy Training School procured	Procurement of processing equipment had commenced.	

Source: Field findings; DDA QI and Q2 FY 2014/15 performance reports.

Entebbe Dairy Training School and the regional offices in Mbarara/South Western, Soroti/Eastern and Malaba/Busia were monitored to assess and verify progress in programme implementation. The findings are presented below.

a) Entebbe Dairy Training School

Background

Entebbe Dairy Training School is located in Old Entebbe Vet village Kigungu parish Entebbe Municipality in Wakiso district. The school was established in the 1960s and was later divested in the 1990s. The DDA started the process of rehabilitating the dilapidated school structures in FY 2013/14 using funds under Project 1268 Dairy Market Access and Value Addition. It was planned that Phase 1 of the rehabilitation of Entebbe Dairy Training School would commence in FY 2013/14 and be completed in FY 2014/15.

A contract was awarded to M/s BAKS Construction Company in FY 2013/14 to undertake works at the school including fencing, re-roofing and external painting and plumbing. The company failed to provide a performance bond resulting in termination of the contract. The contracting process was repeated leading to a time loss of one year in undertaking the works.

Financial performance

Three companies were contracted in June 2014 to undertake Phase I civil works at Entebbe Dairy Training School. The financial performance of the three contracts is presented in Table 5.11: Slow absorption of funds was noted averaging 64% for the three contracts.

Table 5.11: Financial performance of DDA contracts at Entebbe Dairy Training School by 23rd February 2015

Contractor	Lot/Scope of works	Contract sum (Ug shs)	Amount paid (Ug shs)	Balance (Ug shs)	% funds paid
M/s Honest Contractors	Lot 1: Roofs Replacement and Ceiling works	333,091462	246,743,248	86,348,214	74%
M/s Rubex Technical Services Limited	Lot 2: part Fencing and Other External Works	221,246,083	125,038,894	96,207,189	57%

M/s Nato Engineering Company Limited	Lot 3: External Wall Painting. Water Supply and Sewage Disposal works	185,103,555	103,507,057	81,596,498	56%
Total		**739,441,100**	**475,289,199**	**264,151,901**	**64%**

Source: DDA Contracts; DDA financial performance Reports

Physical performance

Works on the three contracts commenced in June 2014 with a completion date of October 2014. However, progress in rehabilitation works was slow and the completion date was extended to 19th December 2014. By 23rd February 2015, the following physical progress was noted for the three contracts:

Newly roofed classroom block (foreground) and factory block (behind) at Entebbe Dairy Training school

Lot 1: Roofs Replacement and Ceiling works

Replacement of roofs and dilapidated ceilings was completed for eight structures namely: classroom block, factory block, milking parlor, store, garage and two staff houses. It was estimated that about 90% of the works were completed. The contractor was still correcting defects in the roofing work.

Lot 2: part Fencing and Other External Works

The completed works included chain-link fencing, guard house, five gates, retaining walls at factory block and some of the drainage works around the classroom and factory blocks. The parking yard was substantially completed.

Pending works included; putting the final layer of bitumen on the parking yard, completing the drainage systems around the classroom and factory blocks. The five gates that were installed were all too small to allow entry of larger vehicles. It was reported by the school management that the contractor had agreed to replace the gates. It was estimated that about 70% of the works were completed.


Left: Completed guard house and one of the small gates at Entebbe Dairy Training School
Right: completed chain link fencing

Lot 3: External Wall Painting. Water Supply and Sewage Disposal works

Completed works included external wall repairs, first and second external painting of buildings, piping systems and manholes, erection of stands for the water tanks, and basement the factory water tank. Pending works included mounting the tanks and connecting toilets in all building to the water source. All the materials needed to complete the works were on site. It was estimated that about 75% of the works were completed.


Left: Painted factory block Right: Basement for factory tank in Entebbe

Challenges

i) The civil works were behind schedule by a full financial year arising from the protracted procurement process of a second contractor after termination of the first contractor who lacked capacity to undertake the works.
ii) Slow completion of works due to inadequate workers on site and delivery of poor quality materials by the contractors that were repeatedly rejected by the project management committee.
iii) The installed gates did not meet the specifications in the bills of quantities.

Recommendations

i) The DDA should ensure that procured contractors fully mobilise their resources to undertake the allocated civil works in time.
ii) The DDA should ensure that the five substandard gates are replaced by the contractor.

a) Malaba/Busia Regional Offices

Background

The DDA Malaba office is located in Tororo district at Malaba border post while the Busia office is at Busia border post in Busia district. Both offices are centrally managed by staff based at the Malaba office. The offices were opened in 2012 and staffed in December 2013. These offices inspect and monitor the quantity and quality of dairy imports and exports to ensure that they conform to safety regulations as contained in the Uganda Dairy Industry Act 1998 and regional and international obligations.

Financial performance

By December 2014, the Malaba/Busia regional office received a total of Ug shs 37,971,680 that was fully expended on staff salaries, fuel, allowances and other operational expenses. The office also received one laptop and data for the Automated System for Customs Data (ASYCUDA).

Physical performance

The annual performance target for the regional offices was that 30 consignments of imports and 30 consignments of exports would be inspected and verified.

- By December 2014, the Malaba/Busia regional offices had undertaken documentary, identity and physical checks and recorded data of all dairy imports and exports; and participated in cross border security meetings.
- A total of 92 consignments (306% of the target) of dairy imports weighing 1,245.89 metric tones were inspected and verified. The Ultra Heat Treated (UHT) milk accounted for 77% of the tonnage of all imported dairy products, followed by yoghurt (11%), ice cream (9%), butter cheese (1%) and therapeutic milk (1%).
- A total of 267 consignments (890% of the target) of dairy exports weighing 4,438.97 tonnes were inspected and verified, mainly through Busia border. Of the total tonnage exported, Full Cream Milk powder constituted 48%, UHT milk 33%, Skim milk powder (17%) and butter (2%).
- Introduction of the ASYCUDA computer system at the regional offices in September 2014 led to increased efficiency in tracking imports and exports; better control of product quantity; and improved compliance to regulations by the exporters and importers.
- The ASYCUDA system had led to increased detection of expired products. The poor quality products were stopped from importation. However, information was not available for the type and quantity of imports that had been rejected.

The DDA had set very low performance targets for the Malaba/Busia regional office in FY 2014/15. These targets were based on previous estimates when most importers and exporters avoided the verification process due to lack of a computer tracking system. These targets should be revised to reflect the reality of the volumes of consignments handled, after the introduction of the ASYCUDA system.

Challenges

1) Delays in clearance of import/export consignments due under staffing. The average time taken to clear a consignment was 2.7 days, above the recommended two days by the Uganda Revenue Authority.
2) Failure to inspect some of the consignments especially in the night due to lack of an institutional vehicle to move between Malaba and Busia borders that were 66km apart. The re-allocation of the verification shed 4kms from Malaba town increased the operational costs.
3) Inadequate/poor verification of product quality due to lack of an operational laboratory for undertaking confirmatory tests.

Recommendations

1) The DDA should recruit an additional five staff for the regional offices (three in Busia and two in Malaba). Alternatively, the DDA should collaborate and provide allowances

to MAAIF staff at the border, through service contracts so that they support the regional offices.

2) The DDA should provide one vehicle to serve the two regional offices.
3) The MAAIF should equip the existing laboratory at Malaba border post with key equipment including a cryoscopy[10], antibiotics kit and consumables.

Mbarara/South Western Regional Office

Background

The regional office is located in Mbarara Municipality and serves 22 districts namely: Mbarara, Isingiro, Ntungamo, Kabale, Kisoro, Rukungiri, Kanungu, Rakai, Kyegegwa, Kabarole, Bundibugyo, Mitooma, Bushenyi, Sheema, Buhweju, Ibanda, Kiruhuru, Lyantonde, Kamwenge, Kyenjojo, Ntoroko and Kasese.

Financial performance

The Mbarara regional office had an approved budget of Ug shs 153,322,556 of which Ug shs 77,764,050 (51%) was released and expended. Table 5.12 shows the key expenditures incurred by December 2014. Most resources were used for inspecting dairy premises and stakeholder trainings.

Table 5.12: DDA expenditures at Mbarara regional office by 31st December 2014

Output	Amount spent (Ug shs)	% total amount spent
Stakeholders trained in hygienic milk production and handling	19,355,500	25
Pasture and forage technologies procured, distributed and established	16,380,000	21
District platform meetings held	7,901,000	10
Surveys and technical assessments conducted	2,254,750	3
Dairy premises, factories, road tankers inspected	26,745,300	34
Dairy standards enforced	5,127,500	7
Total	**77,764,050**	**100**

Source: Field findings; South Western region Q1 and Q2 performance reports

Physical performance

The following outputs were achieved by the Mbarara/South Western Regional office by December 2014:

[10] This is the main equipment mentioned in the Dairy Act and regulations for checking product quality.

- A total of 484 (81%) milk handling premises out of the targeted 594 premises were inspected; out of which 256 (43%) premises complied with the minimum standards.
- Thirty three (138%) operations were undertaken to enforce dairy standards and regulations against a target of 24 operations; 52 premises were closed down for non-complaince with regulations.
- A total of 31 small scale processors were trained in business entrepreneurship and product development.
- A total of 505 samples of milk dairy products were analysed for quality and safety. Violations of standards especially in raw milk, yoghurt and UHT samples was due to addition of water, poor hygiene and presence of yeast and moulds.
- Twelve farms were supported in the establishment of pastures in the districts of Isingiro, Ibanda, Rukungiri, Kiruhura and Sheema; against a target of 6 farms (200% achievement of target).
- A total of 950kgs of sorghum seed that was offered by Amos Dairies was distributed to farmers in Rukungiri, Ntungamo, Kiruhura, Sheema, Isingiro and Mbarara. Target was 1,125kgs implying 84% of target was achieved.
- A total of 165 bags of napier stems and 125kgs of Centrosema were procured. It was planned that the seeds would be distributed in Q3 FY 2014/15.
- Farmers in the region were mobilized for training on various aspects; however, most training was differed to subsequent quarters due to inadequate funding.
- A structural design for 20 milking parlors and stores that were to be piloted was developed.
- Eighteen dairy stakeholder platform meetings were held in the districts of Kamwenge, Kabarole, Bundibugyo, Ntoroko, Kyenjojo, Kyegegwa, Kasese, Rakai and Lyantonde, against a target of 12 meetings (150% achievement of target).
- Sixteen surveys for benchmarking dairy cooperatives and farmers were carried out in Isingiro, Kamwenge, Sheema, Mbarara, Isingiro, Ibanda and Ntoroko districts, against a target of 20 (80% achievement of target).
- The 300 kgs of chloris pasture seeds were not delivered.

Challenges

i) Some targets were not achieved due to inadequacy and late disbursement of funds; Q2 funds for training were received in mid-December 2014.
ii) The inputs delivered from DDA headquarters did not match the Local Purchase Order (LPO); 300 kgs of chloris pasture seeds were not delivered as per LPO.
iii) Inadequate reach to farmers and other dairy stakeholders due to limited staffing of the regional office, in light of the vastness of the region to be covered (22 districts). Some districts like Ntungamo, Mitooma and Buhweju were not reached by DDA staff by December 2014.
iv) Inability to comprehensively assess the quality and safety of milk and milk products and respond to hazardous conditions in the dairy sector due to lack of an operational laboratory.
v) Low production and productivity of animals due to inadequate and inaccessible good quality pasture seeds.

Recommendations

i) The DDA should ensure timely disbursement of funds as approved.

ii) The DDA should ensure that suppliers deliver to regional offices inputs as specified on the LPO.

iii) The DDA should partition the region into four sub-regions that should be manned by an additional four newly recruited staff.

iv) The DDA should collaborate with MAAIF and other willing districts in the South Western region to establish a fully equipped laboratory for microbiology and chemical testing.

v) The DDA should procure and distribute adequate good quality seeds to the farmers.

Soroti/Eastern Regional Office

Background

The office is located in Soroti Municipality in Soroti district. It became operational in September 2014 and operates in 23 districts in four sub-regions: i) Teso sub-region – Soroti, Serere, Kaberamaido, Bukedea, Amuria, Katakwi, Kumi and Ngora districts ii) Bugisu sub -region – Bududa, Mbale, Sironko, Bulambuli and Manafwa districts iii) Karamoja sub-region – Moroto, Nakapiripirit, Abim, Kotido, Amudat, Kabong and Napak districts iv) Sebei sub-region – Kapchorwa, Kween and Bukwo districts.

Financial performance

By 31st December 2014, the Soroti regional office had received and fully expended Ug shs 7,313,000 mainly on training farmers, holding meetings with stakeholders and inspection of dairy premises.

Physical performance

By 31st December 2014, the following activities/outputs were achieved by the Soroti regional office:

- Market surveillance and inspection visits were undertaken in 12 supermarkets in Soroti town; four supermarkets and 19 milk handling premises in Mbale district; and other premises in Teso and Karamoja sub-regions.

  The process however, was constrained by limited resources *"We are only able to visit every dairy premise once due to limited operational funds. Thus, we do not provide feedback or reports to the proprietors of the inspected dairy premises to enable them improve their milk and milk products handling practices"* said the staff at Soroti regional office.

- A total of 91 dairy farmers benefitted from on-farm training in silage making. The farmers belonged to Bugusege Women Livestock Cooperative Sociaty in Sironko district,

Kapchorwa Women Community Development Association and Bududa Dairy Association.

- Visits to benchmark the dairy industry were undertaken in Napak, Kotido, Moroto and Nakapiripit districts. It was established that there were no milk handling places/facilities and established dairy farmer groups in Karamoja. Poor hygiene was noted in milk production and handling across the region.
- Support was extended for the formation of Bufutsa Dairy Cooperative Society in Bushika sub-county in Bududa district.
- Thirty dairy farmers in Kolir sub-county in Bukedea District were sensitized and trained about formation of a cooperative and hygienic milk production and handling.
- Backstopping was offered to the proprietor of Atlas Kobwin Dairy farm in Kobwin sub-county in Ngora district.

Challenges

- Most planned activities were not achieved and outreach to farmers and dairy stakeholders was low due to insufficient funding. On average, only one farmer group would be met out of over 20 groups in a district.
- Poor quality and safety of dairy products in the region due to inadequate inspection visits and follow up by staff.
- Lack of laboratory facilities to test and ensure safety of milk and other dairy products.
- Low adherence to dairy regulations by farmers due to unavailability of milking cans, coolers and other equipment on the market.

Recommendations

i) The DDA should allocate more funding to farmer training and field demonstrations.
ii) The DDA should ensure that the staff are adequately facilitated to undertake regular inspection and follow up of dairy premises.
iii) The DDA should establish a functional laboratory in the region for testing the quality of dairy products.
iv) The DDA should procure and avail dairy equipment to farmers at subsidized prices.

5.4.3 Analysis

Link between financial and physical performance

There was a close link between the financial and physical performance for the DDA recurrent budget during July to December 2014. In regard to the recurrent budget, the delivery of 75% of the planned outputs closely matched the high resource absorption of 86%. Some inputs were still under procurement hence less than the expected outputs.

There was a poor link between the financial and physical performance of the DDA development budget. Whereas the funds release was very low (35%) and absorption poor (55%), the delivery of outputs was good in terms of rehabilitation works at Entebbe Dairy Training School (on

average at 78% completion rate), opening of the Soroti office and undertaking various procurements.

The good physical performance was associated with the fact that rehabilitation works at Entebbe were behind schedule by one year and had already benefitted from funds in FY 2103/14. The regional offices were perfoming well despite the inadequate resources as they had access to fuel cards that enabled staff to carry out monitoring work at minimal cost.

Achievement of Targets

The DDA exhibited good performance in achievement of planned targets in the half year:

- 75% of the outputs under the recurrent budget were achieved;
- 78% of the rehabilitation works under the development budget were achieved; however, the works were behind schedule by one year. Other key targets like opening of a regional office where achieved.
- However, the regional offices did not achieve some of the planned outputs and targets.

Comparative analysis

The performance of the three regional offices varied with the Malaba/Busia office surpassing all the set targets, followed by Mbarara/South Western Office and Eastern office. The differences in performance were associated with the following factors:

- The installation of the ASYCUDA computer system at Malaba/Busia office in September 2014 increased efficiency in tracking imports and exports and controlling product quality and safety. However, it was noted that the set targets were extremely low giving a false impression of over-performance.
- The Mbarara/South Western office that was established several years ago was better staffed and facilitated then the other offices, hence the high level of performance. By December 2014, Mbarara/South Western office had received Ug shs 77,764,050 compared to Ug shs 37,971,680 released to the Malaba/Busia office and Ug shs 7,313,000 for Soroti/Eastern regional office.
- The Soroti/Eastern office was still in its infancy, having been set up in September 2014. The limited funds that were provided to this office were not adequate to deliver any meaningful outputs.

Implementation challenges

- Inadequate and untimely release of funds from DDA headquarters to the regional offices
- Low capacity of contractors at Entebbe Dairy Training School. The civil works were behind schedule and the quality of gates that were delivered was poor.
- Inadequate staffing at the regional offices leading to delayed clearance of import/export consignments at Malaba/Busia office; and few inspection visits and low outreach to farmers and other stakeholders at the Mbarara and Soroti regional offices.
- Lack of functional laboratories at the regional offices to assure milk and milk products quality and safety.

- Low adherence to dairy regulations due to unavailability of milking cans, coolers and other dairy equipment on the market.

5.4.4 Conclusion

The overall performance of the DDA is rated as very good (70%). The release (52%) and expenditure (86%) performance of the recurrent budget was good and this was matched by high delivery of outputs (75%). The release and expenditure performance of the development budget was below average; but the physical performance was very good (78%) for the rehabilitation works. However, this excellent performance was watered down by the average performance of the regional offices which did not achieve some of the planned outputs.

5.4.5 Recommendations

i) The DDA should increase allocations to the regional offices for training dairy stakeholders, technology demonstration and inspection visits.
ii) The DDA should ensure that the contractors hired to undertake civil works at Entebbe Dairy Training School have adequate capacity (staffing, equipment and able to present a performance bond).
iii) The DDA should review enhance the staffing capacity at the regional offices.
iv) The DDA should collaborate with MAAIF and willing districts to establish operational laboratories at the regional level.
v) The DDA should procure and avail dairy equipment and inputs to farmers, small scale processors and cooperatives at subsidized prices. Most needed are milking cans, quality pasture seeds, milk coolers and chuff cutters.

5.5 Farm Development (Vote 010, Program 03)

5.5.1 Background

Uganda's agricultural sector is characterized by low yields due to slow adoption of technological innovations, poor management of pests and diseases, widespread degradation of soils and land, low mechanization and inadequate agricultural infrastructure[11].

To address these challenges, the government established the Department of Farm Development (Programme 03) in MAAIF in 1998. The department's mandate is to support, promote and guide the adoption of appropriate technologies in the development and utilization of farm machinery, soils, land and water resources for sustainable commercial agriculture in Uganda. The department offers technical support to project 1194 Labour Saving Technologies and Mechanisation. The Department also receives funds that are channeled to the Plan for Modernization of Agriculture (PMA) Secretariat as a wage subvention.

[11] GoU, 2014; MAAIF, 2010.

The semi annual monitoring for FY 2014/15 focused on the recurrent expenses of the Department, excluding the subvention to the PMA Secretariat.

The half year planned outputs of the programme in FY 2014/15 include the following:

- 33 irrigation and water harvesting sites technically supported and promoted in 33 districts.
- 14 sustainable land management technologies promoted and disseminated
- Four supervisory and technical backstopping visits on Sustainable Land Management (SLM) in Kasese, Rubirizi, Isingiro and Mitooma undertaken.
- Eight technical back stopping visits on irrigation and water harvesting technologies
- Draft Mechanisation Policy and Draft Irrigation Policy finalised
- Eight water user associations trained at Doho, Mubuku and Agoro irrigation schemes
- Two tractor make tests at Namalere conducted
- Training manuals on farm planning, water harvesting and small scale irrigation developed
- Twenty two valley tanks in districts of Wakiso, Luwero, Mukono, Nakaseke, Isingiro, Kiruhura, Mbarara, Kamwenge and Gomba districts constructed.

5.5.2 Findings

i) Financial performance

The revised budget for the Farm Development Department (Programme 03) was Ug shs 2,116,526,479 of which Ug shs 1.084 bn (51.25%) was released and Ug shs 1.066 bn (98.27% of the release) was spent by 31st December 2014. The release and expenditures were excellent. Of the total amount spent, Ug shs 797,341,733 (74.79%) was a wage subvention for PMA Secretariat.

The remaining balance of Ug shs 268,723,119 (25.21%) was fully spent by the Farm Development Department by December 2014 (Table 5.13). Expenditures were mainly on allowances, short term consultancy services, travel in land, and fuel.

Table 5.13: Farm Development Department expenditures by 31st December 2015

Expenditure item	Amount spent (Ug shs)	% spent
Consultancy services – short term	45,119,424	16.79
Allowances	52,860,748	19.67
Fuel, lubricants and oils	37,074,819	13.80
Staff training	20,280,650	7.55
Workshops and seminars	24,434,920	9.09
Travel abroad	14,428,683	5.37
Printing, Stationery	11,903,398	4.43

Travel inland	38,711,717	14.41
Other recurrent expenses	23,908,760	8.90
Total	**268,723,119**	**100.00**

Source: IFMS data

ii) Physical performance

a) Past performance

There was an overlap (repetition) between the outputs reported by the Department using the recurrent budget and those under the development Project 1194. The following were delivered by the Department between FY 2011/12 and FY 2013/14[12]:

- A total of 16 (17%) small scale irrigation/water harvesting demonstration sites were established against a target of 96 demonstration sites in three years.
- A total of 93 water reservoirs/ponds and valley tanks were rehabilitated by 30th June 2014. This and the above output were achieved using funds under Project 1194. The Department offered supervision and backstopping for the delivery of these outputs.
- Supervision and technical backstopping in 17 districts in Eastern and Western Uganda on sustainable land management and farm planning was undertaken.
- Draft Irrigation Policy and Draft Mechanization Policy developed
- Sustainable land management and irrigation schemes were supervised in Kamuli, Nakasongola, Nakaseke, Iganga, Bugiri, Butaleja, Lamwo and Kasese.
- Training manuals on farm planning, water harvesting and small scale irrigation were developed.

b) Field Findings

By 31st December 2014, the Department had registered limited progress on most of the outputs/targets (Table 5.14). Only two (22%) of nine relevant outputs were satisfactorily achieved.

Table 5.14: Physical performance of the MAAIF Farm Development Department by 31st December 2014

Planned output	Achievement	Remarks
Draft Mechanisation policy finalized	No progress	*The process of preparing the policy stalled. Preparatory meetings were not held.*
Draft Irrigation Policy finalized	The policy was discussed by	*Target was not achieved*

[12] MAAIF, 2014; MAAIF performance reports for various years; Field findings.

	Cabinet Secretariat and the Office of the Prime Minister and differed to MAAIF with comments.	
Four supervisory and technical backstopping visits on SLM undertaken in Kasese, Rubirizi, Isingiro and Mitooma	No progress	*MAAIF reported that the funds were insufficient to undertake the visits; the districts lacked staff to undertake SLM activities*
A total of 33 irrigation and water harvesting demonstration sites technically supported and promoted in 33 districts.	No progress as the procurements for the irrigation facilities had just been initiated.	*Only eight out of 33 districts had submitted names of the sites were the installations would be made.* *The framework contracts that were signed on 21st November 2013 expired on 20th November 2014.*
Two tractor make tests conducted at Namalere	One tractor test was conducted at Namalere	*Target was partially achieved*
Eight water user associations trained at Doho, Mubuku and Agoro irrigation schemes	The MAAIF officer in charge at each scheme offered continuous backstopping to the user associations	*Target was achieved*
Nine technical backstopping visits on irrigation and water harvesting technologies	The MAAIF reported that the backstopping visits were undertaken in Mityana, Buikwe, Buvuma, Kiboga, Luwero, Mubende, Gomba, Bukomansimbi and Masaka.	*The officials in four sampled districts Buikwe, Buvuma, Luwero and Masaka were not aware of the backstopping visits.*
A total of 14 sustainable land management technologies promoted and disseminated	No progress	*Activity differed to quarter three.*
Twenty two valley tanks constructed in districts of Wakiso, Luwero, Mukono, Nakaseke, Isingiro, Kiruhura, Mbarara, Kamwenge and Gomba districts.	No progress	*This performance indicator was misplaced; funds for this activity are earmarked under the Labour Saving Project.*
Training manuals on farm planning, water harvesting and small scale irrigation developed	The training manuals were developed	*Target was achieved*

Source: Field findings

Observations:

- There was general lack of awareness about the activities of the Farm Development Department at local government level. Discussions held with staff from Production departments of the districts where the MAAIF reported to have worked expressed ignorance about the department activities.

- The department had many performance indicators and outputs under the development budget that were also repeated under the recurrent budget. It is difficult to discern under performance in the use of the recurrent budget when the development budget outputs are over performing. This allows use of the development budget to achieve some of the activities under the recurrent budget.

Challenges

i) The districts lacked staff in the Production Department who could be backstopped by MAAIF.
ii) Most planned activities were not implemented due to the inadequate budget that was allocated to the Farm Development Department. The lack of funds for farm development at the districts limited adoption of recommended SLM practices.

Recommendations

i) The MoPS and districts should fast track recruitment of District Agricultural Engineers and Agricultural Officers in the Production Department
ii) The MAAIF should re-prioritise the ministry budget and allocate more funding to the Farm Development Department, in line with the approved workplan.
iii) The MFPED/MAAIF should expand the scope and amount of the PMG to finance SLM activities in districts.

5.5.3 Analysis

Link between financial and physical performance

There was a weak link between the financial and physical performance of the MAAIF Farm Development Department with regard to the recurrent budget. By 31st December 2014, the department had received and fully expended Ug shs 268,723,119 (100%) mainly on travel, allowances, consultancy services and fuel. Only 22% of the planned outputs were achieved.

Although Ug shs 75,786,536 (28%) of the funds were spent on travel inland and fuel, there was no evidence of the Farm Development Department activities in the sampled districts.

Achievement of Targets

The achievement of set targets was below average. Only two (22%) of the nine outputs were satisfactorily achieved by 31st December 2014.

Implementation challenges:

i) Lack of staff in the district production department to work with
ii) Some of the outputs that were specified under the recurrent budget were overambitious requiring more resources than what was allocated to the department.
iii) Failure of districts to adopt and scale up the recommended SLM practices due to lack of a budget for farm development.

5.5.4 Conclusion

Overall, the performance of the MAAIF Farm Development Department by 31st December 2014 was rated as below average (22%). Funds were 100% spent but the achievement of outputs was low. The sampled districts expressed unawareness about the activities that the department reported as having been implemented in the local governments by half year.

The processes of developing the Irrigation and Mechanisation policies that were commenced in FY 2013/14 had not been concluded by 31st December 2014. If the current pace of implementation is continued, it is unlikely that the annual outputs for FY 2014/15 will be achieved.

5.5.5 Recommendations

i) The MAAIF should review the outputs/targets under the recurrent and development budget of the Farm Development Department to remove overlaps. The performance indicators and targets of the recurrent budget should be made explicit and clearer.
ii) The MAAIF, MoPS, MFPED and districts should fast track implementation of the single spine system at the local government level and ensure that all the vacancies in the production departments are filled up.
iii) The MAAIF/MFPED should re-prioritise the sector budget to provide resources for farm development within the production and marketing grant (PMG).
iv) The MAAIF should fast track the finalization of the Irrigation and Mechanization policies.
v) The MFPED should task MAAIF to explain why resources were spent 100% and most outputs not achieved.

5.6 Increasing Mukene for Home Consumption (Project 1165)

5.6.1 Background

The fisheries industry is a major source of income and employment for Ugandans. Although the Nile perch fishery is still the major contributor of income to the fisher folk, mukene fishery has emerged and contributes 44% to the total catch (NaFIRRI, 2006). The mukene (silver fish) industry is facing serious challenges of poor product quality and unavailability of improved fishing technologies.

Project 1165 in MAAIF aims at addressing these challenges through two key objectives: i) to provide small community based infrastructure for Mukene fish processing and handling including drying racks, stores, processing and packaging materials and mechanical dryers ii) to promote linkage of fisher men and artisan processors to cooperative and marketing institutions.

The planned outputs for the period 2010 to 2015 are: a) a total of 24 drying racks, one store and four feed mills promoted b) two fisher groups supported with four fish mills c) Capacity of Beach Management Units (BMUs), women and youth built d) one Strategy and National Management Plan prepared e) suitable fishing crafts such as catamarans promoted f) four new mukene products promoted among fishers, artisans, women processors and investors.

The half year planned outputs for the project in FY 2014/15 were:

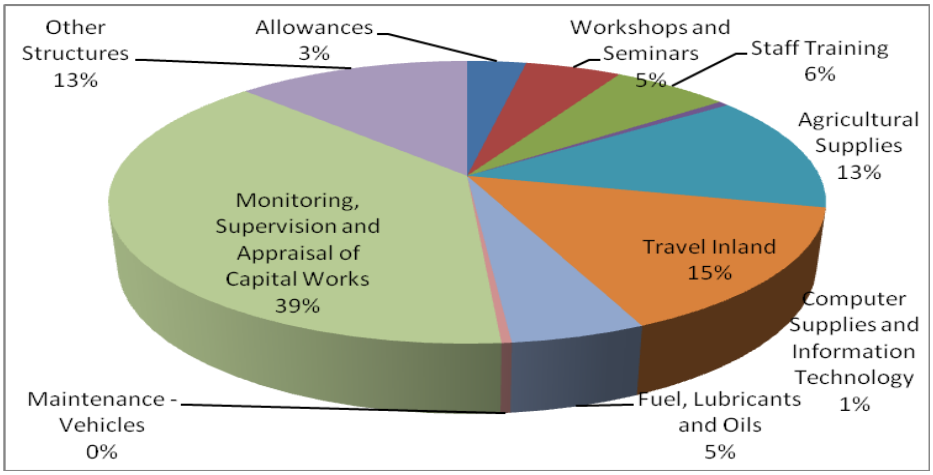
- One fish store constructed in Hoima district
- Four mukene drying racks constructed in each of the two districts Bullisa and Serere
- Six mukene drying racks constructed in Kalangala district
- Two groups of traders, exporters and processors supported to promote fish feed production and marketing
- Survey on existing boat designs and fishing grounds undertaken
- Three new Mukene products promoted among the stakeholders
- Civil works completed and equipment installed in the following landing sites: Kiyindi, Lwampanga, Butiaba and Bukungu
- Fish movement permit collections monitored
- District, women and youth training for in value addition skills.

5.6.2 Findings

i) Financial performance

The FY 2014/15 revised budget for this project is Ug shs 1.311 bn. By 31st December 2014, a total of Ug shs 684,488,292 (52%) had been released representing excellent performance. Expenditure performance was average as Ug shs 325,362,614 (47.5%) was spent out of the total releases. The low resource absorption was attributed to the delays in completion of civil works and payments to contractors (Figure 5.5).

Figure 5.5: Expenditure performance of the Increasing Mukene for Home Consumption Project by 31st December 2014



Source: IFMS Data FY 2014/15

The bulk of expenditure was mainly on monitoring, supervision and appraisal of capital works, other structures and agricultural supplies which was in line with the delivery of the planned outputs.

ii) Physical performance

a) Past Performance

In FY 2013/14, the MAAIF implemented the following key activities/ outputs[13];

- Four Mukene drying racks at Namakeba landing site in Buvuma district were constructed.
- Contract works for four Mukene drying racks at Walukuba landing site in Bullisa district and five drying racks on Lake Kyoga in Serere district were initiated.
- Mapping of fishing grounds and breeding areas where catamaran and other boats operate in Kiyindi, Kalangala, Bullisa, Buikwe and Jinja was done.
- Procured laboratory equipment including a Dish Water, Water balk, incubator Washing Machine, Front and Top loading Autoclave, fridge freezer and Deep freezer.
- Signed a contract for construction of a Mukene store in Buikwe district and a follow up was made on the signing of the Mukene store contract and Kiyindi construction site.
- Initiated the procurement process for construction of Mukene Drying racks on Lake Kyoga in Serere district.

b) Field findings

The overall half year physical performance is summarized in Table 5.15. The performance was good during the reporting period. Three (50%) of the six planned outputs were satisfactorily completed; two outputs were partly achieved and one output was not achieved.

Table 5.15: Physical performance of Increasing Mukene for Home consumption project by 31st December 2014

Planned Output	Achievement	Remark
Complete civil works and equipment in the following landing sites; Kiyindi (Buikwe), Lwampanga (Nakasongola), Butiaba (Bullisa) & Bukungu (Buyende).	Completed civil works of fish store at Kiyindi landing site; Procurement processes were in advanced stages for site works including roads and park yards, walkways, gates fencing, landscaping at Bukungu, Butiaba, and Lwampanga landing sites. The equipment was installed at the ice plant in Nakasongola.	*Target was partly achieved. The lengthy procurement process delayed implementation.*

[13] BMAU Reports of previous monitoring; MAAIF, 2014

Four Mukene drying racks at Kagwara landing site on Lake Kyoga in Serere district and 4 at Walukuba landing sites on Lake Albert in Bullisa district constructed.	Completed construction of 4 drying racks in Walukuba landing site. The contractor was mobilizing materials at Kagwara landing site in Serere district.	*50% achievement of half year target.*
Sustainable crafts on Buvuma landing in Buvuma districts promoted.	The district acknowledged receipt of the two boats. However, the boats had not yet been joined to form the catamaran and they were taken over by a politician.	*Target was partially achieved*
District, women and youth on Lake Victoria trained in value addition skills.	30 artisan women processors and youth on Lake Victoria were trained in value addition on Mukene	*Target was achieved*
Construct, monitor and supervise one Mukene store in Hoima district.	Procurement process was ongoing for the construction of Mukene store at Runga landing site in Hoima.	*Target not achieved.*
Undertake monitoring of fish movement permit collections and Mukene fish levy payments in regional fish trade and marketing information collected from Bundibugyo, Hoima and Ntoroko.	Monitoring of fish movement permit collections and Mukene fish levy payments in regional fish trade undertaken and marketing information collected from the three districts.	*Target was achieved*

Source: Field Findings

Three districts (Buikwe, Nakasongola and Buliisa) were civil works were ongoing were visited to assess implementation progress.

Buikwe district

Kiyindi landing site

Kiyindi landing site is located in Kiyindi village, Kiyindi parish in Najja subcounty. M/s Ssensu Limited was contracted at a sum of Ug shs 131,981,336 to construct a mukene store at Kiyindi landing site in Buikwe district. Civil works were scheduled to start on 4th October 2014 with the expected completion date of 24th December 2014.

By 30th January 2015, the store had been completed, the contractor was paid and the structure was in use. The beneficiaries in

Completed drying racks at Walukuba landing site in Bullisa district

Kiyindi fishers' community appreciated the good quality work done by the contractor.

Bulisa district

M/s Skibs Limited was contracted by MAAIF at a contract sum of Ug shs 70,399,840 to construct four drying racks at Walukuba landing site in Bullisa district and five racks in Kagwara landing site in Serere district. The contract period was two months from 29th December 2014 to 1st March 2015.

By 12th February 2015, civil works for construction of four drying racks in Kisingya LC1, Walukuba Parish, Butiaba subcounty had been completed.

Payments for the contractor were not yet made, pending completion of this project in Serere district. The contractor was mobilising materials at Kagwara landing site.

Nakasongola district

Lwampanga landing site

The district received the first class fish handling facility in Lwampanga sub-county under support for fisheries development funded by the African Development Bank (ADB) in FY 2012/13. The facility was supposed to be equipped with an ice making plant which could not be installed due to lack of power in the area.

Ice making plant and a water tank installed in Nakasongola town council

The MAAIF and the Nakasongola district Local Government agreed to relocate the ice making facility to Nakasongola Town Council, due to easy access to power, water and the landing sites. In FY 2013/14 the construction of the plant was undertaken by M/s Spencon. Pending works included installation of the tank and ice making plant, construction of the foundation, and power connectivity

In FY 2014/15, M/s Skibs Limited was contracted at a sum of Ug shs 58,320,000 to install a $3m^3$ reservoir tank on a structural steel fabricated tower for the ice plant, construction of the foundation and power connectivity. The MAAIF handed over the site on 3rd December 2014 and works started instantly.

By 9th February 2015, the foundation was constructed, a fridge and water tank installed. The pending activity was connecting the facility to power. However, it was noted that the facility required fencing, construction of parking yard and an access road that were not part of the scope for M/s Skibs Limited. The project had stalled due to absence of a high voltage power line.

There was an existing two phase power line near the facility which belongs to the National Backbone Infrastructure project that could be upgraded as advised by UMEME. The Contractor and MAAIF were in the process of seeking authority from this project to tap and upgrade this transformer.

Challenges

i) The facility lacked sanitation facilities.
ii) The facility could not be operationalized due to lack of a power source. And a parking yard.
iii) The facility was not easily accessible due to lack of an access road

Recommendations

i) The MAAIF should construct sanitary facilities, parking yard and an access road for this facility.
ii) The MAAIF should engage the National Information Technology Authority on upgrading the power.

5.6.3 Analysis

Link between financial and physical performance

The physical performance of the Increasing Mukene for Human Consumption project was commensurate to the financial performance. During the first half of the FY 2014/15, three (50%) of the six planned outputs were satisfactorily completed in line with the low resource absorption at 47.5%. Resources were not fully spent awaiting the completion of civil works by the contractors.

Achievement of set targets

Physical performance was fair during the reporting period. By 31st December 2014, 50% of the planned output targets were satisfactorily completed; 33% were partially achieved and 17% were not achieved. The procurement processes delayed the achievement of the set targets.

Implementation challenges

i) The delayed procurement processes affected implementation of planned activities.
ii) Lack of high voltage power source to connect the ice making plant in Nakasongola district.
iii) Misuse of catamaran boats by some politicians in Buvuma district as reported.

5.6.4 Conclusion

The performance of this project was rated as fair (50%) by 31st December 2014. The resource absorption was below average while only 50% of the planned targets were fully achieved.

5.6.5 Recommendations

i) The MAAIF should initiate procurement processes early at the start of the financial year
ii) The MAAIF should engage the National Information Technology Authority on upgrading the power

iii) The MAAIF should supervise and regulate the use of catamaran boats.

5.7 National Agricultural Research Organisation (Vote 142)

5.7.1 Introduction

Established by an Act of Parliament in 2005, the mission of the National Agricultural Research Organisation (NARO) is *"generation, adoption and dissemination of appropriate and demand driven technologies, knowledge and information through an effective, efficient, sustainable, decentralized and well coordinated agricultural research system"*[14].

The NARO activities are implemented through six research institutes and nine Zonal Agricultural Research and Development Institutes (ZARDIs). The NARO is implementing three development projects namely: Project 1139 Agricultural Technology and Agribusiness Advisory Services (ATAAS) Project 0382 Support for NARO and Project 1138 East Africa Agricultural Productivity Project (EAAPP). These projects are jointly funded by the EU, WB and DANIDA with counterpart funding from GoU.

Table 5.16: NARO financial performance by 31st December 2014

Item	Approved (Ug shs)	Contribution (Ug shs)		GoU Release (Ug shs)/%	GoU Expenditure (Ug shs)/%
		GoU	Donor		
Recurrent	34,826,267,000	34,826,267,000	0	13,845,598,073 (40%)	13,168,356,549 (96%)
Development	122,645,641,000	11,978,858,562	110,666,782,438	5,980,721,782 (50%)	5,128,191,883 (86%)
Total	157,471,908,000	46,805,125,562	110,666,782,438	19,826,319,855	18,296,548,432

Source: IFMS

Note: The development budget releases and expenditures are part of the basket funding and are shown in sections 5.7.2 and 5.7.3.

The half year monitoring focused on two out of the three NARO development projects namely the Agricultural Technology and Agribusiness Advisory Services (ATAAS) and Eastern Africa Agricultural Productivity Project (EAAPP). The findings are presented below.

5.7.2 Agricultural Technology and Agribusiness Advisory Services (Project 1139)

Background

The GoU introduced the Agricultural Technology and Agribusiness Advisory Services (ATAAS) in July 2010 to strengthen the linkages between research and extension services.

[14] www.naro.go.ug.

The summary project profile is presented in Box 5.2. By 30th June 2014, Components 2, 3 and 4 of the ATAAS project became dysfunctional with the phasing out of NAADS staff at the local government level. The monitoring work focused on the support to NARO Component 1 of the ATAAS project.

Box 5.2: Agricultural Technology and Agribusiness Advisory Services

Objective: Increase agricultural productivity and incomes of participating households by improving the performance of agricultural research and advisory service systems in Uganda.

Implementing institutions: National Agricultural Research Organisation (NARO) and National Agricultural Advisory Services (NAADS).

Original project period at inception: July 1, 2010 – June 30, 2015

Revised project period: 2011 – 2016

Estimated Total Project Cost: US$ 665.5 million funded by Government of Uganda and International Development Agency (IDA).

Project Components:

Component 1: Developing Agricultural Technologies and Strengthening the National Agricultural Research System (NARO).
Component 2: Enhancing Partnerships between Agricultural Research, Advisory Services and other Stakeholders (NARO and NAADS).
Component 3: Strengthening the National Agricultural Advisory Services (NAADS).
Component 4: Supporting Agribusiness Services and Market Linkages (NAADS)
Component 5: Program Management (NARO Secretariat and NAADS Secretariat).

Source: World Bank, 2010.

The planned annual outputs for the ATAAS component 1 for FY 2014/15 are:

- Promising technologies of the priority commodities developed and promoted
- Institutional capacity of research institutions built
- Research trials undertaken for priority commodities
- Appropriate soil and water management practices identified and promoted
- Appropriate agro-forestry technologies and practices identified and promoted
- Appropriate aquaculture and livestock technologies and nutrition practices promoted
- Plant genetic resources conserved
- Maize and rice varieties with appropriate consumer attributes developed
- Bean varieties with acceptable market qualities developed
- Improved coffee varieties and management options developed
- Forage technologies developed and promoted
- Soil fertility and soil management practices developed and promoted

Findings

i) Financial performance

The approved budget for the ATAAS project in FY 2014/15 was Ug 75,666,782,000 of which Ug shs 2.781 bn (3%) is the GoU contribution and Ug shs 72.885 bn (97%) is the donor component. By 31st December 2014, Ug shs 35.414 bn (47%) had been released to the NARO institutes (Table 5.17). Releases were below average for most institutes except for the NARO Secretariat, Competitive Grant System (CGS) and Audits.

Table 5.17: Releases to NARO Institutes by 31st December 2014

Institute	Annual Budget (Ug shs)	Balance brought forward (Ug shs)	Release (Ug shs)	% release
NAROSEC	51,637,230,024	-	26,336,115,012	51
CGS	2,343,263,260	-	1,171,631,630	50
NARL-SLM	1,516,110,685	-	1,158,386,085	76
NACRRI	1,813,154,820	251,159,863	553,288,705	31
NAFIRRI	1,242,465,373	19,108,583	410,616,343	33
NAFORRI	1,242,465,373	71,984,427	410,616,343	33
NALIRRI	1,242,465,373	71,707,208	410,616,343	33
NaSARRI	1,242,465,373	163,946,430	407,760,365	33
NARL	1,813,154,820	76,371,934	553,288,705	31
ABI ZARDI	1,034,951,548	27,886,245	358,737,887	35
BULINDI	1,034,951,548	5,269,255	358,737,887	35
KAZARDI	1,034,951,548	12,367,391	358,737,887	35
MUKONO	1,034,951,548	6,358,047	358,737,887	35
NGETTA	1,034,951,548	14,164,706	358,737,887	35
NABUIN	1,034,951,548	454,871	358,737,887	35
MBARARA	1,034,951,548	4,857,040	358,737,887	35
BUGINYANYA	1,034,951,548	42,576,143	358,737,887	35
RWEBITABA	1,034,951,548	333,119	358,737,887	35
NACORRI	1,242,465,373	153,518,778	410,339,816	33
KAMENYAMIGGO	579,477,594	-	144,869,399	25
I.AUDIT	437,500,000	-	218,750,000	50
		-		

Source: NARO Secretariat

By 31st December 2014, the NARO Secretariat had spent Ug shs 4.599 bn on constructing and rehabilitating infrastructures at the ZARDIs. The infrastructures included offices, laboratories, residential buildings, stores, animal infrastructure facilities, water, sewage and electrical works and screen houses. The supervising consultants are ID Forum Consultants. The contract period is 36 weeks ending August 2015. Table 5.18 shows the contract details and financial progress of the running contracts.

Table 5.18: Financial performance of ATAAS NARO infrastructure projects by 31st December 2014

Lot No.	Scope of works	Contractor	Contract sum (Ug shs)	Payments so far (30% Advance payment)	% physical progress to date
1	Rehabilitations of Laboratories at NaSARRI: Soil, Sorghum, and Entomology. Construction of Conference and Training facility; and a Laboratory at Ngetta ZARDI	Techno Three (U) Ltd	2,163,952,816	649,185,844	10
2	Construction of Office with a Conference facility, and Rehabilitation of Laboratory at Buginyanya; and Construction of Office with a Conference facility at Bulegeni	DRD Construction and Engineering Ltd	3,110,663,869	933,199,160	15
3	Construction of Conference and Training Facility, Laboratory, Store, and Director's House at NaBUIN ZARDI	Excel Construction Company Ltd	2,417,026,428	725,107,928	15
5	Construction of Conference and Training Facility, and Rehabilitation of Tissue Culture Laboratory at KaZARDI, and Construction of a Screen House at Karengere sub station.	Excel Construction Company Ltd	1,475,086,630	442,525,989	10
6	Construction of a Conference and Training Facility and Laboratory at Bulindi ZARDI	Nicole Associates Ltd	1,504,235,741	451,270,722	20
7	Construction of Conference and Training Facility at Kajjansi, and Nakyensasa; and Rehabilitation of NAROSEC Canteen.	Techno Three (U) Ltd	1,762,292,422	528,687,727	10

8	Construction of a Conference and Training Facility at Kamenyamigo and Mbarara ZARDI; and Rehabilitation of Water Works at Mbarara	Egy Trading and Engineering Projects Ltd.	2,899,722,268	869,916,680	10
	Total		**15,332,980,174**	**4,599,894,050**	

Source: NARO Secretariat

ii) Physical performance

a) Past performance

The following key outputs were delivered by NARO under the ATAAS project during December 2011 and July 2014[15]:

- Various technologies were developed and disseminated to farmers for the ten priority commodities – banana, cassava, maize, rice, beans, coffee, tea, livestock (dairy), livestock (beef) and fish. For example:
- 80 hectares of cassava multiplication fields were established at five ZARDIs; the variety was NASE 14. An additional 400 hectares were established on farmer fields in Lango, Central and Mid-West sub-regions.
- Ten new drought tolerant and three high yielding highland maize varieties were advanced to national performance trials. Three maize varieties were released and were being bulked by seed companies. These were: UH 5051, UH 5052 and UH 5053.
- Two banana varieties Kabana 6H and Kabana 7H were released and promoted at farm level in 11 districts in Northern and Eastern Uganda.
- A total of 52 mother gardens, each of 350 coffee bushes were established countrywide for multiplication of seven coffee wilt resistant varieties. Ten Robusta coffee varieties and four Arabica coffee varieties that were resistant to the wilt were in advanced stages of multi-location trials.

b) Field Findings

The performance of the ATAAS was assessed at five out of nine NARO ZARDIs that were randomly selected namely: Abi ZARDI in Arua district; Ngetta ZARDI in Lira district; Mukono ZARDI in Mukono district; Mbarara ZARDI in Mbarara district and Kachwekano ZARDI in Kabale district). The findings are presented below.

[15] NARO, 2014.

Abi ZARDI – Arua district

Background

The ZARDI is one of the NARO institutes located in Manibe sub-county Arua district. It is mandated to conduct and manage applied and adaptive agricultural research in the West Nile region. The ATAAS programme at Abi ZARDI supports infrastructure development and research. The infrastructure procurement for Abi ZARDI was centrally managed by NARO Secretariat.

Financial performance

The financial performance of the Abi ZARDI is shown in Table 5.19. By December 2014, Ug shs 204,087,794 (51.47% of total available resources) was spent on delivery of ATAAS outputs (Table 5.18). The bulk of funds were spent on technology identification and development (92%) including research trials, travel for researchers, payment of hired labour for the trials, procurement of veterinary drugs, agro-inputs, research materials and laboratory consumables and repair of vehicles.

Table 5.19: Expenditures of ATAAS funds at Abi ZARDI by December 2014

Expenditure areas	**Balance brought forward (a)**	**Amount Received (b)**	**Amount Spent (c)**	**Available balance (a)+(b)-(c)**
Technology Identification and Development	65,648,565	305,476,643	187,837,994	183,287,214
Enhancing Partnerships between Agricultural Research, Advisory Services, and Other stakeholders	0	25,374,999	16,249,800	9,125,199
Total	**65,648,565**	**330,851,642**	**204,087,794**	**192,412,413**

Data source: Abi ZARDI finance department

A major challenge was the late release of the Q2 funds on 23rd December 2014 leading to delayed/slow implementation of planned activities and a low resource absorption rate.

Physical performance

By 31st December 2014, eight ATAAS funded research projects were implemented under four research programmes at Abi ZARDI. In addition, infrastructure and equipment was directly procured and provided by the NARO Secretariat.

Programme 1: Crop Research and Development

Three projects focusing on cassava, cereals (maize and sorghum) and legumes (groundnuts and beans) were implemented under Programme 1.

Project 1: Development and commercialization of cassava varieties resistant to cassava brown streak virus and cassava mosaic disease in West Nile

The project aims at introducing and screening cassava varieties for adaptability and other attributes; analyzing production, processing and marketability of cassava in the West Nile region; establishment of a cassava stakeholder platform and dissemination of proven technologies and practices. The performance of project 1 during the reporting period is summarized in Table 5.20. Only half of the planned targets for project 1 were achieved.

Table 5.20: Performance of ATAAS Project 1 at Abi ZARDI by December 2014

Planned activity/output	Achievements	Remark
Establishment of crossing block with landrace and elite breeding cassava geno types	The crossing block was established	*Target was achieved*
Establishment of on-station trials on fertilizer response, characterization and conservation	The trials were established	*Target was achieved*
Four adaptive trials established	Six adaptive trials were established, one site in Moyo, Nebbi, Koboko, Adjumani, Maracha and on-station	*Target was achieved*
Two cassava processing technologies evaluated and promoted	A request for two machines was submitted to NARO Secretariat	*Target was not achieved*
One cassava multi-stakeholder innovation platform formed	No progress	*Target was not achieved*
Value chain analysis survey for cassava conducted	No progress	*Target was not achieved*

Source: Field findings

Cassava experimental trials at Abi ZARDI

Project 2: Introduction and adaptation of selected cereal crop varieties with end-user attributes

The project aims at improving and adapting new high yielding disease tolerant varieties of maize and sorghum; develop a sustainable seed multiplication and delivery system in the West Nile region and build capacity of farmers in cereal crop production. The progress in project implementation is presented in Table 5.21. The targets were partially achieved.

Table 5.21: Physical progress of ATAAS Project 2 at Abi ZARDI by December 2014

Planned Annual output	Achievements	Remark
Three well adapted superior varieties of sorghum availed to West Nile farmers	Improved sorghum varieties were collected and introduced; mult-location trials were established	*Half year targets were achieved*
Ten landrace varieties collected, characterized and conserved on station	Land race varieties were collected, characterized and performance evaluation undertaken	*Target was achieved*
Populations from crossed between Godo sorghum and elite lines developed	No progress	*Target was not achieved*
Three community based seed multiplication groups established and supported in quality seed multiplication	On farm demonstration and multiplication of adapted farmer preferred varieties of sorghum was undertaken on station	*Half year target was partially achieved*
Survey report on socioeconomics of sorghum production in the West Nile region	Conducted a cross-sectional survey in all the districts of West Nile	*Half year target was achieved*

Source: Field findings

Sorghum experimental trials at Abi ZARDI

Project 3: Participatory evaluation of improved Groundnuts and Beans technologies

The project aims at developing, screening, multiplying and disseminating appropriate agronomic technologies and foundation seed of promising groundnut and bean varieties. The implementation status of the project is shown in Table 5.22. Limited progress was registered in achievement of outputs for project 3.

Table 5.22: Physical progress of ATAAS project 3 at Abi ZARDI by December 2014

Planned Annual output	Achievements	Remark
Five superior improved bean and groundnut varieties availed to West Nile farmers	Recently released bean and groundnut varieties were screened for resistance on-station; evaluated the varieties at multi-location sites for stability and adaptability and designed integrated pest management technologies	*Half year target was partially achieved*
Three community based seed multiplication groups established and supported	No progress	*Half year target was not achieved*

Source: Field findings

Bean varieties under testing in screen houses at Abi ZARDI

Programme 2: Livestock and Fisheries Research and Development

Three projects were implemented under Programme 2 and the progress is presented below.

Project 4: Development of technologies that enhance aquaculture production and marketing through sustainable aquaculture practices in the West Nile region

The project aims at addressing challenges of poor quality fish seed, inadequate supplies of commercial aqua feeds, lack of fish hatcheries in the region and inadequate information of fish catch/market.

The key planned research output for the reporting period was: *Fish cage production system for Tilapia validated for farmer adoption*. By December 2014, potential areas for the cage production system were established and mapped in Adjumani district; information on the growth performance of tilapia was established; and the returns from cage farming at farm level were estimated. The cages were established at Onigo D fishing bay and the half year target was achieved. The key challenge was the incomplete research results due to lack of water quality assessment kits. Fish fingerlings were also provided to farmers. See case study farmer in Box 5.3.

Box 5.3: Case study of beneficiary of fish technologies from Abi ZARDI ATAAS in Arua district

Performance

Mr. Ataba Matthew's fish farm is located in Obopi West village Otravu parish Manibe sub-county. The farmer received advice from Abi ZARDI that helped him establish a 1,000 sq. metre fish pond. He acknowledged receipt of 3,000 tilapia fish fingerlings and 480 kgs of fish feed in August 2014 from the ZARDI as part of an adaptive research trial.

Fish pond stocked by Abi ZARDI ATAAS programme in Obopi West village

Challenges

i) Slow growth of fish due to the poor quality of feeds provided by Abi ZARDI. The feeds were contaminated with molds; fish that were expected to be at least 200 grams each after 5 months grew to 85 grams each on average.

ii) Uneven growth of fish and poor research results arising from the farmer being provided with fingerlings of different sizes and species.

Recommendations

i) The Abi ZARDI should ensure that fish feeds are well stored and of good quality before they are distributed to farmers.

ii) The Uganda National Bureau of Standards (UNBS) should quality assure all the inputs that are provided to farmers by NARO and MAAIF.

Source: Field findings

Project 5: Goat productivity improvement through nutrition, health and breeding management

The key planned research output for the reporting period was: *Two efficacious medical plants evaluated for recommendation to technology up-take pathways*. By December 2014, three medicinal plants were screened for phytochemical composition, acute organ toxicity profiles and in-vitro anthelmintic activity. These were Cassia nigricans (pilopilo), Aristolochia bracleolata (Etiringu) and Chamaecrista nigricans (Mala). The target was achieved.

Mubende goats on the nutritional programme at Abi ZARDI

However, two key challenges constrained project implementation: delays in acquisition of equipment for research and the lack of laboratory facilities.

Project 6: Improvement of dairy cattle productivity in West Nile region

Performance of project 6 is summarized in Table 5.23. Only one out of the three key performance indicators was achieved. Factors that constrained performance included the lack of a functional laboratory that made experimentation incomplete; the prohibitive cost of acquiring improved diary animals and the remoteness from artificial insemination facilities.

Table 5.23: Physical progress of ATAAS project 6 at Abi ZARDI by December 2014

Annual Planned output	Achievements	Remark
Five high yielding forage cultivars evaluated	More than 15 species and/or lines of improved forage were planted on-station and were undergoing evaluation. Adaptive trials were established in four sites in the zone including Moyo and Zombo District Farm institutes, Logiri sub-county in Arua district and Erusi sub-county in Nebbi district. Preliminary findings on the performance of Lablab, Napier 99 and B. Mulato were available.	*The half target was achieved.*
Locally available feed resources identified and recommended for dairy cattle feeding practices	Forty eight indigenous dry season feeds were collected for evaluation of nutritive quality. Preliminary results were available. Aurea molasses mult-nutrient block formula was being tested.	*Half year target was achieved.*
Ten zebu animals assessed for reproductive potential, growth and high performance	A survey was conducted to assess milk production and consumption in the region. Three animals were inseminated with a collaborating farmer in Arua district	*Half year target was partially achieved.*

Source: Field findings

Programme 3: Natural Resource Management and Research

One project was implemented under Programme 3 and the findings are presented below.

Project 7: Sustainable management of soil and agroforestry resources for improved crop sub-sector in the West Nile region

The project has two aims to: 1) develop and adapt agroforestry technologies that can enable integration of both fruit and non-fruit trees into the farming system while producing products that have high market value. 2) increase crop productivity in the region by integrated use of organic and inorganic fertilizers with minimum effect on the environment.

Agro-forestry component: the annual planned research outputs were: a) twenty fruit and non-fruit tree species established; b) four adapted varieties of mango, citrus and apple for technology uptake pathways; c) Five thousand established shea and tamarind seedlings; d) a document on production trends of shea products in the West Nile region. *The project under-preformed on this component by December 2014; only one output of documenting production trends in Moyo district Lefori sub-county was achieved as the project did not receive adequate funds*. *Research was still ongoing on grafting mangoes*

Soil fertility component: the annual planned research ouputs were: a) one optimum organic and inorganic soil nutrient integration recommendation b) one validated soil and water conservation technology for farmer use c) Two validated organic soil fertility improvement technologies for farmer use. *The project under performed on this component by December 2014: one output was partially implemented of initiating validation of organic soil fertility. This was undertaken in Nebbi and Kucwini sub counties in Nebbi district*.

Programme 4: Farming Systems Livelihood Analysis

One project was implemented under Programme 4 and the findings are presented below.

Project 8: Characterization of the Farming Systems in the West Nile Agro-ecological Zone

The main objective of the project is to establish and document the current status of farming systems and livelihoods in the West Nile Agro-ecological Zone.

The key research output for the reporting period was a Farming Systems and Livelihood Analysis Survey undertaken and the results documented.

The target was achieved; a survey was conducted and data was collected from at least 400 households from the eight districts in the zone. Preliminary findings were available.

Support by NARO Secretariat

The Abi ZARDI received furniture and two vehicles (a station wagon and pick up) in August 2014 that were directly procured by the NARO Secretariat. In addition, three fish tanks were

constructed and stocked with 3,000 catfish, 100 Angara and 5,000 Nile Tilapia fingerlings between July and August 2014. Four additional hatching tanks were under construction.


Left: Vehicle provided by NARO Secretariat Right: Ponds that were supported by NARO Secretariat at Abi ZARDI

Overall challenges at Abi ZARDI

1) The animal breeding programmes were underperforming due to lack of artificial insemination services within proximal areas in Northern Uganda.
2) Poor performance and follow up of on-farm adaptive trials due to lack of extension staff in the districts.
3) Untimely and poor implementation of research activities due to the mismatch between the funding flow schedules and the seasons. Research activities are season based as opposed to quarterly release of funds.

Recommendations

1) The NAGRC&DB should establish a regional centre in Northern Uganda for artificial insemination and liquid nitrogen services.
2) The local governments should recruit additional staff to collaborate with NARO in setting up on farm trials.
3) The MFPED/NARO should release research funds twice a year in July and January.

Kachwekano ZARDI - Kabale district

Background

The Kachwekano ZARDI (KAZARDI) is located in Kacwekano village Kagarama parish Bubale sub-county. The ZARDI operates in the South Western zone covering the districts of Kanungu, Rukungiri, Kisoro and Kabale. Priority commodities that are researched are apples, irish potatoes, fisheries, goats, sorghum, rice and cassava.

Financial performance

The KAZARDI received a total of Ug shs 358,718,000 of which Ug shs 249,634,982 (70%) was spent by 31st December 2014. Funds were not fully absorbed as the Q2 release of Ug shs 100 million was transferred late on 24th December 2014. The funds were spent as shown in Table 5.24.

Table 5.24: ATAAS expenditures at KAZARDI by 31st December 2014

Research programme	Payments (Ug shs)	% payments
Potato variety production	42,008,578	16.83
Sorghum, rice, cassava germplasm maintenance and multiplication	6,148,000	2.46
Improved breeds of goats, training and feeding management options	45,101,599	18.07
Fish species development and promotion	25,912,000	10.38
Apple varieties development and promotion	23,310,000	9.34
Soil nutrient management on upland rice crop productivity	30,000,000	12.02
Analysis of farming systems and livelihoods of farmers	10,543,000	4.22
Operational expenses, management of research	66,611,805	26.68
Total	**249,634,982**	**100.00**

Source: KAZARDI Finance department

In January 2015, the institute received an additional Ug shs 69,898,000 for two PHD students. By 3rd February 2015, Ug shs 7,684,000 (11%) had been paid to the students.

Physical performance

The semi-annual performance of the six ATAAS supported research projects at KAZARDI is presented below.

Project 1: Potato variety production

This research aims at development and promotion of quality potato varieties for enhanced productivity in Uganda. Table 5.25 summarises the physical performance of the project by end of December 2014. In light of the Ug shs 42 million that was utilized, the project performance was good at an average of 62%.

Table 5.25: Performance of ATAAS Potato project at KAZARDI by 31st December 2014

Annual planned outputs	Achievements	Remark
At least 100 F1 potato clones with resistance to late blight selected	26 local cultivars were been selected and planted in screen houses	*52% achievement of half year target*

At least 50,000 minitubers generated	22,700 minitubers and 18,000 plantlets were generated	*91% achievement of half year target*
At least 32 tonnes of basic potato seed produced	11 tonnes of basic seeds were produced and were in storage	*69% achievement of target*
Preliminary yield performance of at least five advanced clones multi-locational trials established	Six potato genotypes were planted in six sites (Kacwekano, Kalengyere, Rwebitaba, Buginyanya, Zeu and Kibimbiri)	*Target was achieved 100%*
150 farmers trained in seed development	A farmer needs assessment was done. Training was not conducted	*Output not achieved due to inadequate funds (0%)*

Source: Field findings

Left: Potato seed in storage at KAZARDI Right: Local cultivars of potato growing in screen houses at KAZARDI

Project 2: Sorghum, rice, cassava germplasm maintenance and multiplication

Due to inadequate staffing and funds, the project focused on maintaining existing gardens of the cereals and tubers during the reporting period. The physical performance of this project is summarized below (Table 5.26). The project performance was good despite the low resourcing levels. Cassava cuttings were obtained from mature gardens that did not require a high resource outlay.

Table 5.26: Performance of ATAAS Cereal/tuber project at KAZARDI by 31st December 2014

Annual planned outputs	Achievements	Remark
On-station maintenance breeding of sorghum and identification of most promising lines	Six early maturing short and high yielding varieties were identified and maintained	*Target was achieved*
20 cassava genotypes maintained on station for screening	Eight better performing varieties were selected and replanted at two sites (Kachwekano, Bugongi) for reassessment	*80% achievement of half year target*

At least 20 tonnes of cassava planting materials produced from five acres and availed to end users	A total of 144 bags (about 10 tonnes) of cassava cuttings were distributed – 98 bags to 24 farmers in Kanungu district and 46 bags to 12 farmers in Rukungiri district	*Half year target was achieved*
On station maintenance of breeding materials for rice	Data was collected and rice varieties were maintained at the ZARDI	*Target was achieved*
8 tonnes of foundation seed produced and availed to farmers	A total of 1,445kgs of upland rice breeder seed were acquired and distributed to 54 farmers (820kgs to 41 farmers in Kanungu and 625kgs to 13 farmers in Rukungiri district)	*37% of the half year target was achieved*

Source: Field findings

Project 3: Goat breeding and nutrition

The intervention aims at development of improved breeds of goats and feeding management options for enhanced productivity. Table 5.27 presents the summary semi-annual performance of the project. The project performance was fair and consumerate to the Ug shs 45 million that was utilised.

Table 5.27: Performance of ATAAS Goat project at KAZARDI by 31st December 2014

Annual planned outputs	Achievements	Remark
500 goat farmers trained in effective management of worms in goats	125 farmers from Kanungu, Rukungiri, Kisoro and Kabale were trained	*50% of the half year target achieved; funds were inadequate*
100 breeding stock of goats maintained on station	196 goats were maintained	*Target was achieved*
Improved goats procured	Procurement process was initiated but funds were insufficient; hence process stalled	*Target was not achieved*

Source: Field findings

A case study farmer in Kisoro district was monitored to verify the delivery of training to farmers by KAZARDI. The findings are presented below (Box 5.4).

Goats that are maintained at KAZARDI

Box 5.4: Beneficiary of KAZARDI ATAAS training on deworming goats in Kisoro district

Mrs. Lydia Mugisha residing in Nyakatanda village Buhozi parish Busanza sub-county was a participant in the Abi ZARDI goat research programme during February to October 2014. Thirty goats in her herd were selected and tagged for demonstration purposes. They were given dewormers and weighed every two months to assess their growth process. Samples of their droppings and blood were taken frequently for analysis at KAZARDI. During July to August 2014, the beneficiary was involved in planning and review workshops that were organized by ZARDI to assess project progress.

The farmer noted that the mortality rate declined in the goats that were treated compared to the others that did not benefit from the dewormers. The main challenge was that the farmer was not given the name of the drugs that were administered to her goats so that she could continue with the deworming process. It was recommended that the KAZARDI should provide the prescription of the dewormers to the farmers so that they can scale up the intervention.

Source: Field findings

Project 4: Fish species development and promotion

The intervention aims at development and promotion of fish species for enhanced productivity. The physical performance of the project during the reporting period is summarized in Table 5.28. The project performance was very good and consumerate to the resourcing levels.

Table 5.28: Performance of ATAAS fish project at KAZARDI by 31st December 2014

Annual planned outputs	Achievements	Remark
Six ponds rehabilitated and maintained in Kyanamira sub-county and one fish pond stocked	The six ponds were rehabilitated and one pond was stocked with 70 pieces of tilapia	*Target was achieved*
MoU signed with a private hatchery, two ponds rehabilitated and stocked with tilapia and catfish	The MoU was signed with private hatchery at Bugara village, Gisorora parish Nyakabande sub-county Kisoro district; The farmer rehabilitated the two ponds	*Target was achieved* *Farmer faced challenge of lack of fish feeds*

	and received 2000 fingerlings of catfish, 2,000 fingerlings of mirror carp and 2,000 fingerlings of tilapia and 10 bags of feeds from the ZARDI	
500 farmers trained in fish farming best management practices	130 farmers were trained on-station	*52% achievement of half year target.*

Source: Field findings

Rehabilitated fish ponds at Kyanamira sub-county Kisoro district

Project 5: Apple varieties development and promotion

The intervention aims at development and promotion of quality apple varieties in Uganda. The project performance is summarized in Table 5.29. Work on most outputs was still in progress.

Table 5.29: Performance of ATAAS apple project at KAZARDI by 31st December 2014

Annual planned outputs	Achievements	Remark
At least two apple varieties with tolerance to powdery mildrew selected and on farm trials established	Four apple varieties were selected, planted in the nursery and grafted at Bugongi station in Kabale district	*The on-farm trials were scheduled to be established in Q3*
Fertilizer type and rate that maximize apple productivity established	Baseline soil fertility results were obtained	*The experiments were still in progress; target was partially achieved.*
At least one efficient apple seedling production technique identified	Plants were collected and experiments initiated in the tissue culture laboratory	*The experiments were still in progress; target was partially achieved.*
Returns to investment in apple production established	Data collection tools were assembled	*Target was not achieved*

Source: Field findings

Grafted apple seedlings in nursery at Bugongi station Kabale Municipality

Project 6: Soil nutrient management on upland rice

The project is focused on assessing soil nutrient management and moisture effects on upland rice crop productivity. The key planned annual output for the project is: 'fertilizer type and rates that maximize rice productivity determined and recommended for utilization'. By 31st December 2014, soils had been assembled from two upland growing areas for analysis. The research work was still in progress. However, the activities that were implemented were far below the resourcing level of Ug shs 30 million.

Infrastructure and equipment provision

By 3rd February 2015, the KAZARDI had received one pick up vehicle, one tractor with disc plough and wheel loader and a 30 seater bus from NARO Secretariat. Construction of a conference and training facility was ongoing and was at foundation level.

Left: Conference and training facility under construction at KAZARDI Right: Tractor and pickup provided to KAZARDI by NARO Secretariat

Implementation challenges at KAZARDI

i) Stalment of research projects due to lack of capital development funds to renovate ponds, construct screen houses, repair equipment in laboratory and acquire other critical assets. It takes a year before requisitions for capital expenditures are honoured by the NARO Secretariat.
ii) Some planned activities were not implemented due to late disbursement of Q2 funds at the end of December 2014.
iii) Inadequate staff to implement the projects.
iv) Inability to identify and follow up on-farm trials and disseminate technologies due to lack of extension staff at district and sub-county level.

Recommendations

i) The NARO should allocate funds for capital development for the institutes.
ii) The NARO should release funds early at the beginning of the quarter.
iii) The NARO should recruit and train additional staff for the ZARDI.
iv) The MAAIF and districts should fast track the implementation of the single spine extension system in local governments and ensure that all vacant positions are filled.

Mbarara ZARDI - Mbarara district

Background

Located in Mbarara Municipality, Mbarara ZARDI (MBAZARDI) is mandated to conduct and manage applied and adaptive agricultural research in the South Western region. Priority commodities that are researched include cassava, banana, coffee, rice, livestock, aquaculture and pastures.

Financial performance

The approved budget for MBAZARDI was Ug shs 1.034 bn of which Ug shs 353 (35%) million was released and 76% of total resources spent by 31st December 2014. The detailed financial performance is presented in Table 5.30. The Q2 release was received late on 23rd December 2014 which negatively affected the pace of project implementation.

Table 5.30: EAAPP financial performance at MBAZARDI by 31st December 2014

Item	Balance brought forward (Ug shs)	Amount received (Ug shs)	Total available funds (Ug shs)	Amount spent (Ug shs)	% spent of total funds
Core research	25,003,191	189,784,126	214,787,317	163,436,450	76%
Operating expenses	17,271,609	138,721,722	155,993,331	121,707,534	78%
Joint prioritization planning, adaptive research and technology upscaling	0	25,374,999	25,374,999	17,487,887	69%
Total	**42,274,800**	**353,880,847**	**396,155,647**	**302,631,871**	**76%**

Source: MBAZARDI Finance Department

Physical performance

The MBAZARDI spent the ATAAS funds on four core research programmes namely: i) crop germplasm ii) soil fertility and water management iii) aquaculture iv) training. The progress in ATAAS implementation in the four programmes is presented below. In addition, the NARO Secretariat financed infrastructure development at the ZARDI during the reporting period.

a) Crop germplasm programme

The intervention aims at developing and promoting improved tea, banana, coffee and rice technologies for improved productivity. Table 5.31 summarises the semi-annual physical performance of this programme. The performance was below average as the key outputs were not achieved.

Table 5.31: Physical performance of the ATAAS Crop germplasm programme at MBAZARDI by 31st December 2014

Half year planned output	Achievement	Remark
At least two rice varieties highly adaptable with traits preferred by end users identified	Established NAMCHE rice variety trials on farmers' fields in Mitooma and Rubirizi districts Data collection processes had commenced to assess adaptability	*Work was still in progress. Target was partially achieved.*
Water harvesting practices and irrigation technologies in rice farming systems evaluated	No progress	*Was still in the process of identifying and acquiring water harvesting and irrigation materials* *Target was not achieved*
Screen house for tea nursery constructed and tea clones acquired for evaluation	No progress	*Target was not achieved.* *Activity differed to subsequent quarters*
Determining the effect of soil and water stress on the susceptibility of banana	No progress	*Materials for potting had not been acquired. Target was not achieved*
Coffee and banana mother gardens/germplasm maintained on station	1,000 plants of banana germplasm and ¼ acre of coffee germplasm were maintained	*Target was achieved*

Source: Field findings

Left: Banana germplasm Right: Coffee germplasm intercropped with beans maintained at MbaZARDI in Mbarara district

b) Soil fertility and water management programme

The project aims at improving tea production through soil fertility and water management innovations. The half year target was optimum soil nutrient management innovations identified. Research was undertaken involving application of NPK fertilizers in tea gardens and the results were recorded. This was still work in progress.

c) Aquaculture programme

The research work focused on improving feeds and water quality in catfish culture systems. The three planned outputs and the progress in implementation by 31st December 2014 is presented below:

- Output 1: At least three fish feed formulae developed and disseminated to farmers; Progress – One feed formulation software and four feed formulae were developed. The target was achieved.
- Output 2: At least 80 semi-commercial farmers trained; Progress – 60 (75%) farmers from Ntungamo, Bushenyi and Mittoma districts were trained.
- Output 3: Construction of a hatchery commenced; No progress was registered due to the late release of funds.

d) Training programme

It was planned that one student would be trained at Masters' level and a copy of dissertation submitted to the University. Ms. Dina Nabasumba was completing a Master of Science in Agroforestry at Makerere University. She had submitted the third draft of her dissertation to the University. The target was achieved.

Infrastructure provision

A conference and training hall was under construction at MbaZARDI directly financed by NARO Secretariat. The construction works were at foundation level by 5th/02/2015.

Challenges at MbaZARDI

i) Poor implementation of planned programmes due to late receipt of Q2 funds from NARO Secretariat.
ii) Lack of equipment for undertaking experiments.
iii) Late opening of land and planting due to lack of a tractor.

Recommendations

i) The NARO Secretariat should release funds early to coincide with the start of the cropping seasons.
ii) The NARO Secretariat should allocate capital development funds to the ZARDI to procure equipment required by the Scientists.
iii) The NARO Secretariat should provide a tractor to the ZARDI.

Mukono ZARDI – Mukono district

Background

Mukono ZARDI (MuZARDI) is located in Ntawo village Mukono Municipality. Research and development activities focus on cereals, legumes, bananas, coffee, cocoa, horticulture, livestock, apiary and agro-forestry. The ZARDI serves twenty one districts namely: Kampala, Kayunga, Wakiso, Nakasongola, Mukono, Buvuma, Buikwe, Mityana, Bukomansimbi, Kalangala, Kalungu, Lwengo, Masaka, Butambala, Mpigi, Gomba, Luwero, Nakaseke, Kyankwanzi, Kiboga and Mubende.

The MuZARDI is facing challenges of eviction from the current location which belongs to the Church of Uganda. To avoid loss of research work, some of the experiments are gradually being shifted to Kamenyamiggo station in Lwengo district and farm structures are undergoing rehabilitation.

Monitoring work focused on ATAAS programmes at MuZARDI in Mukono district and Kamenyamiggo station in Lwengo district.

Financial performance

The financial performance of the ATAAS project at MuZARDI is summarised in Table 5.32. The release performance for MuZARDI was low (35%) and the expenditure performance good (66%).

Table 5.32: Financial performance of ATAAS project at MuZARDI by 31st December 2014

Institution	Approved budget (Ug shs)	Balance brought forward (Ug shs)	Release (Ug shs)	Total funds	Expenditure	% Expenditure
MuZARDI	1,034,951,548	6,358,047	352,379,840	358,737,887	243,140,717	68%
Kamenyamiggo station*	-	-	144,869,399	144,869,399	86,921,840	60%
Total	**1,034,951,548**	**6,358,047**	**497,249,239**	**503,607,286**	**330,062,557**	**66%**

****Note: Transfers for rehabilitation works at Kamenyamiggo station were disbursed from the NARO Secretariat budget***

Source: MuZARDI Finance Department

The funds were spent on the research programmes as shown in Table 5.33. Most funds were spent on rehabilitation works and research at Kamenyamiggo station, administration and the poultry and crop research programmes.

Table 5.33: ATAAS expenditures at MuZARDI by 31st December 2014

Expenditure area	Amount spent (Ug shs)	% amount spent
Aquaculture research programme	22,436,500	6.80
Poultry research programme	53,071,500	16.08
Dairy research programme	1,496,200	0.45

Crop research programme	35,275,500	10.69
Kamenyanyamigo rehabilitation of structures and research work	86,921,840	26.33
PHD training	19,651,500	5.95
Earth project	2,420,600	0.73
Extension	25,344,500	7.68
Administration	81,539,417	24.70
Other expenses	1,905,000	0.58
Total	**330,062,557**	

Source: MuZARDI Finance Department

Physical performance

The findings on the implementation progress of the ATAAS funded core research programmes at MuZARDI and Kamenyamiggo station are presented below.

Aquaculture programme

The project aims at determining the two best performing strains of tilapia through utilization of local feed and seed. The annual planned ouputs under ATAAS included: i) Multi-purpose set of fish tanks at Kamenyamiggo constructed/rehabilitated ii) manholes, inspection points and piped drainage constructed in the culture units at MuZARDI iii) 300,000 tilapia fry produced.


Left: rehabilitated fish tanks at Kamenyamiggo station Right: Functional fish ponds at MuZARDI after rehabilitation of drainage systems

By 31st December 2014, the five existing fish tanks at Kamenyamiggo station were rehabilitated and stocked with tilapia fry. The manholes and drainage systems for the culture units were constructed and the ponds stocked with fish. A total of 15,000 tilapia fish were produced (10% of half year target). The ongoing rehabilitation works of the breeding facilities slowed the pace of fish seed multiplication.

Poultry and dairy programme

The main purpose of the programme is to enhance the productivity and marketing of poultry and dairy in urban and peri-urban areas. The annual planned targets under ATAAS were i) 180 identified indigenous chicken breeds sourced from the six agro-ecological zones ii) twelve Friesian heifers sourced for testing iii) Twelve cattle sheds constructed.

Indigenous chicken breeds under assessment at MuZARDI in Mukono district

By 31st December 2014, 130 (100% achievement of half year target) indigenous chicken breeds were collected from West Nile, Acholi, Lango, Bunyoro, Bukedi, Busoga, Bugishu, Kigezi and Ankole sub-regions. They were being assessed for desirable traits by MuZARDI.

The procurement process for the 12 Friesian heifers and cattle shed was commenced but stalled due to inadequate funding and low capacity of the PPDA pre-qualified suppliers. The MuZARDI Procurement and Disposal Unit (PDU) stopped the procurement after realizing that the required initial capital for the 12 animals and shed was much higher than the available funds. The Scientists were advised to repackage the project to fit within the available resources.

Crop programme

The programme has two key objectives: i) Enhancing crop productivity and marketing in urban and peri-urban areas ii) Promoting integrated management options for improving robusta coffee and banana productivity in the region. The half year programme performance is summarized in Table 5.34.

Table 5.34: Crop programme performance at MuZARDI by 31st December 2014

Annual output	Achievement	Remark
Baseline information collected on dynamics, constraints and opportunities in crop production	The data was collected, analysed and a survey report produced	*The target was achieved.*
Two stakeholder meetings held and 160 small holder farmers skilled in improved agronomic practices	The two meetings were held involving 120 farmers in Masaka and Wakiso districts	*The half year target was achieved*
15 on-farm trials established for management of banana pests and diseases	Baseline on the banana coffee farmers was still undergoing analysis. The results would form for selecting the 15 farmers to host the on-farm trials	*Work was still in progress. Target was not achieved.*
Coffee banana trials established and maintained at Kamenyamiggo station and MuZARDI	Three onstation coffee banana trials were planted at Kamenyamiggo Nursery and germplasm was maintained at MuZARDI for wilt resistant coffee varieties; 30,000 seedlings were ready for distribution.	*Target was achieved*

Source: Field findings


Left: Established coffee nursery Right: Coffee germplasm/garden at MuZARDI in Mukono district

Infrastructure development

By 27th/01/2015, the NARO Secretariat supported the infrastructure development at Kamenyamiggo station as follows:

- Farm roads were opened up
- Existing seedling nursery sheds were rehabilitated and new ones constructed
- The office block was undergoing renovation
- A structure for housing pigs was under construction
- A conference and training facility was under construction; it was at foundation level.


Left: Office block undergoing renovation Right: Conference and training facility at foundation level at Kamenyamiggo station in Lwengo district


Left: New seedling nursery shed constructed Right: Structure for housing pigs under construction at Kamenyamiggo station in Lwengo district

Challenges at MuZARDI

i) Slow absorption of funds and implementation of planned activities due to late release of funds in the dry season by NARO Secretariat.
ii) Limited supervision of ongoing rehabilitation works and research projects at Kamenyamiggo station and in the 20 districts due to inadequate vehicles.
iii) Low capacity of PPDA prequalified contractors for major development projects.

Recommendations

i) The NARO Secretariat should release funds in time for the seasons; the first release should be made in January-February and the second release by August.
ii) The NARO Secretariat should provide two additional vehicles to the MuZARDI.
iii) The PPDA should give waivers for the ZARDI to procure non-prequalified contractors who can ably supply good quality animals for the research work.

Ngetta ZARDI – Lira district

Background

Ngetta ZARDI is one of the NARO entities that was established in 2007 to carry out applied and adaptive research for the mid-Northern and Northern agro-ecological zone. The institution implements programmes in 15 districts namely: Agago, Alebtong, Amolator, Amuru, Apac, Dokolo, Gulu, Kitgum, Kole, Lamwo, Lira, Nwoya, Otuuke, Oyam and Pader. Implementation of the ATAAS at Ngetta ZARDI started in 2012.

Financial performance

The approved budget for the ATAAS project activities at Ngetta ZARDI for FY 2014/15 is Ug shs 1,255,827,548. Ngetta ZARDI received Ug shs 358,737,887 (29%), of which Ug shs 158,487,887 (44%) was spent by 31st December 2014. The funds were spent mainly on six projects as shown in Table 5.35.

Table 5.35: ATAAS expenditures at Ngetta ZARDI by 31st December 2014

Programme/Project	**Amount spent (Ug shs)**
Programme: Livestock and Fisheries	
1. Developing feeding strategies for cattle, goats and poultry to ensure nutrition of communities in the Northern Agro-Ecological Zone (NAEZ)	22,025,200
2. Exploring improved aquaculture management for enhanced fish productivity in the NAEZ	24,779,000

Programme: Crop Research and Development	
3. Mechanization of Maize and upland rice production systems in the NAEZ	26,891,200
4. Evaluation and Adaptation of new varieties of beans, groundnuts, rice, fruit trees and simsim in the NAEZ	13,659,000
5. Developing integrated pest and disease management strategies for increased productivity of simsim and citrus in the NAEZ	31,164,700
Programme: Natural Resources and Management	
6. Developing Cutting and Tissue culture Techniques for Rapid Multiplication of Shea Tree germplasm in Uganda	13,731,200
General	
Research extension interface (partnerships), Technology promotions (World Food Days, Agricultural Shows, Workshops)	26,237,587
Grand total	**158,487,887**

Source: Ngetta ZARDI

The funds were disbursed late by the NARO Secretariat in September 2014 when the cropping season was ending. This resulted in low absorption of funds as the planned activities could not be implemented in the dry season.

Physical performance

The semi-annual progress in implementation of the six projects at Ngetta ZARDI is presented below.

Project 1: Developing feeding strategies for cattle, goats and poultry to ensure nutrition of communities in the Northern Agro-Ecological Zone (NAEZ)

The project aims at developing supplementation packages for livestock from locally available materials; and identification of nutrient gaps of priority livestock during the season. The project period for Project 1 is July 2009 to September 2016. The physical performance of the project during July – December 2014 is summarized in Table 5.36. The key targets for Project 1 were substantially achieved.

Table 5.36: Physical performance of ATAAS Project 1 at Ngetta ZARDI by December 2014

Output target	Achievements	Remark
Nutrient gaps of priority livestock during the different seasons documented	Profiled the major nutrients of selected cereal crop residues in a journal article titled *"Extent of availability of major nutrients from selected cereal crop residues to dairy ruminants as an alternative dry season forage in Northern Uganda"*	*Target was achieved*

Information on feed resource availability and ruminant livestock production constraints documented; four feed rations for ruminants developed	Data was collected; field sampling manuscript was being developed for submission for peer reviewing. Four feed rations for ruminants were formulated.	*Target was partially achieved.* Remaining work included analyzing collected samples for nutrient profiling.
Information documented on local poultry feed resources availability and quality in the zone; three feed rations for poultry developed.	Baseline survey on feeding and management practices of poultry in the region was undertaken. Developed three poultry feed rations. Published a paper *"Availability of major nutrients from selected cereal residues to dairy ruminants as alternative dry season forage in Northern Uganda"*.	*Target was achieved.*

Source: Field findings

Project 2: Exploring improved aquaculture management for enhanced fish productivity in the NAEZ

The project aims at evaluating the performance of Tilapia X Catfish versus the monosex tilapia. The physical performance of project 2 during July – December 2014 is summarized in Table 5.37. The key outputs for Project 2 were achieved.

Table 5.37: Physical performance of ATAAS Project 2 at Ngetta ZARDI by December 2014

Output target	Achievements	Remark
Nine grow out ponds with catfish and tilapia fingerlings on station stocked.	On-station trials on the appropriate performance stocking ratio, stocking density and rearing period of catfish and tilapia were ongoing in 30 cages and 12 ponds. The trials also included evaluation of performance of mono-sex tilapia culture against tilapia & catfish polyculture production systems.	*Target was achieved.*
Fish farm at Ngetta maintained	The fences around the fish farm were repaired and the bushes were cleared. A total of 5,000 Nile Tilapia fingerlings and 10,000 fry were ready for distribution to farmers for multiplication,	*Target was achieved.*

Source: Field findings

Project 3: Mechanization of Maize and upland rice production systems in the NAEZ

The main objective of Project 3 is to develop and promote labour saving "smart options" by combining appropriate mechanization, herbicide use and novel crop traits. The project started in January 2014 and is scheduled to end in June 2016. The physical performance of Project 3 is summarized in Table 5.38. The targets for Project 3 were not achieved due to delayed release of funds.

Table 5.38: Physical performance of ATAAS Project 3 at Ngetta ZARDI by December 2014

Output target	Achievements	Remark
Rice and maize cropping calendars developed after undertaking survey	Survey conducted in Lango and Acholi regions and data was partially entered.	*Target was not achieved* due to lack of funding to enter and analyse the data; and hold focus group discussions (FGDs). Development of the calendars was dependent on completion of the above activities.
Existing labour saving technologies for maize and rice enterprises catalogued	No progress	*Target was not achieved.*
Labour saving "smart options" developed and promoted	No progress	*Target was not achieved*

Source: Field findings

Project 4: Evaluation and Adaptation of new varieties of beans, groundnuts, rice, fruit trees and simsim in the NAEZ

The project aims at determining key constraints to adaptability of the new varieties in the different sub-regions and develop cost effective crop management strategies. The project started in January 2014 and is scheduled to end in June 2016. The physical performance of Project 4 is summarized in Table 5.39. Most targets were not achieved.

Table 5.39: Physical performance of ATAAS Project 4 at Ngetta ZARDI by December 2014

Output target	Achievements	Remark
Data from baseline survey conducted in FY 2013/14 analysed	No progress	*Target was not achieved* as there no funds to enter and analyse the data
Two early maturing and drought tolerant varieties introduced and evaluated	No progress	*Target was not achieved*
Performance of 9 bean varieties evaluated in the different locations through on station and on-farm trials (16);	On station trails were set up Four on-farm trails were set up one in each of the following locations: Minakulu sub-county Oyam district; Inomo sub-county Apac district; Awach sub-county Gulu district and Akwang sub-county Kitgum district.	*Target was partially achieved.* *Inadequate foundation seed to set up the planned trial sites as there was a shortage in seed production at NACRRI.*
Integrated pest management strategy developed	On station trial planted	*Target was not achieved*

Source: Field findings

Project 5: Developing integrated pest and disease management strategies for increased productivity of simsim and citrus in the NAEZ

The physical performance of Project 5 is summarized in Table 5.40. The key output targets for project 5 were partially achieved.

Table 5.40: Physical performance of ATAAS Project 5 at Ngetta ZARDI by December 2014

Output target	Achievements	Remark
Incidence maps for simsim wilt gallmidge, citrus canker, Alternaria brown spot and citrus greening in place	Geo-referenced maps for citrus canker, Alternaria brown spot and citrus greening were developed.	*Target was partially achieved.* The field surveys did not cover simsim diseases as funds were insufficient.
Citrus canker pathogen isolated and characterized	Only nine pathogens in two districts out of 80 samples were isolated.	*Target was partially achieved. Work was still in progress.*
On-farm trials of integrated pests and disease management for citrus maintained	Maintained eight on farm trials at 8 locations, one in each district Alebtong, Kole, Amolator, Gulu, Nwoya, Pader, Kitgum and Oyam. However, fire destroyed the trial in Pader; the trials in Kitgum and Oyam were abandoned by farmers who were poorly identified/selected by the NAADS programme in FY 2013/14	*Target was partially achieved.*
On-farm trials of phyto-sanitary cultural control options for citrus canker maintained and data collected	Maintained four on-farm trials in Gulu, Oyam, Lira and Dokolo districts; data was collected at these locations	*Target was achieved.*

Source: Field findings

Project 6: Developing Cutting and Tissue Culture Techniques for Rapid Multiplication of Shea Tree germplasm in Uganda

The overall objective is to generate practical approaches for sustainable quality production and utilization of the Shea Tree for improved livelihoods. The project started in September 2009 and is scheduled to end in June 2016.The physical performance of Project 6 is summarized in Table 5.41. Most targets were not achieved for Project 6 during the reporting period.

Table 5.41: Physical performance of ATAAS Project 6 at Ngetta ZARDI by December 2014

Output target	Achievements	Remark
Shea coppice cuttings for on station evaluation collected	The first set of experiments for propagating the Shea tree through cuttings was established on-station	*Target was achieved.*
Monitoring and maintenance of air-layering trials in Otuuke and Alebtong districts	A promising technique for air-layering using 5000ppm concentration that increased rooting from 5% to 20% was	*Target was partially achieved. Trials using the new techniques were to be maintained in Otuuke and*

	developed A promising propagating technique for coppice cutting that increased rooting from 10% to 40% was developed.	*Alebtong districts in subsequent quarters.*
A trial on grafting established and maintained in Otuuke district	No progress	*Target was not achieved*
Micro propagation by tissue culture evaluated	No progress	*Target was not achieved*
Data on Shea nut yield for 2013 season collected and a yield assessment report produced	No progress	*Target was not achieved.*

Source: Field findings

Overall performance of ATAAS at Ngetta ZARDI

During July to December 2014, the ATAAS programme was poorly implemented with few outputs being achieved. Out of 21 target outputs, six were fully achieved, six were partially achieved and nine where not achieved.

Key Challenges

1) Unsatisfactory, incomplete and few research trials were set up as the funds were inadequate and released late in September 2014 when the rain season was ending.
2) The outcomes of the on-farm trials were not known to the scientists as they could not locate the host farmers that were identified by the NAADS programme. With the closure of NAADS, Ngetta ZARDI lacked information on its experiments at farm level.
3) Technologies that were due for dissemination to farmers remained on shelf due to lack of an effective extension mechanism at district level.
4) Poor analysis of research results due to lack of laboratory equipment and consumables.

Recommendations

1) The NARO Secretariat should release adequate funds in time for the trials.
2) The MAAIF should collaborate with the local governments to strengthen the single spine extension system and ensure that the District Production Department is adequately staffed and facilitated.
3) The MAAIF should review and refocus the terms of reference of the recently deployed Zonal Agricultural Development Officer from input distribution to technology dissemination and follow up the on-farm trials.
4) The NARO Secretariat should fast track procurement and provision of laboratory equipment and consumables for Ngetta ZARDI.

5.7.3 Eastern Africa Agricultural Productivity Project (Project 1138)

Background

The Eastern Africa Agricultural Productivity Project (EAAPP) was started in 2009 as a regional intervention to improve the generation and uptake of technologies for enhanced agricultural productivity. The project aims at strengthening and scaling up regional cooperation in technology generation, training and dissemination programmes for priority commodities[16].

The program is structured around Centres of Excellence (COEs) where countries engage in research in priority commodities where they have comparative advantage. The COEs for the participating countries focus on the following commodities: cassava and rice in Uganda; rice in Tanzania, wheat in Ethiopia and dairy in Kenya. In Uganda, the COE is under NARO.

The EAAPP has four project components: i) Strengthening the COEs ii) Support to Technology Generation, Training and Dissemination iii) Improved Availability of Planting Material, Seeds and Livestock Breeding Materials iv) Programme Management and Coordination. It is funded by a World Bank/IDA loan amounting to US$ 30 million over a five year period (2010-2015). More than 70% of the resources were earmarked to Component 1 for establishing physical infrastructure and purchasing equipment. The component is implemented by the Namulonge Agricultural Resources Research Institute (NACRRI).

The planned annual outputs for the EAAPP for FY 2014/15 are:

- Office space and laboratories constructed at the Cassava Regional Centre of Excellence (CRCoE) at NACRRI
- Promising technologies of the priority commodities developed and promoted
- Value addition technologies and value added products promoted
- Innovation platforms developed
- Capacity of scientists/technical staff built at Masters and Doctorate level
- Institutional capacity built at NACRRI ROE and ZARDIs
- Research trials undertaken for the priority commodities
- Research publications prepared and disseminated

Findings

i) Financial performance

The semi-annual financial performance of the NARO EAAPP is presented in Table 5.42. Expenditures were high for the GoU component (86%) and low for donor funds (25%) by 31st December 2014.

[16] World Bank, 2009.

Table 5.42: Financial performance of the EAAPP by 31st December 2014

Item/Institution	Balance brought forward 30th June 2014 (Ug shs)	Releases (Ug shs)	Total available funds (Ug shs)	Expenditures (Ug shs)	% expenditure
Advance to BugiZARDI	311,491	297,676,792	297,988,283	136,568,048	45.83
Advance to NARL	69,151,612	175,171,001	244,322,613	225,185,182	92.17
Advance to NALIRRI	45,290,166	480,840,667	526,130,833	444,872,966	84.56
Advance to NaCRRI	44,517,997	1,503,804,266	1,548,322,263	1,546,831,689	99.90
Advance to NAGRC&DB	43,894,538	169,023,273	212,917,811	176,938,500	83.10
Advance to NAADS	205,700,129		205,700,129	205,697,587	100.00
Advance to MAAIF	-	111,291,068	111,291,068	-	
Advance from MAAIF – seed multiplication	-	684,161,851	684,161,851	482,080,000	70.46
PCU – project account	1,023,390	537,097,833	538,121,223	527,999,949	98.12
Total GoU (Ug shs)	**409,889,324**	**3,959,066,751**	**4,368,956,075**	**3,746,173,921**	**85.75**
Total ASARECA donor ($)	**173,449.43**	**80,000**	**253,449**	**64,708.57**	**25.53**

Source: NARO Secretariat

Procurement of goods under the respective institutions was undergoing under the EAAPP programme as indicated in Table 5.43.

Table 5.43: Status of Goods Procurements under EAAPP by 31st December 2014

Item	Description	Amount US$
1.	Rehabilitation of a Laboratory and water reservoir at NaLIRRI	93,156
2.	Installation of a Livestock Unit at Nakyesesa under NaLIRRI	215,982
3.	IT equipment and assorted office furniture (under Seed)	26,000

4.	Laboratory consumables and equipments under Seed	30,000
5.	Tractors and implements under dairy research at NAGRC&DB and wheat	239,254
6.	Supply of fertilizers and printing of phytosanitary books under seed	22,000
	Total	**626,392**

Source: NARO Secretariat

ii) Physical performance

a) Past performance

The cumulative EAAPP performance for the period 2010 to August 2014 was[17]:

- Laboratory equipment, tractors and implements were delivered to NACRRI.
- Liquid Nitrogen Plant was installed, staffed and equipped at the NAGRC&DB
- Embryo freezing equipment and tractors and equipment were provided to NAGRC&DB.
- 8 Doctorate of Philosophy (Phd) and 13 Masters of Science (Msc) were pursuing higher education.
- The architectual drawings of the CRCoE office space and laboratories were completed.
- 800 acres of cassava were established and cuttings distributed to farmers
- 100 acres of rice seed multiplication were established and seeds distributed to farmers
- 200 kgs of lablab pasture seeds and 700kgs of Clitoria where produced and supplied to ZARDIs for multiplication.

b) Field Findings

The performance of the EAAPP was assessed at the Cassava Regional Centre of Excellence (CRCoE) National Crop Resources Research Institute (NACRRI) and four ZARDIs that received funding during the reporting period out of nine (Abi in Arua district; Ngetta in Lira district; Mukono in Mukono district; Mbarara in Mbarara district). The findings are presented below.

Cassava Regional Centre of Excellence - National Crop Resources Research Institute

Background
The CRCoE is an EAAPP funded programme hosted by the National Crop Resources Research Institute (NACRRI) in Namulonge Wakiso district. The programme mainly focuses on cassava research and development and to a lesser extent the rice commodity. Interventions to strengthen the CRCoE are in the areas of: i) infrastructure development at NACRRI and the ZARDIs ii) acquisition of key laboratory equipment, field vehicles and screen houses, iii) recruitment and training of staff iv) research and development of technologies for value addition.

[17] EAAPP Detailed Mission Report February 2014; Various EAAPP progress reports

Financial performance

The overall performance of the EAAPP at NACRRI is presented above in Table 5.42. Six civil works contracts were in progress under the CRCoE (Table 5.44). Apart from Lot 1 which had a completion date of January 2014 and a defects liability period of June 2015, the rest of the lots were to be completed by August 2014 and the defect liability period ending in February 2015. All the contracts commenced on 1st April 2014 and were supervised by M/S Arch Tech Consultants.

In addition, other civil works that spilled over from previous financial years on the Embryo Transfer Laboratory was ongoing. Average physical progress for the six lots and the additional civil works was at 85% by 31st October 2014.

Table 5.44: Progress of EAAPP civil works under the CRCoE by 31st October 2014

Lot	Item	Contractor	Duration Months	Contract Amount (Ug shs)	Payments effected (Ug shs)	% payment	Progress of Works
1	Construction of CRCoE Office	Kwik Build Contractors and Engineers Ltd	9	6,108,056,932	2,936,965,680	48%	55%
2	Nutritional Analysis Laboratory	Egy Trading and Engineering Projects Ltd	4	3,149,859,715	1,543,611,690	48.95%	60%
3	Rehabilitation of six screen houses at NACRRI and ZARDIs	Zimu Construction Company Ltd	4	680,195,094	387,448,464	56%	85%
4	Rehabilitation of Office Block in Abi, Arua	Dolphins Consulting Engineers Ltd	4	203,399,196	183,059,276	90%	100%
5	Rehabilitation of Office Block in Ngetta, Bulindi	Ferguson Enterprises Ltd	4	268,780,170	241,902,153	90%	100%
6	Rehabilitation of Office Block in Bulindi,Hoima	Ferguson Enterprises Ltd	4	209,311,975	188,380,775	90%	100%
7	Rehabilitation of Embryo Transfer Laboratory at NAGRC&DB	Buwekula Mixed Farm		$151,000	$109,148	72%	95%

Source: NACRRI Finance Department; NARO Secretariat; Field findings

Whereas good performance was noted for Lots 4, 5 and 6, civil works under Lots 1, 2 and 3 where behind schedule. The slow implementation of projects was due to

i) Delays in deliveries of equipment's as a result of continuous amendment of Letters of Credit by International Suppliers.
ii) International Suppliers exceeding delivery lead times citing non availability of particular items to customize equipment's for intended use.
iii) Government new tax payment procedure which has led to delays in clearance of equipment's and high demurrage costs.

Field findings

The progress in implementation of research projects, equipment acquisition and civil works under the CRCoE was assessed. Civil works under lots 1, 2, 3, 4 and 5 were monitored (refer to Table 5.44). In this section, the civil works at NACRRI under Lot 1, 2 and 3 are presented. The infrastructure development at ZARDIs under Lots 3, 4 and 5 are presented below in the respective ZARDIs.

a) Civil works

Lot 1: Office block

Construction of the double storied office block at the CRCoE started in May 2014 and was at 65% completion rate by 08th/01 2015. The works which were supposed to be completed by 31st January 2015 where behind schedule. The super structure was almost complete. Ongoing work included installation of roofing trusses and casting the ring beam. The structure was at wall plate level. The quality of works was good.

Two storied office block under construction at the CRCoE NACRRI in Namulonge

Pending work included roofing, walling, putting finishes and external works. The completion date was extended to June 2015 to allow for all the pending work to be done. The key constraint was the delayed payment of one of the certificates by one month and half which affected the contractor's cash flows.

Partly constructed nutritional analysis laboratory at NACRRI in Namulonge

Lot 2: Nutritional Analysis Laboratory

Construction of the laboratory started in May 2014 and was at 75% completion rate by 08th/01/2015. The main structure was completed and ongoing

work included internal plastering and conduiting electrical wires. Pending works included: roofing, windows shuttering, plumbing, external works and finishes and electrical fittings. The quality of works was good.

Lot 3: Screen houses

One of the existing screen houses that was rehabilitated at NACRRI

Right: Completed black netted screen house at NACRRI in Namulonge

Works to construct two new screen houses at NACRRI commenced in May 2014. By 08th/01/2015, one of the screen houses was completed while the second one was 80% complete, pending addition of netting.

The delay in completion of the second screen house was due to unavailability of netting materials in Isreal where the other materials had been imported from. The international suppliers were waiting for the materials to be supplied from another source in the United Kingdom (UK). The screen houses works were noted to be of good quality.

Rehabilitation of two existing screen houses for the rice programme was completed. The works were of good quality.

b) Equipment provision

During the reporting period, the NACRRI received assorted equipment and consumables under the EAAPP for the biotechnology laboratory. These included two freezers, two centrifuges, two tissue lysser, fumehood and various other assorted equipment. The laboratory was also rehabilitated using funding under the NARO Secretariat budget.

Rehabilitated and equipped Biotechnology Laboratory at NACRRI

Positive outcomes were noted arising from the laboratory rehabilitation and provision of equipment: *"Until this year, we were using manual methods for analyzing the samples. Within*

five minutes we would analyse only one leaf sample. We would detect one disease strain at a time. Some samples were analysed from other countries.

The laboratory is now more efficient since the rehabilitation and provision of equipment. We use more sophiscated methods of analysis that enable us analyse 48 leaf samples within 20 seconds. We are able to detect more strains at a time and have registered a higher discovery of diseases. More scientists and students work in this laboratory. The functional capacity of the laboratory has been increased from 10% to 70% for humans and equipment. We rarely send samples abroad for analysis". Coordinator of CRCoE programme at NACRRI.

Pickups at NACRRI received from the NARO Secretariat

By 08th/01/2015, the NACRRI had received two double cabin pickup vehicles from the NARO Secretariat under the CRCoE programme. They were of good quality.

c) Staffing and training

By 08th/01/2015, twenty four staff (consultants) of various disciplines were contracted and continued undertaking research and development work under the CRCoE. Eight PhD and eleven Masters Students were recruited and registered at various local and international universities. They were undertaking research in the commodities that were handled under the CRCoE.

d) Regional research

By 08th/01/2015 various research projects were undergoing at the CRCoE for four commodities with funding from EAAPP as follows:

Cassava research: Eight projects were under implementation:

- Development and promotion of value added cassava products in Eastern Africa
- Genetic improvement of cassava in eastern Africa
- Enhancing uptake of technologies along cassava value chain
- Understanding the biology, ecology, epidemiology and diversity of major pests and diseases of cassava
- Monitoring prevalence and severity of cassava diseases and pests in the Eastern Africa region
- Economic analysis of cassava research, production and marketing in Eastern Africa
- Development of integrated pest and disease management options for cassava in Eastern Africa
- Conserving and exploiting cassava genetic resources.

Rice research: Eight research projects were undergoing with support from the EAAPP:

- Enhancing rice productivity through development of integrated management of major abiotic stresses with exploitation of diversified rice products in Eastern Africa
- Improving productivity in rice ecosystems through integrated soil fertility and water management
- Enhancing adoption of rice technologies in different ecosystems in Eastern Africa
- Development of African Rice Gall Midge management options in Eastern Africa.
- Development and promotion of small to medium scale mechanization and post harvest technologies for improving rice productivity and grain quality
- Increasing competitiveness of rice value chain in the region
- Enhancing the productivity of the rice based systems: verification and promotion of crop and nutrient management options
- Development and promotion of management options for major diseases of rice in Eastern Africa.

Dairy research: Was undertaken focusing on livestock health and nutrition, pests and diseases and livestock breeding.

Wheat research: Five candidate wheat lines with good disease resistance and high yielding were under development.

As a result of the research work, scientific papers were presented to national and international fora and technologies were developed and disseminated. On farm trials were implemented in various locations in the country to assess the technology adaptability. One farmer in Arua district who had benefitted from the EAAPP NACRRI programme was monitored to assess progress in implementation.

The EAAPP – NACRRI case study farmer in Arua district

Mr. Amuran Chandia of Bira village Ocopi parish Katrin sub-county received support from NACRRI to set up a rice demonstration site for lowland and upland rice during October to November 2014. Four varieties of NERICA rice were being tested. By 13/01/2015, the rice was ready for harvesting. The farmer was waiting for NACRRI staff to come to the farm to collect the harvesting data.

NACRRI supported rice adaptive trials in Bira village Arua district

Challenges

i) Delayed delivery of seed by NACRRI led to late planting and poor growth as the drought had set in.

ii) Poor performance of the trial due to lack of extension services to guide the farmer on the appropriate agronomic practices.

iii) Loss of crop in the field due to birds and rats.

Recommendations

i) The NACRRI should deliver rice seeds to farmers early before the start of the planting season.
ii) The NARO should collaborate with the District Production Office to ensure that farmers receive advisory services while implementing the adaptive trails.

Challenges at the CRCoE at NACRRI

i) Failure to implement planned research projects due to delayed processing of requisitions and disbursement of funds by the NARO Secretariat.
ii) Delays in implementing projects due to the low cash limit of Ug shs 20 million per week.
iii) Inadequate infrastructure especially screen houses and thermo therapy chamber to undertake the research work effectively.

Recommendations

i) The MFPED/NARO Secretariat should change the funding cycle and disburse funds twice in the year in line with the agricultural seasons.
ii) The MFPED should allow institutions to have a cash float of at least Ug shs 50 million per week.
iii) The NARO Secretariat should fast track the completion of works on screen houses and construct additional screen houses.

<u>Regional level</u>

Abi ZARDI – Arua District

Background

The Abi ZARDI is located in Manibe sub-county in Arua district. Implementation of the EAAPP at Abi ZARDI commenced in 2012. The project was designed to produce seed for distribution to farmers for multiplication through the NAADS programme. The EAAPP funds support infrastructure development and seed production for three priority commodities: rice, cassava and pastures.

Findings

Financial performance

By December 2014, the Abi ZARDI received 100% of the annual donor budget amounting to Ug shs 73,577,000. The institution had an opening balance on 1st July 2014 from the previous FY of Ug shs 4,658,554 bringing the total funds available for expenditure to Ug shs Ug shs 78,235,554. All the funds were fully expended by 31st December 2014 (Table 5.45). Half (51%) of the funds were spent on cassava seed multiplication; 32% on rice seed multiplication and 17% on the pastures component.

Table 5.45: EAAPP expenditures at Abi ZARDI by December 2014

Crop/Expenditure item	Amount Spent (Ug shs)
Rice	
Land preparation, ploughing and planting	4,620,000
Procurement of inputs	1,736,000
Weeding, fencing, scaring away birds and pest control	14,494,023
Maintaining seed purity, harvesting, threshing, drying and bagging	3,980,000
Sub-total	24,830,023
Cassava	
Ploughing and planting	5,718,147
Weeding and slashing around established fields	21,334,000
Fencing established fields and repairs of old fences	8,134,926
Distribution of planting materials	1,185,500
Monitoring on-farm cassava multiplication and reporting	3,808,884
Sub-total	40,181,457
Pastures	
Land preparation, ploughing, harrowing and planting	1,781,074
Procurement of seed, fertilizers and panting materials	1,192,500
Weeding	4,218,000
Fencing, forage conservation and pest control	6,032,500
Sub-total	13,224,074
Total expenditure	78,235,554

Source: Abi ZARDI Finance Department

Physical performance

The seed production processes for the EAAPP at Abi ZARDI were on a multi-year basis. Three year performance targets were set for the period January 2013 to December 2015. Below are the findings on the progress made so far during January 2013 to December 2014.

a) Cassava seed multiplication

It was planned that 66 acres of cassava improved varieties would be maintained at Abi ZARDI and Moyo and Zombo District Farm Institutes. By December 2014, 55 acres (100% achievement of half year target) of ratoon and newly established cassava was being maintained. This was excellent performance.

It was planned that Abi ZARDI would avail 3,450 bags (2,070,000 cuttings) of improved cassava planting materials to farmers by December 2015. By December 2014, 2,527 bags (1,516,200 cuttings or 100% achievement of half year target) were distributed to 142 farmers in the West Nile region (Table 5.46). This was excellent performance.

Table 5.46: Beneficiaries of EAAPP cassava cuttings from Abi ZARDI during 2013 – December 2014

No.	District	Sub counties	Benefitting farmers by gender		Bags of cuttings	Estimated acreage (acres)
			Female	Male		
1	Arua	Ogoko, Vurra, Logiri, Arivu, Rigbo, Offaka, Aroi, Ajia, Rhino Camp, Odupi, Oluko, Dadamu, Pajulu, Odupi	5	21	724	120.6
2	Yumbe	Apo, Yumbe Town Council, Kuru, Kei, Romogi, Koch, Kululu, Odravu, Ariwa, Midigo, Drajini	8	58	377	62.3
3	Moyo	Gimara, Moyo, Lefori, Itula	1	14	383	63.8
4	Adjumani	Itirikwa	0	1	496	82.6
5	Nebbi	Panyango, Nyarvur, Kuchwing, Atego, Akwaor, Pakwatch, Kalwang	1	9	274	45.6
6	Maracha	Yivu, Nyadri, Oleba, Town Council, Kijomoro	1	16	153	25.5
7	Koboko	Kuluba, Lobule, Dranya	0	5	80	13.3
8	Zombo	Atyak, Nyapea	0	2	40	6.6
	Total		**16**	**126**	**2,527**	**420.3**

Source: Field findings

Gender issues: More men (89%) benefitted from the cassava cuttings than women (11%). The key factors explaining these trends were i) women lacked access and ownership of land for farming; most landholdings for farming were owned by men ii) women lacked transport means/funds and time to collect the cuttings from the remote sub-county headquarters iii) Men preferred growing cassava which was not labour intensive and was a good income earner.

Challenge: About 11 acres of cassava gardens (equivalent to 660 bags) were lost in Adjumani district due to a fire outbreak during February 2014.

b) Rice seed multiplication

It was planned that 10 acres of upland rice Nerica 4 and Namche varieties would be established and 8,000 kgs of rice Nerica 4 and Namche distributed to farmers for planting in subsequent seasons. By December 2014, 8 acres (100% achievement of half year target) of Nerica 4 and 2 acres of Namche 1,2,3,4 varieties had been established and the rice was harvested. On 12/01/2015, the monitoring team found in storage 12,872 kgs of upland rice Nerica 4 and 3,032 kgs Namche grains awaiting distribution to farmers during 2015.

It was planned that 3,700kg of Rice Nerica 4 variety would be distributed to farmers in the West Nile region. By December 2014, 3,900 kgs (100% of target) were distributed to 163 farmers as indicated in Table 5.47.

Table 5.47: Beneficiaries of EAAPP Rice Nerica 4 from Abi ZARDI by December 2014

No.	District	Benefitting farmers by gender		Total Kgs of rice distributed	Estimated acreage (acres)
		Female	Male		
1	Arua	14	22	740	29.6
2	Nebbi	7	16	700	28.0
3	Moyo	4	21	600	24.0
4	Koboko	9	31	800	32.0
5	Adjumani	7	31	1010	40.1
6	Yumbe	0	1	50	2.0
	Total	41	122	3,900	155.7

Source: Field findings

Gender issues: Most rice seed was given to men (75%) than women (25%). The main constraints to women's uptake of the rice technologies were reported to be: lack of farming land and limited access to extension services to guide them on how to grow the crop. However, when cassava and rice uptake by men is compared, less men took up rice (75%) than cassava (89%) improved varieties due to the high labour intensity of the rice crop. The rice crop required more labour at weeding and harvesting time which men found difficult to provide. On the other hand, more women had taken up rice (25%) than cassava (11%) as they viewed this crop as key to household food security and income generation, despite the high labour intensity.

c) Pasture production

It was planned that 2.25 acres of Brachiaria Mulato grass variety would be planted on-station; weeding and maintenance of pasture fields would be undertaken; hay would be stored; five nursery sheds would be established and 10 acres of land fenced.

By December 2014, 3.5 acres (target achieved) of Brachiaria Mulato was planted and was being maintained on-station. In addition, 2.5 acres of Brachiaria brizantha, 2 acres of Rhodes grass and 2 acres of Lablab legume were being maintained at the ZARDI. Other performance indicators were not achieved. The reason for the underperformance was that the pasture component was

introduced late in July 2014 and several preparations had to be made before establishing the pastures.

Pasture multiplication trials at Abi ZARDI

d) Infrastructure development

By December 2014, the NARO Secretariat had rehabilitated one office block, provided one pickup vehicle and set up two screen houses.

- Screen houses: construction work of the two screen houses started in May 2013; one of the screen houses was 100% completed while the second one was still under construction. The quality of works of the completed screen house was good.
- Office block: renovation was completed and the building handed over to the ZARDI management in September 2014. By 12th/01/2015, the office was not yet in use due to lack of power and furniture.

Overall challenges to EAAPP at Abi ZARDI

i) Loss/wastage of planting materials due to a poor distribution mechanism associated with a weak district extension service. The districts lacked staff to effectively distribute the planting materials, monitor performance and report back to NARO.
ii) Planned targets were not achieved in some instances because the Abi ZARDI diverted funds to distribution of inputs in the absence of an effective extension system.

Recommendations

i) The MAAIF and districts should fast track implementation of the single spine system in the production sector and recruit adequate extension staff at district and sub-county level.
ii) The NARO Secretariat should provide some funds for distributing technologies and monitoring the seed multiplication process.

Case studies of Abi ZARDI EAAPP beneficiaries
Two farmers who benefited under the cassava seed multiplication program by Abi ZARDI were randomly selected and monitored.

- Mr. Stephen Edema of Adruvu village Anyavu parish Logiri sub county Arua district acknowledged receipt of 12 bags of cassava NASE 14 variety from NARO in August 2014; this was as per the records at Abi ZARDI. Due to land shortage, he only planted 7 bags of cuttings and the rest was discarded. The monitoring team found evidence of the dried cassava stems at the farm.

EAAPP cassava cuttings that were abandoned in Adruvu village

EAAPP supported cassava garden at Mr. Edema's farm in Adruvu village

- Mr. Tia Alex of Pajuru village Arivu parish Arivu sub-county Arua district recieved 20 bags of cassava cuttings from Abi ZARDI in July 2014. However, the records at Abi ZARDI indicated that he had been given 28 bags of cuttings; no explanation was available for the extra 8 bags that could not be accounted for. The farmer planted 18 bags of cuttings on his farm in Pajuru village and 2 bags at this farm located in Bondo village within the same sub-county.

  The cassava in Pajuru village was destroyed by stray animals in October 2014. The cassava in Bondo village was performing well. The farmer recommended that the district should support local councils to pass bylaws on managing stray animals and ensure that they are enforced.

Mbarara ZARDI - Mbarara district

Background
The EAAPP programme at MbaZARDI focused on multiplication of cassava planting materials and production of pasture foundation seeds.

Financial performance

The approved budget for EAAPP activities at MbaZARDI was Ug shs 75,939,080. The funds were fully disbursed on 5th November 2014 and Ug shs 41,874,300 (55%) was spent by 31st December 2014. A total of Ug shs 27,125,000 was spent on distribution of cassava planting materials and maintenance of fields while Ug shs 14,748,400 was spent on pasture field maintenance. The low resource absorption was due to late disbursement of funds.

Physical performance

Cassava multiplication

The annual targets were to distribute 3,000 bags of cuttings to farmers and maintain 50 acres of ratoon cassava. By 31st December 2014, a total of 1,800 bags of cuttings (100% achievement of half year target) had been distributed to farmers and twenty acres (80% achievement of half year target) of ratoon cassava maintained. Lack of funds constrained maintenance of all the ratoon cassava.

Ratoon cassava maintained at MbaZARDI in Mbarara district

The cassava cuttings were distributed in 13 districts namely: Ssembabule, Rakai, Mitooma, Buhweju, Rubirizi, Ntungamo, Kiruhura, Lyantonde, Bushenyi, Ibanda, Sheema, Isingiro and Mbarara. Two case study farmers were sampled randomly to assess project implementation progress.

EAAPP supported cassava crop intercropped with bananas in Nyakakoni village

Case study beneficiaries of EAAPP cassava cuttings in Mbarara district

- Mr. Stephen Muhumuza of Nyakakoni village Rukindo parish Nyakayojo sub-county received 22 bags from MbaZARDI in October 2014. The cassava was intercopped with bananas and was performing well by 5th/02/2015.

- Mrs. Anna Kalinda of Kakoma village Kakoma parish Kakika sub-county received 30 bags of cassava cuttings from MbaZARDI in October 2014. She planted the cassava in four acres. The crop was facing a challenge of drought.

Pasture seed multiplication

The annual targets were to establish 13 acres of Chloris Guyana and three acres of Brachiaria mulato fields onstation; pot 50,000 Brachiaria seedlings; harvest and distribute pasture seeds to

farmers; train farmers on pasture production and maintain existing pasture fields. The following progress was registered at MbaZARDI by 31st December 2014:

- Bush clearing was done on 16 acres where Chloris Guyana and Brachiaria were to be planted.
- Existing pasture fields were maintained
- 140 farmers were trained
- Pasture harvesting was ongoing: 187kgs of pasture seeds were distributed in seven districts as follows: Sembabule (60kgs), Ntungamo (30kgs), Mbarara (2kgs), Lyantonde (50kgs), Buhweju (15kgs), Sheema (12kgs) and Kiruhuru (18kgs). The rest of the pasture seeds were in storage.

Left: Harvested and baled pastures at MbaZARDI Right: Pasture seeds in storage at MbaZARDI in Mbarara district

Challenges at MbaZARDI

i) Poor yields onstation and off station due to late disbursement of funds when the rains were ending.
ii) Fewer farmers received the planting materials because there were no district and subcounty extension staff to mobilize them. *"With restructuring of NAADS, we lack contact persons to mobilize the communities and follow up on the NARO on-farm trials. We have pasture seeds in storage but do not have staff and a budget to train farmers in the use of these technologies. Hence technology adoption rates remain low at farm level"* said the Production Scientist at MbaZARDI.

Recommendations

i) The NARO Secretariat should release funds early in February-March for the first season and July-August for the second season.
ii) The MAAIF and districts should fast track recruitment of extension staff at district and sub-county level.
iii) The NARO should provide a budget to the ZARDI for farmer training and outreach.

Mukono ZARDI - Mukono district

Financial performance

The balance brought forward from FY 2013/14 for the EAAPP was Ug shs 40,729,622. The approved budget for FY 2014/15 is Ug shs 187,413,510. All the funds were received bringing the total available resource to Ug shs 228,143,132, of which Ug shs 151,357,055 (66%) was spent by 31st/12/2014. All the funds were spent on cassava, rice and pasture seed multiplication at MuZARDI, Kamenyamiggo station and distribution of planting materials to farmers for on-farm trials.

Physical performance

Cassava

The annual planned outputs were: i) 110 acres of existing cassava fields maintained ii) 35 acres of cassava fields planted iii) cuttings distributed to farmers for on-farm trials.

By 06th/02/2015, the following implementation progress was registered:

- 110 (100%) of existing cassava fields were maintained at MuZARDI, Bukalasa Agricultural College, Mityana station, Nakaseke and Butambala district headquarters and Kamenyamiggo station.
- 35 (100%) acres of new cassava fields were established at Kamenyamiggo station
- A total of 3,694 bags of cassava cuttings were distributed to farmers by MuZARDI and Kamenyamiggo station.

Newly established EAAPP cassava gardens at Kamenyamiggo station in Lwengo district

Rice

The annual planned outputs were to plant five acres of new rice fields and distribute seeds to farmers for multiplication. By 06th/02/2015, no new fields were opened up as funds were received late when the rains were ending. A total of 2.5 tonnes of seed were harvested from Zirobwe and Luwero multiplication centres and distributed to farmers in the region for planting.

Pasture

The annual planned output was to distribute pasture seeds that were produced during FY 2013/14 to farmers for planting. By 06th/02/2015, 200kg of Chrolis Guyana and 6,000 seedlings of Bracharia grass from Kamenyamiggo station were distributed to farmers in Buikwe, Mukono, Nakasongola' Luwero and Wakiso districts.

Challenges

i) Inability to implement planned activities due to delayed release of funds by NARO Secretariat.
ii) Low outreach and poor follow up of on-farm research experiments due to lack of an effective extension system in the local governments.

Recommendations

i) The NARO Secretariat should disburse funds in time before the start of the rain seasons.
ii) The MAAIF and districts should fast track the implementation of the single spine extension system in local governments.

Ngetta ZARDI – Lira District

Financial performance

The financial performance of the EAAPP at Ngetta ZARDI is presented in Table 5.48. Release and absorption of funds was poor during the six months period.

Table 5.48: Financial performance of EAAPP at Ngetta ZARDI by December 2014

Item	Annual budget (Ug shs)	Release		Expenditure	
		Ug shs	% of budget	Ug shs	% of release
EAAPP Trials	91,507,700	60,200,000	66	33,858,651	56
Distribution of seed EAAPP	195,845,000	0	0	0	0
Total	**287,352,700**	**60,200,000**	**21**	**33,858,651**	**56**

Source: Ngetta ZARDI

The disbursed funds were utilized for cassava multiplication. The detailed expenditures are shown in Table 5.49. The rice and pasture programmes did not receive any funds.

Table 5.49: Expenditures of EAAPP funds for cassava multiplication by December 2014

Benefitting institution/items	Amount spent (Ug shs)
Loro Prison Farm	9,300,000
Dokolo Prison Farm	9,250,000
Kitgum Satellite Station	3,120,000
Ngetta Main Station	11,685,000
Bank Charges	503,651
Total	**33,858,651**

Source: Ngetta ZARDI; field findings

Physical performance

Cassava programme: The main output delivered by Ngetta ZARDI using EAAPP funds by December 2014 was maintenance of cassava multiplication gardens at Loro Prison Farm, Dokolo Prison Farm, Kitgum Satellite Station and on-station.

Rice programme: Non-tax revenue (NTR) was borrowed and used for maintaining the rice trials on station and in Lamwo district; it was planned that these funds would be refunded from EAAPP funds. All the target outputs were 100% achieved including:

- Seven acres of Nerica 4 and two acres of Nerica 10 rice varieties were established and maintained at Ngetta ZARDI; 2,512.5 kgs of Nerica 4 and 718 kgs of rice were harvested.
- Ten acres of Nerica 4 were established at Agoro irrigation scheme. Due to inadequacy of funds, they were not maintained.
- A total of 2.5 acres of lowland rice UG0057/Okile variety were established and maintained on station; 1,321 kgs of rice were harvested.

Forage component: The ZARDI had planned to multiply 50,000 seedlings of bracharia mulato and produce 300 bags of napier grass cuttings. These outputs were not achieved as funds were not released for this programme.

Challenges

1) The results of the on-farm trials at the prison farms were not known by the scientists at the ZARDI after phasing out of NAADS. The EAAPP did not have a budget for monitoring the trials.
2) Poor identification and follow up of farmer groups that benefit from NARO technologies by the District Production Department. *"The outcomes of distribution of cassava planting materials in previous seasons were poor. Weak farmer groups and disinterested farmers were selected by the district staff; the materials were kept and distributed in the dry season. The District Production staff are not properly facilitated and motivated to take over the NAADS roles"* **said Ngetta ZARDI Farm Manager**.
3) Adoption of cassava improved varieties was low among farmers due to lack of technologies to preserve and process the excess produce.

Recommendations

1) The NARO should review the EAAPP design to incorporate a component for review and monitoring of trials by the ZARDI, including a budget.
2) The MFPED should increase the budget for the District production Department to enhance monitoring the project.
3) The NARO should expand the EAAPP programme areas to include research and dissemination of value addition technologies for cassava.

The monitoring team sampled Dokolo Prison Farm to assess progress in EAAPP implementation.

Dokolo Prison - Dokolo District

Background

Ngetta ZARDI officials reported that Dokolo Prison was provided with Ug shs 9.1 million and cassava cuttings for purposes of seed multiplication. The monitoring team visited the Prison to verify this information.

Findings

Uganda Government Prison Dokolo is located in Arudabiro village Alwitnac parish Dokolo Town Council Dokolo district. The Officer in Charge (OC) of the prison confirmed receipt of cassava cuttings from Ngetta ZARDI twice in 2013 and during July 2014.

Ngetta ZARDI Cassava multiplication site at Dokolo Prison in Dokolo district

The cuttings that were received in 2013 were planted in 24 acres that were being maintained. This cassava stand was ready awaiting for NARO to collect the cuttings. The cuttings that were received in 2014 were planted in 10 acres during August 2014 and were also being maintained.

The OC acknowledged receipt of Ug shs 9.1 million from Ngetta ZARDI between July and December 2014 for purposes of maintaining the cassava fields. The OC reported that as the cassava gardens were maintained using labour of prisoners, the funds were diverted to renovation of two blocks at the prison and purchase of 100 mats/beddings for the prisoners.

Challenges

i) Reduction in cassava acreage due to damage by stray animals.
ii) The land under cultivation had progressively reduced over the years due to lack of tractors for ploughing.

Recommendations

i) The Prison should scale up the coping measure of using prisoners as shamba guards to scare away stray animals.
ii) The MAAIF should consider providing a tractor to the prison for enhanced mechanization and crop production.

5.7.4 Analysis

Link between financial and physical performance

Overall, there was a close link between the financial and physical performance of NARO as the funds that were released to and absorbed by the ATAAS and EAAPP projects were spent on delivery of core planned outputs. For the ATAAS programme, 41% of the planned outputs were fully achieved by 31st December 2014 comparable to the 47% releases to the NARO institutes. About 27% of the ATAAS outputs were partially achieved and 32% not achieved.

For the EAAPP programme, 64% of the planned outputs were achieved against an average of 55% of the funds released. In addition, 16% of the outputs were partially achieved and 20% were not achieved. The good performance of the EAAPP relative to the funds released was because one major output of maintaining existing cassava stands was done by ZARDIs with minimal resources.

Achievement of targets

Overall, the achievement of targets by NARO was good given the resourcing levels. For the ATAAS project, 68% of the outputs were fully or were partially achieved (work in progress) and 32% where not achieved. For the EAAPP project, 80% of the ouputs were fully or partially achieved and 20% where not achieved. Combining the two projects together, on average 74% of the NARO planned activities for half year were fully or partially achieved. The outputs that were partially achieved were ongoing trials or rehabilitation works that were planned to be completed by the end of the financial year.

Comparative analysis

The achievement of outputs varied across the projects and NARO Institutes. Both the ATAAS and EAAPP projects underperformed in some respects due to the absence of an effective extension system in the local governments to transmit proven technologies to farmers and follow up the onfarm trials. In addition, the EAAPP faced a challenge of late disbursement of funds in Q2 that made it difficult to undertake crop based research activities in the dry season.

Implementation challenges

i) Poor yields onstation and off station due to late disbursement of funds to ZARDIs when rains were ending:
ii) Mismatch between the funding flow schedules and the seasons. Funds were received towards the dry season when the research trials could not be conducted.
iii) Wastage of technologies at station and farm level, poor dissemination of proven technologies and inadequate information on research outcomes at farm level due to lack of extension staff in the districts.
iv) Stalment of research projects due to lack of capital development funds to renovate fish ponds, screen houses and repair equipment in laboratories. The NARO was noted to be inefficient in providing laboratory equipment and consumables in time.

v) The outcomes of the on-farm trials were not known to the scientists as they could not locate the host farmers that were identified by NAADS in the previous FY.
vi) Lack of well equipped laboratories to undertake chemical tests, especially in the aquaculture sub-sector.

5.7.5 Conclusion

The semi-annual performance of NARO during FY 2014/15 is rated as very good (74%). The funds absorption matched the delivery of key planned outputs. There was evidence of construction and rehabilitation of various infrastructures at NACRRI and the ZARDIs, delivery of vehicles and tractors, training of scientists at Masters and PHD level and onstation and off station multiplication trials for cereals, cassava, legumes, aquaculture, cattle, Mubende goats, pastures and agro-forestry.

5.7.6 Recommendations

i) The MFPED/NARO Secretariat should release research funds early and in line with the rain seasons (July and January).
ii) The MAAIF should collaborate with the local governments to fast track implementation of the single spine extension system and ensure that extension staff are recruited at all levels.
iii) The NARO should allocate funds for capital development to the Institutes to speed delivery of planned outputs.
iv) The NARO Secretariat should fast track procurement and provision of laboratory equipment and consumables for the ZARDIs.
v) The NARO should allocated funds for capital development to the institutes and ZARDIs

vi) The NARO should recruit additional staff at the ZARDIs to link research and extension and collaborate with district production staff to follow up on farm trials.

5.8 Uganda Cotton Development Organization (Vote 155)

5.8.1 Background

Formed in 1994, the Uganda Cotton Development Organization (UCDO) is mandated to monitor the production, processing, and marketing of cotton so as to enhance the quality of lint exported and locally sold. It promotes the distribution of high quality cotton seed, issues export licenses and facilitates the development of the cotton industry. These functions are carried out in collaboration with the Uganda Ginners and Cotton Exports Association (UGCEA) and MAAIF.

The UCDO provides services to 55 cotton growing districts through 10 regions namely: Busoga/South Eastern, Tororo/Busia, Bugisu, Pallisa/North Eastern, Teso, Acholi, South Western, Lango, Western and West Nile. The government cotton seed dressing facilities have traditionally been hosted in ginneries that belong to private processors. The UCDO in 2012 commenced a development project 1219: Cotton Improvement to establish the first government seed processing plant in Pader district. The project completion date for Phase I is June 2016.

The planned outputs for UCDO in FY 2014/15 are:

- High quality cotton planting seeds distributed to farmers in 58 cotton growing districts
- Seed growers in five segregated seed multiplication areas mobilized and organized to produce 3,750 MT of certified seed for use in FY 2015/16.
- The establishment of 3,500 demonstration plots for training farmers supported.
- A total of 280 field extension workers trained and deployed
- Fertilizers, pesticides and spray pumps procured and distributed to farmers.
- A total of 1,000 ox-ploughs procured and distributed to farmers.
- Tractor hire services for cotton farmers organized.
- Land in Pader district fenced, construction of buildings and structures under Phase 1 continued, and delivery and installation of machinery under project 1219

The semi-annual monitoring focused on the recurrent activities undertaken by the UCDO under Programme 01 Headquarters and the development project 1219. Five out of the 10 cotton growing regions were monitored to assess progress in programme implementation, namely: the South Eastern, West Nile, Lango, North Eastern and Acholi. The findings are presented below.

5.8.2 Findings

i) **Financial performance**

The approved budget for the UCDO in FY 2014/15 is Ug shs 5.991billion (of which Ug shs 3.586 billion is GoU contribution and Ug shs 2.405 Billion is expected Non-Tax Revenue NTR). By 31st December 2014, the NTR had not been realised. The detailed overall financial performance of the UCDO is presented in Table 5.50.

Table 5.50: UCDO financial performance by 31st December 2014 (Ug shs)

Item	Approved budget	Release	Expenditure
Recurrent (Non-Wage)	1,397,136,916	692,540,392	451,924,119
Development(GoU)	2,196,000,000	1,067,256,000	61,570,000
NTR	2,403,863,084	0	0
Total	**5,991,000,000**	**1,759,796,392**	**513,494,119**

Source: IFMS data

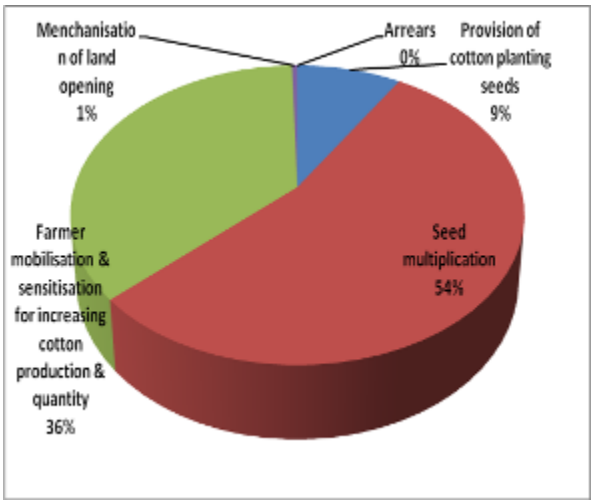
The half year release for the recurrent budget was excellent (50%) and the resource utilization good (65%). The semi-annual release for the development project was excellent (48.6%) while

the expenditure performance was poor (5.8%). Low absorption on the project was mainly due to stalemate of civil works in Pader district.

The expenditure under the project were on site clearing, fencing, boreholes and construction of other structures. The detailed expenditure for the recurrent budget under Program 01 Headquarters is shown in Figure 5.6.

The expenditure performance for Programme 01 (Headquarters) was excellent as the bulk of funds were spent on delivery of the key planned outputs (54% for seed multiplication, followed by farmer mobilization and sensitization for increasing cotton production and quantity at 36%).

Figure 5.6: UCDO Headquarters Expenditure as of 31st December 2014



Source: IFMS

ii) Physical performance

a) Past performance

Program 01 Recurrent budget: During FY 2013/14, the UCDO in collaboration with the UGCEA distributed cotton seeds to farmers in 54 districts, planted 9,000 acres, trained 8,090 seed growers in seven districts, and established 3,101 demonstration plots.

A total of 41,274 MT of cotton seed were produced and purchased from farmers; 255 field extension workers were trained and deployed in cotton growing areas; 424,466 units of pesticides, 375 MT of fertilizers, 3,000 liters of herbicides and 3,493 spray pumps were distributed to cotton farmers; procured 2,000 ox ploughs, organized tractor hire services for cotton farmers in the five cotton growing areas and ploughed 7,300 acres of land[18].

Development budget Project 1219: In FY 2013/14, the UCDO acquired 16 acres of land in Pajule subcounty, Pader district; finalized designing of structures; compiled bills of quantities for the seed processing facility and construction services were procured in preparation for commencement of construction.

Field findings

Project 1219 Cotton Production Improvement

[18] UCDO Annual Progress Report 2013/14; discussions with UCDO officials; Field findings

The annual planned outputs for UCDO Project 1219 during FY 2014/15 are:

- Fencing of land completed
- Phase 1 building and other structures completed
- Installation of electricity completed
- Construction of boreholes completed
- Specialized machinery procured and installed.

Physical performance

The UCDO contracted M/s China Jiangxi Corporation for International Economic and Technical Cooperation Limited in association with Bikandema and Partners, Kaburu Okello Consulting Engineers Limited and Multi Consults Limited at a sum of Ug shs 11,130,218,624 to undertake civil works for construction of a cotton seed processing plant in Pader district. The contract period was 12 months (7th July 2014 to 7th July 2015).

The scope of works included: construction of a Guard house and perimeter fence, Ginning Hall and Seed Bagging area, Delinting Hall, Ablution Block, Power House, Pump House and ancillary services which include; a borehole, overhead water tank, electrical and mechanical installations. The site located in Akwal West LC1, Ogura parish, Lapul sub-county in Pader district was handed over to the contractor in June 2014.

By 11th February 2015, civil works had stalled at less than 10% level of completion due to termination of the contractor. The perimeter fence was partly constructed (excavation and hoarding of foundation for boundary wall were completed and the front and eastern side of the wall were partly constructed); construction of the foundation for the delinting hall and ginning hall had just been initiated. The two boreholes were substantially completed, pending fixing of hand pumps. Extension of the power line to the site was done.


Left to Right: A partially constructed perimeter fence and a stalled ginning hall at foundation level at UCDO dressing station in Pader district


Left to Right: One of the boreholes pending fixing of a hand pump, materials mobilized and abandoned by the contractor at UCDO dressing station in Pader district.

The contract was terminated on 6th January 2015 following guidance from the Solicitor General. The grounds for termination were:

1) Breach of Contract Whereby the contractor failed to provide a Contract Manager for the project
2) The contractor issued a curriculum vitae of one Engineer without notifying him and without his consent to its submission; which amounted to fraudulent practice, contrary to PPDA Code of Ethical Conduct for Bidders and Providers.
3) Slow implementation of the project against the set timelines.

The UCDO was in the process of preparing revised Bill of Quantities (BOQs) and tendering out the project to another contractor.

Program 01 Headquarters

Implementation approach

The cotton season follows the calendar year rather than the financial year. This causes challenges in accounting as procurements are done in the preceding year before implementation begins in the FY. The cotton year starts from November to October of the preceding year. The inputs that are used in November are procured in March and distributed in April - July. The monitoring work focused on the period March 2014 – February 2015 that covered the relevant activities for the cotton growing season in FY 2014/15.

During FY 2014/15, the UCDO in collaboration with UGCEA provided inputs to farmers at subsidized prices using the following standardized approach:

- **Cotton seeds:** Fuzzy seeds were procured from cotton ginners and processed at different seed dressing station; the delinted seed was distributed to farmers between April and July 2014. The unit cost of a 3kgs bag of cotton seed was Ug shs 3,000.

a) **Pesticides:** These were procured and distributed to cotton farmers at Ug shs 3,500 per unit.
b) **Spray pumps:** availed to farmers at Ug shs 50,000 each. All fertilizer demos received free pumps while credit was extended to individuals and farmer groups.
c) **Fertilizers:** Two types of fertilizers; NPK and UREA were availed to farmers at Ug shs 60,000 per 50kgs bag. Lead farmers received free fertilizers for demonstration purposes targeting each one acre.
d) **Herbicides:** These were procured and distributed to cotton farmers at Ug shs 14,000 per unit, that covers one acre on both credit and cash basis.
e) **Tractor hire services:** The services were obtained at Ug shs 60,000 per acre; ox-ploughs were distributed to farmer groups for free in all districts visited. Each group received an ox-plough to open up land for cotton growing and other crops.
f) **Extension services:** The UCDO offers services through the decentralized structure of Assistant Field Officers, Area Coordinators and site coordinators.

Overall physical performance
The monitoring team reviewed delivery notes for inputs to districts and training reports at UCDO. On the basis of this evidence and discussion with various officials at UCDO, and districts, the following outputs were delivered countrywide by February 2015:

- Processed and supplied about 1,580 MT of delinted and graded cotton planting seed to farmers in 55 districts in the Eastern, central and western regions.
- Distributed seven metric tonnes (MT) of Nucleus and foundation seed from NARO and 30 metric tonnes of certified seed to farmers in the northern region for multiplication.
- Distributed 24,400 units of pesticides and 200 spray pumps to seed growers.
- Approximately 8,516 acres were established under seed multiplication.
- Organized and established 3,078 demonstration plots.
- A total of 333 extension workers (14 Assistant Filed officers, 51 Area coordinators and 269 Site coordinators/lead farmers) were trained and deployed as trainers of farmers.
- A total of 250 MT of Urea and NPK fertilizers, 213,669 units of Dimethoate, 565,608 units of karate and 851 spray pumps were procured.
- A total of 133 MT of fertilizers, 433,592 units of Dimethoate and karate and 851 spray pumps were distributed to farmers.

- Deployed 24 tractors owned by UCDO and Ginners which ploughed over 4,088 acres in the cotton growing regions of the North and North east.

Field Findings

a) Acholi region

The region is constituted by 10 cotton growing districts namely; Kitgum, Lamwo, Pader, Agago, Gulu, Amuru, Oyam, Nwoya, Part of Kabong and Abim. Activities that were undertaken in the region/zone during the period of March 2014 to February 2015 included; group formation; seeds distribution, farmer training, pesticides distribution, tractor services, farmer group registration and distribution of spray pumps.

Group formation: A total of 24,495 cotton farmers were registered and 2,867 farmer groups formed in the districts of Lamwo, Agago, Kabong, Kitgum and Pader.

Input distribution
Table 5.51 shows the inputs that were distributed to farmers both on cash and credit basis by the UCDO in the Acholi region. Cash payments for the inputs by farmers were low. By 10th February 2015, the region had an uncollected debt totaling Ug shs 320,006,000 (96%) for the inputs that were sold to farmers on credit.

Table 5.51: UCDO Input distribution and payments in Acholi region during March 2014 to February 2015

Inputs distributed	Quantity sold on cash basis	Quantity sold on credit basis	Quantity Issued to demos	Stock balances	Total quantity Supplied	Total Amount collected & Banked (Ug shs)	Total Amount Outstanding (Ug shs)
Cotton Seed (Kgs)	1,755	59,350	2,431	14,623	78,159	4,389,000	148,418,500
Pesticides(in Units**)**	2,387	54,633	8779	7,817	74,210	7,165,500	153,607,500
Spray pumps	35	111	47	9	202	1,750,000	5,300,000
Fertilizers (Kgs)	26	211	187	25	449	1,540,000	12,680,000
Total						**14,844,500**	**320,006,000**

Source: Field findings

Crop establishment and performance
A total of 50,998 acres of cotton were planted and 95 fertilizer demo plots, 10 herbicide demo plots and 482 agronomy demo plots were established. Performance was excellent for the

establishment of cotton acreage (82%), establishment of fertilizers demos (83%) and agronomy demos (79%) and below average for herbicide demos (20%). Refer to Table 5.52.

Table 5.52: UCDO Crop establishment in Acholi region by February 2015 (acres)

District	Area under cotton		Fertilizers Demo plots		Agronomy demo plots		Herbicide Demo Plots	
	Target	Planted to date	Target	Planted to date	Target	Planted to date	Target	Planted to date
Agago	9,100	5,432	10	10	60	60	5	0
Kitgum	12,798	12,599	10	10	60	60	5	0
Pader	11,000	9,850	10	10	63	63	5	5
Lamwo	3,000	1,418	10	10	60	60	5	5
Kaabong	2,000	2,088	10	5	60	5	5	0
Gulu	5,000	7,208	10	10	60	60	5	0
Amuru	2,000	1,300	10	10	60	60	5	0
Nwoya	3,000	1,100	10	10	60	60	5	0
Abim	1,100	360	10	1	60	16	5	0
Oyam	2,000	260	5	3	60	36	5	0
TOTAL	**50,998**	**41,651**	**95**	**79**	**605**	**482**	**50**	**10**

Source: Field findings

Mechanization and land opening

The UCDO deployed six tractors in the districts of Kitgum, Pader and Gulu which ploughed 1,171 acres for 692 farmers. Revenue generated and banked excluding expenses amounted to Ug Shs 13,461,200. By 10th February 2015, a total Ug Shs 7,500,000 was still in debts.

The monitoring team sampled and visited some case study farmer groups in Kitgum and Pader districts who were reported to have benefitted from the UCDO.

Kitgum District

Two farmer groups were sampled in Kitgum district and the findings are presented below. The farmer groups had received and utilised the UCDO inputs.

Case study one: Rwotomigo farmer group

Physical performance

Formed in 2011, the farmer group is located in Oguda LC1, Pawidi Parish, Lagoro subcounty. The group received 25Kgs of cotton seed and 17 units of pesticides that were used to plant a total 20 acres of cotton. Mr. Okema Cam Mario the Chairman of this group harvested 1,500kgs of

seed cotton, which he sold at Ug shs 1000 per Kg. He used the money to buy three bulls and paid school fees for his children.

Challenges; i) Unaffordability of inputs due to the low prices and returns from of cotton ii) Limited opening of land and late planting due to inadequacy of ox-ploughs.

Recommendation: i) The UCDO should subsidize the inputs further. ii) The UCDO should provide more ox-ploughs to the farmers.

Case study two: Ogudamaktic farmer group

Physical performance
Formed in 2014, the farmer group is located in Oguda LC1, Pawidi Parish, Lagoro subcounty.
The group received 40bags of cotton seed, 15 units of pesticides and one additional bag of fertilizers for free. They planted a total of 15 acres of cotton and harvested three tons of seed cotton that were sold at Ug shs 1,000 per kg.

The resultant funds from cotton sales were used by members in various ways including: banking the money for farming in the next season; paying school fees; and laying bricks for permanent house construction. Some members paid in cash for the inputs while others faced challenges of paying back.

Challenges

i) Failure to expand cotton farming due to the low prices of and returns from cotton
j) Late planting and low yields due to delayed access to the ox-plough owned by the group.

Recommendation: The UCDO should avail farmers with more ox-ploughs.

Pader district

The monitoring team held discussions with one of the UCDO Area Coordinator in Pader district to assess progress in programme implementation (Box 5.5). Two farmers were sampled to verify and triangulate the findings (Table 5.53). Both farmers had received UCDO inputs.

Box 5.5: Case study of UCDO Area Coordinator in Pader district

Mr. David Okello residing in Akware village Ogle parish in Lapul subcounty is the Area Coordinator for Pader West. By 11th February 2015, Mr. Okello had received the following inputs from UCDO and distributed/sold them to farmers at the recommended prices: 13,500 bags of seeds of which 500 bags were for demonstration; 12,500 units of pesticides; 26 spray pumps; 35 bags of fertilizers, 160 ploughs and 80 bottles of herbicides of which five bottles were for demonstration. The input distribution was undertaken during March to November 2014.

Most inputs were sold on credit and farmers had not paid back the money. For example, out of 13,000 bags of seed that were sold, only 166 had been paid for in cash. Out of 12,500 units of

pesticides sold, farmers had paid for 450 units and the rest was still in debts. No payments had been received for the fertilizers.

The low loan recovery rate was attributed to the high dependency syndrome in Northern Uganda whereby the farmers did not expect to pay back to government. The main challenge faced by the Area Coordinator was the low outreach to farmers due to the weak transport means (bajjaji motorcycle) given the vast distances and limited field allowances. The UCDO should recruit additional Area Coordinators and increase the facilitation allowances for the field staff.

Source: Field findings

Table 5.53: Physical performance of cotton beneficiaries in Pader district by February 2015

Beneficiary	Location	Received	Activities under taken	Challenges	Recommendations
Oketch Damascus a demonstration farmer	Lila LC1, Palwo parish, Pajule sub-county.	2bags of cotton seed, 14 bottles of pesticide, one bag of NPK fertilizers and one spray pump on credit.	Planted two acres of cotton and harvested 1,240kgs. Sold and used the money to pay school fees and other investments.	Low yields due to inadequate weeding and operational costs. Low price of cotton.	The UCDO should avail them with loans to pay back after harvesting. The Government should regulate the prices to at least Ug shs 1,500 per Kg
George Ocera	Awar-mon LC1, Ogole parish in lapul sub county	Two kgs of cotton seed and two units of pesticides on credit.	Planted four acres of cotton and harvested 800kgs. Sold the seed cotton and used the money to pay school fees for three children, one at the university.	Poor yields due to late planting arising from delayed distribution of seeds. Limited crop expansion due to unaffordability of tractor hire services at Ug shs 60,000.	UCDO should distribute seeds in April. UCDO should reduce tractor hire services to Ug shs 30,000 per acre.

Source: Field findings

Implementation challenges in Acholi region

1) Losses to UCDO due to poor recovery of input loans.
2) Reduction in area planted to cotton due to the low price of cotton (Ug shs 1,000 per kgs).
3) Low outreach of extension services due to conflicts between Karamajong and Acholi people; the Karamajong prefer that extension services should be provided by their kinsmen.

4) Low cotton yields at farm level due to ineffective monitoring by the Site Coordinators who were demotivated by a low salary (Ug shs 50,000 per month).
5) Loss of fertilizers due to poor storage facilities in the region. The lack of pallets in farmers' stores led to fertilizers absorbing moisture and losing quality.

Recommendations for Acholi region

1) The UCDO should restrict sells of inputs on cash basis.
2) The UCDO should implement measures that raise the farm gate prices of cotton to at least Ug shs 1,500 per Kg.
3) The UCDO should recruit Area Coordinators of Karamonjong origin to work in Karamoja.
4) The UCDA should consider raising the salary for the site coordinators to at least Ug shs 150,000 per month.
5) The UCDO should train farmers on the use of pallets in stores to avoid absorption of moisture by fertilizers.

b) Lango region

The cotton growing districts in this region are; Alebtong, Amolator, Apac, Dokolo, Kaberamaido, Kole, Lira, Otuke and Oyam. Extension activities that were undertaken in the region/zone during the period of March to December 2014 included; seeds, ox ploughs and pesticide distribution, farmer training, tractor services, farmers registration and group formation.

Group formation: By 31st December 2014, a total of 39,447 cotton farmers were registered and 2,236 farmer groups formed in Lango region.

Input distribution: The UCDO distributed the following inputs to cotton farmers from the period of March to December 2014 (Table 5.54). Farmers had not paid back the input loans. About 92% of the total expected revenue from input sales was still in debts.

Table 5.54: Input distribution and payments in Lango region during March to 31st December 2014

Inputs distributed	Quantity Sold on Cash basis	Quantity sold on credit basis	Quantity Issued to demos	Stock balances	Total Quantity Supplied	Total Amount collected & Banked (Ug shs)	Total Amount Outstanding Ug shs)
Cotton Seed	11,425	95,581	1,224	13,018	121,248	28,562,500	238,952,500
Pesticides	9,135	137,181	3,319	-	149,635	27,405,000	411,543,000
Spray Pumps	48	152	31	3	234	2,400,000	7,600,000
Fertilizers	14	323	100	2	439	840,000	19,380,000

Total	**59,207,500**	**677,475,500**

Source: Field findings

Crop establishment and performance

The level of achievement for the planned activities in Lango region was excellent against set targets (Table 5.55).

Table 5.55: Crop establishment in Lango region during March to 31st December 2014 (acres)

District	Area under cotton		Fertilizers Demo plots		Agronomy demo plots		Herbicide Demo Plots	
	Target	Planted to date	Target	Planted to date	Target	Planted to date	Target	Planted to date
Alebtong	12,000	9,510	10	10	65	65	5	5
Amolator	5,000	3,600	10	10	65	65	5	5
Apac	6,000	3,500	10	10	65	65	5	5
Dokolo	4,000	3,000	10	10	65	65	5	5
Kaberamaido	1,500	600	4	4	26	26	2	2
Kole	5,000	3,000	6	6	39	39	3	3
Lira	15,000	18,000	12	13	78	78	6	6
Otuke	1,500	450	4	4	26	26	2	2
Oyam	10,000	9,900	14	14	91	91	7	7
TOTAL	**60,000**	**51,560**	**78**	**79**	**507**	**507**	**39**	**39**

Source: Field findings

Two farms/farmers were sampled from Lira district and one from Alebtong to assess progress in programme implementation.

Lira district

Case study one: Loro Prison farm

The farm is located in Erute prison, Central Division Lira Municipality in Lira district. The farm received 40bags of cotton seeds, 70 units of herbicides (karate) and tractor hire services in July 2014. A total of 20 acres of cotton were planted and harvesting commenced in December 2014. By 20th January 2014, harvesting of cotton was still ongoing. All the harvested cotton was in storage awaiting bulk selling.

Key challenges in cotton growing were: i) lower yields due to the high prevalence of boll worms and ineffective pesticides; ii) inadequate weeding due to lack of operational funds and

Left: Loro prison cotton field ready for harvesting Right: harvested seed cotton in the store

iii) Insufficient land planted to cotton due to lack of tractor hire services in the region. The farm recommended that the UCDO should avail more tractors to farmers and more effective pesticides.

Cases study two: Mr. Molo Tonny

The farmer resides in Otono village Ober parish Barr subcounty. He received 12 bags of cotton seed, 48 units of Karate pesticide, 35 units of cypacal on credit and 70 units of dimethoate on cash between April and September 2014. He planted three acres of cotton and harvested 1,600kgs of cotton in December 2014. The seed cotton was sold at Ug shs 1140 per Kg.

Mr. Molo Tonny`s motorcycle bought from cotton sales in Lira district

The farmer used the money to buy a solar panel for his house and also bought a motorcycle to widen his sources of income. His key challenge was lack of finances to weed the garden which reduced the expected yield.

Alebtong district

Case study two: Orbibcing Women`s group

Formed in 2006, the group composed of 41 women is based in Bedworo village Anyiti parish Abako subcounty. During May to November 2014, the group received 128 bags of cotton seed, 64 bags of NPK and UREA fertilizers, 42 liters of herbicides, 10 ox-ploughs, four boxes of cypacal, 24 boxes of karate and five boxes of dimethoate pesticides on credit.

The group hired a tractor at Ug shs 30,000 per acre to open up land and planted 64 acres of cotton; of which 23 acres were planted as a group and the 41 acres were planted as individuals. By 20th January 2015, harvesting was still ongoing; a total of 14 tons of seed cotton was harvested and sold at Ug shs 1,000 per Kg. The monies were used to: i) buy plastic chairs and serving dishes for hiring out at ceremonies ii) planted 14 acres of cassava NASE 14 variety and iii) initiate processes of constructing a produce store.

Key challenges were: i) Lower yields due to the small quantity of pesticide given that was not effective against the high incidence of boll worms. ii) Late planting due to unavailability of tractor hire services in the region.

Recommendations: i) The UCDO should avail sufficient pesticides to the farmer group ii)The UCDO should provide more tractors in the region.

Implementation challenges in Lango region

i) Low cotton productivity due to the prolonged dry season, soil infertility and less usage of fertilizers.
ii) Slow recovery of the monies for the inputs distributed to farmers on credit due to low cotton price (Ug shs 1,000 per Kg).
iii) Cotton prices were low as, which impacted on Limited monitoring and supervision of farmers by the Site Coordinators due to inadequate facilitation and allowances.
iv) Low outreach to farmers due to inadequate UCDO field staff.

Recommendations for the Lango region

i) The UCDO should provide farmers with fertilizers at subsidized prices and training on usage.
ii) The UCDO should consider increasing the allowances for field staff.
iii) The UCDO should recruit more area coordinators in Lango region.

c) North Eastern region

The cotton growing districts in this region are; Pallisa, Kibuku, Budaka, Kumi, Bukedea, Serere, Soroti, Amuria, Katakwi, Bulamburi, Sironko, Manafwa and Mbale. Extension activities that were undertaken in the region/zone during the period of March to January 2015 included; seed, pesticide and spray pumps distribution, farmer training, tractor hire services, and farmers and groups registration.

By January 2015, a total of 40,230 cotton farmers were registered and 1199 farmer groups formed in the districts of Pallisa, Budaka, Sironko, Mbale, Kumi, Bukedea and Kibuku. Three Assistant Field Coordinators, eight Area Coordinators and eight coordinators were recruited for the region. Inputs distribution to farmers is shown in Table 5.56. About 77% of the total expected revenue from input sales was in debts.

Table 5.56: UCDO input distribution and payments in North Eastern region during March 2014 to January 2015

Inputs distributed	Stock balances	Quantity Sold on Cash basis	Quantity sold on credit basis	Quantity Issued to demos	Total Quantity Supplied	Total Amount collected & Banked (Ug shs)	Total Amount Outstanding (Ug shs)
Cotton Seed (Kgs)	14,248	16,598	65,455	3,623	99,924	41,610,500	163,637,500
Pesticides (in units)	6,762	36,358	109,099	9,932	162,151	109,074,000	327,297,000
Spray Pumps	22	20	33	79	154	1,150,000	1,650,000
Fertilizers (Kgs)	31	203	203	282	518	120,000	12,180,000
Herbicides	34	1	109	47	191	14,000	1,526,000
Total						**150,968,500**	**506,290,500**

Source: Field findings

Crop establishment and performance

The level of achievement for the planned activities was excellent overall against the set targets. A total of 45,100 acres of cotton were planted, 57 fertilizer demo plots, 681 agronomy demo plots and 28 herbicide demo plots were established (Table 5.57).

Table 5.57: Crop establishment and performance in the North Eastern region during March 2014 to January 2015 (acres)

District	Area under cotton (acres)		Fertilizers Demo plots		Agronomy demo plots		Herbicide Demo Plots	
	Target	Planted to date	Target	Planted to date	Target	Planted to date	Target	Planted to date
Pallisa-Ladoto	9500	5200	5	7	54	54	5	10
Pallisa-Kabole	8,000	4500	5	10	36	69	5	8
Kibuku	13,000	10000	10	10	108	136	10	
Budaka	6,000	3000	5	7	54	70	5	
Sironko	7,000	6500	5	8	36	40	5	2
Mbale	1,500	600	2	2	18	2	0	
Manafwa	1,500	700	3	3	18	3	0	
Kumi	5,500	7500	5	5	66	217	5	3

Bukedea	5,500	6200	5	5	36	66	5	5
TOTAL	**60000**	**45100**	**45**	**57**	**462**	**681**	**10**	**28**

Source: Field findings

Mechanization and land opening

The UCDO deployed two tractors in the districts of Sironko and Pallisa which ploughed 341 acreage of land for a total of 122 farmers in the region. Revenue generated and banked excluding expenses amounted to Ug Shs 5,430,000. By January 2015, a total Ug Shs 4,800,000 was still in debts on this activity.

The UCDO distributed 200 ox-ploughs to 200 farmer groups in the districts of Pallisa (Ladoto), Bukedea, Budaka, Kibuku, Sironko, Mbale, Manafwa, Serere, Kumi and Soroti. During the period under review, a total of 9,605 acres for 15,486 acres for other crops were ploughed.

The monitoring team sampled and visited three farmers who had benefited from inputs in the districts of Kumi and Ngora. Findings are presented in Table 5.58.

Table 5.58: UCDO physical performance of cotton beneficiaries in Ngora and Kumi districts by January 2015

Beneficiary	Location	Received	Activity	Challenges	Recommendations
Teko Sebastine	Obur Village, Akeit Parish, Mukura Sub-county in Ngora district	15 bags of cotton seed, a spray pump, Ox-plough and 20 units of pesticides.	Planted eight acres and harvested 3,000kgs. Sold and used the money to pay school fees for his children.	Weeding was Expensive. Ineffective Pesticides (karate) Low farm gate prices of seed.	The UCDO should provide more effective pesticides to the farmers.
Samwel Erongu	Okunguro Village, Okunguro Parish in Mukura Sub-county in Ngora district	Six bottles of pesticide and three bags of cotton seed in June 2014.	Planted 1.5 acres. Harvested and sold 710kgs. Used the money to renovate his home and bought chicken	Lacked funds for weeding. Expensive pesticides discourages usage	The UCDO should provide soft loans to farmers for weeding. The UCDO should reduce the prices of pesticides.
Obore James is a lead farmer	Kanapa Village, Kanapa Parish in Ongno Sub-county in	Six bags of cotton seed, 28units of pesticides, two bags fertilizers	Planted 2.5 acres of cotton and harvested 2,856Kgs of seed cotton. Sold and used the money to	Weeding is expensive. Low farm gate prices of seed cotton. The spray pumps	The UCDO should regulate the prices of cotton to the farmers. The UCDO should avail the farmers more spray pumps.

	Kumi district.	and an Ox-plough	pay school fees. He also bought one oxen	distributed were very few, 20 farmers use one Spray pump in a planting season.	

Source: Field findings

Implementation challenges in the North Eastern region

1) Low yields due to late planting and poor quality of seeds.
2) Low acreage of cotton planted due to the unaffordability of inputs.
3) Infertility of the soils in the North eastern region lowers the expected yields.

Recommendations

1) The NARO should develop more improved early maturing cotton seed varieties
2) The UCDO should subsidize inputs further.
3) The UCDO should scale up provision of fertilizers to cotton farmers.

d) South Eastern Region

The cotton growing districts in this region are; Kaliro, Buyende, Namayingo, Namutumba, Bugiri, Luuka, Iganga and Mayuge. The activities that were undertaken in the region during March 2014 to January 2015 included; seeds, pesticide and spray pump distribution, farmer training, and farmers/groups registration.

By January 2015, a total of 12,817 cotton farmers were registered and 624 farmer groups formed. The UCDO distributed inputs to cotton farmers (Table 5.59). 38.3% of the total expected revenue from input sales was still in debts.

Table 5.59: UCDO input distribution and payments in South Eastern region during March 2014 to January 2015

Inputs distributed	**Qty Sold on Cash basis**	**Qty sold on credit basis**	**Qty Issued to demos**	**Stock Balances**	**Total Qty Supplied**	**Total AMT collected & Banked (Ug shs)**	**Total AMT Outstanding (Ug shs)**
Cotton Seed (Kgs)	15,856	8002.2	430	11,973	36,261	39,639,500	20,005,500
Pesticides (Units)	21,036	16,082	2,002	8,760	47,880	63,107,700	48,245,700
Spray pumps	71	5	15	7	98	3,560,000	250,000
Fertilizers (Kgs)	44	1	55	124	221	2,610,000	3,000
Herbicides(Liters)	110	34.5	0	59.8	291	1,645,500	0
Total						**110,562,700**	**68,504,200**

Source: Field findings

Crop establishment and performance

The level of achievement for the planned activities was good for acres planted (60%) and excellent for the other indicators (95%). A total of 19,500 acres of cotton were planted, 40 fertilizer, 137 agronomy and 39 herbicide demo plots were established (Table 5.60).

Table 5.60: UCDO crop establishment and performance in South Eastern region by January 2015 (acres)

District	Area under cotton		Fertilizers Demo plots		Agronomy demo plots		Herbicide Demo Plots	
	Target	Planted to date	Target	Planted to date	Target	Planted to date	Target	Planted to date
Kaliro	12,000	9,461	12	12	45	41	12	11
Buyende	6,000	1,994	6	6	23	23	6	6
Namutumba	7,500	3,675	10	10	37	37	10	10
Bugiri	3,800	3,141	4	4	14	8	4	4
Luuka	2,200	989	4	4	14	14	4	4
Iganga	2,000	681	4	4	14	14	4	4
TOTAL	**33,500**	**19,941**	**40**	**40**	**147**	**137**	**40**	**39**

Source: Field findings

Mechanization and land opening

By January 2015, the UCDO had distributed 150 ox-ploughs to 144 farmer groups in the districts of Kaliro, Buyende, Namutumba, Bugiri, Luuka and Iganga. A total of 1,025 acres of cotton and 1,755 acres for other crops were ploughed.

Implementation challenges in South Eastern Region

i) Low recovery of input loans associated with poor prices and returns from cotton sales.
ii) Low yields due to new diseases and pests that affected the cotton gardens.
iii) Lack of transport to distribute inputs from the sub counties to the farmers.
iv) Fake weighing scales used by middle men to cheat farmers.

Recommendations

i) The UCDO should review the implementation approach of giving inputs to farmers on credit.
ii) The Ministry of Trade and Cooperatives should strengthen the cooperatives societies to enhance their bargaining power for better produce prices
iii) The NARO should intensify research into pests and diseases affecting cotton and recommend appropriate control measures.

iv) The UCDO should facilitate the regional office to transfer inputs from sub-county to farmer locations.
v) The UNBS should improve monitoring and assuring the quality of weighing scales used by middle men.

e) West Nile Region

The cotton growing districts in the region are; Nwoya, Arua, Zombo Nebbi, and part of Democratic Republic of Congo[19]. The activities that were implemented in the region during March to December 2014 included; seeds, pesticide and spray pump distribution, farmer training, tractor hire services and registration of farmers and farmer groups.

During the season, a total of 12,000 cotton farmers were registered and 283 farmer groups formed in the region.

The UCDO distributed the following inputs to cotton farmers between March to December 2014 (Table 5.61). 35% of the total expected revenue from input sales was still in debts.

Table 5.61: UCDO inputs distributed and payments made in the West Nile region during March to 31st December 2014

Inputs distributed	Quantity issued to Demo	Quantity Sold on Cash basis	Quantity sold on credit basis	Stock Balances	Total Quantity Supplied	Total Amount collected & Banked Ug shs	Total Amount Outstanding Ug shs
Cotton Seed (Kgs)	603	67,789	3,059	784	72,235	169,471,500	7,648,500
Pesticides (Units**)**	693	28,315	41,095	17,416	87,519	84,944,500	123,285,500
Spray pumps	21	29	0	0	50	1,430,000	20,000
Fertilizers (Kgs)	44	14	96	111.5	265	830,000	5,740,000
Herbicides(Liters)	16	15	3	126	160	210,000	42,000
Total						**256,886,000**	**136,736,000**

Source: Field findings

[19] The area of DRC that is facilitated by GoU is a major producer of cotton that is sold in Uganda.

Crop establishment and performance

The level of achievement for the planned activities was above 75%. A total of 20,000 acres of cotton were planted, 32 fertilizer, 146 agronomy and 16 herbicide demo plots were established (Table 5.62).

Table 5.62: UCDO crop establishment and performance in West Nile region by 31st December 2014 (acres)

District	Area under cotton		Fertilizers Demo plots		Agronomy demo plots		Herbicide Demo Plots	
	Target	Planted to date	Target	Planted to date	Target	Planted to date	Target	Planted to date
Nebbi+ Drc	26,000	18,300	28	28	109	109	12	12
Zombo	150	150	2	1	10	7	2	1
Arua	2,650	1,050	4	3	30	30	3	3
Yumbe	100	-	-	-	-	-	-	-
Moyo	50	-	-	-	-	-	-	-
Adjumani	50	-	-	-	-	-	-	-
Nwoya	1,000	500	-	-	-	-	-	-
TOTAL	**30,000**	**20,000**	**34**	**32**	**149**	**146**	**17**	**16**

Source: Field findings

Mechanization and land opening

By 31st December 2014, the UCDO deployed one tractor and distributed 100 ox-ploughs to 99 farmer groups in West Nile sub region. A total of 205 farmers benefited under this service and ploughed 277.4 acres of land. Net revenue generated was Ug Shs 6,486,000 excluding expenses on the tractor. By 16th January 2015 a total of Ug Shs 240,000 was still in debts.

The districts of Zombo, Nebbi and Arua in West Nile region were monitored to assess project performance.

Arua district

Cotton growing is undertaken in six sub counties namely: Odupi, Rhino Camp, Oluko, Ogoko, Rigbo and Pawor. By 14th January 2015, the following progress was achieved:

Cotton seeds: During the period of April to September 2014, a total of 849bags of cotton seeds were distributed to famers on cash and 672bags sold on credit. A total of 90bags of cotton seeds were distributed to demonstration farmers' gardens for free. A total of 589 bags of cotton seeds were still with the agencies and were to be distributed in the following planting season.

Pesticides: A total of 255 units of pesticides were sold on cash and 2,333 units of pesticides were distributed on credit. The UCDO also distributed 161 units of pesticides to demonstration farmers for free.

Urea: The district received three bags of Urea fertilizers; one bag was given to two sub counties of Ribo and Oyoko each getting 25Kgs. The two bags were taken to Odupi sub-county, which used one bag, and stored one for the following planting season.

By 14th January 2015, all the cotton fields were already harvested. The monitoring team held discussions with two case study farmers in Odupi sub-county who had benefited from the inputs that were distributed in the reporting period (Table 5.63).

Table 5.63: Physical performance of cotton farmers in Odupi sub-county in Arua district by January 2015

Beneficiary	Location	Received	Activities	Challenges	Recommendations
Dramamaza Lino a demonstration farmer	Onivo village, Lugbari Parish, Odupi Sub-county in Terego County	3bags of cotton seed, 4 units of pesticides and 2 bags of fertilizers (NPK and Urea).	Planted one acre of cotton and harvested 800Kgs which he sold at Ug Shs 1100 per Kg	Low prices of cotton. Fake weighing scales used by middle men.	There is need for proper cotton ginners who can buy at a price higher than Ug Shs 1,100 per Kg in the region. The UNBS should check and satisfy the scales used in Arua district.
Mr. John Bosco Driwale	Upper-ogia village, Lugbari Parish, Odupi Sub-county, Terego County	3bags of cotton seed, 4 bottles of pesticides and 25Kgs of Urea fertilizers in May 2014	Planted two acres in May 2014 and harvested 581Kgs of seed cotton between October and December 2014	Lack of market. Lower prices fixed by middle men who even use fake weighing scales. Late distribution of cotton inputs. Absences of tractors hire services.	The government should provide market and come up with a fixed price of seed cotton The UNBS should approve and stamp all weighing machines in Arua district. Inputs should be distributed in May.

Source: Field findings

Key challenges in Arua district

1) Poor debt recovery for the inputs distributed on credit.
2) Lower yields and poor quality lint due to inadequate training and extension services for farmers by UCDO staff.
3) Low outreach of extension services due to poor facilitation of UCDO field staff. Facilitation allowance for the area coordinators is very low to undertake all cotton activities in the district.

Recommendations

1) The UCDO should extend loans to creditworthy farmer groups rather than individual farmers.
2) The UCDO should increase and facilitate field staff to offer more extension advice to farmers.

Nebbi district

Four farmers were sampled in Nebbi district and the findings are presented below (Table 5.64).

Table 5.64: Physical performance of cotton farmers in Nebbi district by January 2015

Beneficiary	Location	Received	Activities	Challenges	Recommendations
Adubango Nazarrendo a lead farmer	Angal ayilla village, angle lower parish in Nyarav ur Sub-county.	3bottles of pesticides and 5bags of cotton seeds.	Planted and harvested 200kgs of seed cotton. Sold and used the money to buy food at home.	Too much rain affected the yield. Ineffective weeding due to limited labor force.	Need pesticides that can withstand bad weather conditions. Should avail them with loan scheme to hire labor for weeding.
Owekmeno John	Central Parombo Village, Parwo Parish, Parombo Sub-county	Acknowledged receipt of 6bags of cotton seeds and 9 bottles of pesticides	Planted 1 acre and harvested 300kgs. Sold at Ug shs 1,150 per Kg and used the money to pay school fees for his the children.	Too costly to open up land for cotton growing. Bad weather conditions affected the yield.	Should be given loans to open up land. Should be given inputs as earlier as possible to plant in time.

Source: Field findings

Zombo District

Cotton growing is undertaken in Paidha subcounty out of the 10 sub counties in Zombo district. The district received 87 units of pesticides (out of which 21 units were for demonstration) and 202 bags of cotton seed (out of which 10 bags were for demonstration).

The monitoring team held discussions with four farmers in Paidha subcounty who had benefited from the inputs that were distributed. The findings are presented below (Table 5.65).

Table 5.65: Physical performance of cotton farmers in Paidha sub-county in Zombo district by January 2015

Beneficiary	Location	Received	Activity	Challenges	Recommendations
Mr. Jawamba	Jupangali upper Village,	3bags of cotton seed and 3	Planted and harvested 150Kgs of seed cotton	Bad weather condition led to low yield.	Need loans to buy enough pesticides. Government should

Richard	Otheko parish, Paider Sub-county	bottles of pesticides	which was still in store.	Low prices of seed cotton.	fix higher prices of seed cotton.
Mr. Athocon Denies is a lead farmer	Jupangali lower village, Otheko Parish, Paider Sub-county	1bag of cotton seed, NPK and Urea fertilizers, and 4units of pesticides.	Planted and harvesting was still ongoing as on 20th January 2015. Had 200Kgs of seed cotton in his house. Was to sale and pay school fees for the children.	Low prices of cotton. Low yield due to too much rainfall. Lack of storage facilities for the harvests. No facilitation to train farmers	Prices should be increased from Ug shs 1,000 to Ug shs 1,500 per Kg. Should be given loans as a group to construct stores. Should be facilitated during the trainings.
Mr. Okurboth William	Jupamgali Upper village, Otheko Parish in Paider Sub-county	3bags cotton seed and did not have money to buy pesticides	Planted and harvested 300Kgs. Stored and plans to sale at the beginning of February 2015 to cater for his children's school fees.	Has no capital to open up more land for bumper cotton growing. Lacks money to buy pesticides.	Government should put in place financial institutions for the cotton farmers to access simple loans.
Mr. Ongiu Magid	Jupamgali Upper village, Otheko Parish in Paider Sub-county	4bags cotton seed and 6 bottles of pesticides.	Planted and harvested a total of 400kgs out of the expected 1,000kgs. Sold at Ug shs 1,000 per Kg.	Bad weather led to low yield.	

Source: Field findings

Key challenges

1) Ineffective pesticides especially during the rain period
2) Slow rate of recovering the monies for inputs distributed to cotton farmers on credit
3) Low production due to late planting arising from delayed distribution of inputs to farmers.

Recommendations

1) The UCDO should avail cotton farmers with effective pesticides that can withstand harsh weather conditions.
2) The UCDO should provide input loans to creditworthy farmer groups rather than individual farmers.
3) The UCDO should ensure that inputs are distributed early in the cropping season.

5.8.3 Analysis

Link between financial and physical performance
There was a good link between financial and physical performance for the recurrent budget and a weak link for development project 1219.

By December 2014, the UCDO had received Ug shs 1,759,796,392 of which Ug shs 1,067,256,000 was earmarked for development and Ug shs 692,540,392 for recurrent activities. The bulk of funds for recurrent activities were expended on items that were critical for the delivery of the planned outputs. There was excellent performance in provision of cotton extension services, production inputs and cotton planting seeds to cotton farmers. However, the UCDO did not perform well on mechanization of land opening.

Very poor expenditure performance was observed on project 1219 cotton production improvement, where 5.8% of the released development funds were expended on this project. The project had stalled and the contractor was terminated.

Achievement of Targets
The key performance targets set by UCDO were significantly achieved for Programme 01 and partially achieved for project 1219. The level of achievement of targets for provision of cotton extension services, production inputs and cotton planting seeds was excellent at above 75%. The level of achievement of Project 1219 was average at 10%.

Comparative analysis
There was a discrepancy in performance of regions and beneficiary farmers visited with some performing better that the others. This was accredited to climatic conditions of the region, time of planting, availability of tractor hire services and fertilizers, market access and availability of inputs for cotton growing mainly for the lead farmers who received free fertilizers, cotton seeds and pesticide. With exception of acres planted, the level of achievement for the planned activities under crop establishment and performance was above 75% against their targets in all the regions visited. Poor loan recovery was observed in Lango, Acholi and the North Eastern regions with over 85% of the total expected revenue still in debts, while loan recovery was fairly good for the west Nile and the North Eastern sub regions.

5.8.4 Conclusion
The overall performance of the UCDO is rated as fair at 59%. The performance of the recurrent budget was excellent while the development project 1219 underperformed.

5.8.5 Recommendations

i) The UCDO should fast track award of a contract to another contractor to complete construction and equipping the cotton dressing station in Pader district.
ii) The UCDO should review the implementation approach of providing inputs on credit to find a mechanism of ensuring a high recovery rate.
iii) The UCDO should increase staffing in the regions to improve extension outreach.
iv) The UCDO should distribute inputs early before the start of the cropping season.

5.9 Vegetable Oil Development Project Phase 2 (Vote 010, Project 1195)

5.9.1 Background

The Vegetable Oil Development Project (VODP) aims to increase the domestic production of vegetable oil and it's by products to enhance rural incomes for smallholder producers and ensuring the supply of affordable vegetable oil products to the market. The project has three components: (i) the Oil Palm Development (ii) the Vegetable Oil Development Fund and (iii) the Institutional Support component. The first phase of the project was completed (1997-2012) and the implementation of the second phase (VODP2) commenced for the period 2012-2018.

The project is financed by the International Fund for Agricultural Development (IFAD) with a major private sector player in Kalangala – Oil Palm Uganda Ltd (OPUL) – in charge of establishing the nucleus plantation, palm oil mill and market. The Kalangala Oil Palm Growers' Trust (KOPGT) supports oil palm small holder farmers through provision of inputs, credit, extension and transport for produce.

Total investment and recurrent costs for VODP2, including contingencies, are estimated at Ug shs 294 billion (VODP2 PIP 2010). The process commenced for buying land to establish oil palm plantations in Buvuma district. In the oil seeds component in the Northern and Eastern regions, Pay for Service Providers were contracted by VODP to provide extension services and backstopping to the farmers.

Over the project period, the key planned outputs are:

- 6,050 ha of nucleus and 4,700 ha of smallholder plantations established in Kalangala
- 1700 smallholders' accessing KOPGT advisory services.
- 6500 ha nucleus estate planted by 2017 on Buvuma.
- Oil palm mill constructed by 2017 on Buvuma Island
- Two improved varieties of oil seed crops released by 2012 and two each year after.
- 2900 farmer groups receiving extension services by 2014 and 5900 groups supported over project life.
- 1,000 farmer groups bulk selling and receiving 15% price premium by 2015.
- Oil seed production increased from 70,000MT in 2010 to 150,000MT in 2018.
- Increase oil seed processing capacity from about 40% in 2010 to 70% by 2018.

The annual key planned outputs for VODP2 in FY 2014/15 by component are:

Oil Palm Component:

- Environmental and Social Impact Assessments (ESIA) in Kalangala and Buvuma districts carried out
- 450 hectares of oil palm planted in Kalangala
- One fertilizer store constructed in Kalangala

- 1,500 hectares of land procured and handed over to OPUL for the nucleus estate in Buvuma.
- 66 Kms of road boundaries opened in Buvuma.
- 3,863 hectares of oil palm planted by the smallholder farmers in Kalangala district
- 1,610 smallholder farmers provided with extension services by KOPGT
- 1500 tonnes of assorted fertilizers provided to farmers on credit

Oil Seeds Component:

- Market linkages established along the oil seeds value chain (10 millers linked to farmer groups)
- 12MT of soyabeans produced as foundation seed by NACRRI
- Hub offices operationalised
- NaSARRI and NaCRRI supported to produce 12 MT of soybeans, 10 MT of hybrid parental lines of sunflower, 10 MT of sim sim and 12 MT of ground nuts improved varieties.
- 542 farmer groups mobilized and provided with extension services
- 320 farmer learning platforms (FLPs) established

5.9.2 Findings

i) Financial performance

The semi-annual financial performance of the VODP2 is presented in Table 5.66. The detailed expenditures are presented in Table 5.67. The bulk of funds were spent on purchasing land for small holder oil palm plantations.

Table 5.66: VODP2 financial performance by 28th February 2015

Category	Approved budget (Ug shs)	Expenditure (Ug shs)	% Expenditure
GoU	10,396,826,294	8,203,750,662	78.91%
IFAD	19,679,106,746	6,754,891,841	34.33%
Total	**30,075,933,041**	**14,958,642,503**	**49.74%**

Source: VODP2 Headquarters

Table 5.67: VODP2 expenditures by 28th February 2015

CATEGORY	Budget (Ug shs)	Expenditure (Ug shs)	% Expenditure
GOU			
2 Materials	162,000,000	0	0.00%
4 Civil works	149,400,000	0	0.00%
5 Small holder Oil Palm	9,516,526,200	8,131,993,263	85.45%
8 Extension service	160,120,000	0	0.00%
9 Salaries	148,060,094	59,851,641	40.42%
10 Operating cost	260,720,000	11,905,758	4.57%
Subtotal Gou	**10,396,826,294**	**8,203,750,662**	**78.91%**
IFAD			
1 Vehicle, Equipment and materials	595,400,000	257,616,044	43.27%
2 Materials	900,000,000	434,987,864	48.33%
4 Civil works	1,733,000,000	661,971,637	38.20%
5 Small holder Oil Palm	5,445,950,240	1,270,286,100	23.33%
7 Consultancy, training and workshops	2,905,536,917	897,867,130	30.90%
8 Extension service	5,445,219,000	1,439,621,135	26.44%
9 Salaries	1,680,862,586	1,211,435,273	72.07%
10 Operating cost	973,138,004	581,106,658	59.71%
Sub IFAD	**19,679,106,746**	**6,754,891,841**	34.33%
Grand Total	**30,075,933,041**	**14,958,642,503**	**49.74%**

Note: Small holder oil palm caters for land purchases and valuation, credit and fertilizers to farmers
Source: VODP2 Headquarters

ii) Physical performance

A. Oil Palm Component

The overall performance of the oil palm component in Kalangala and Buvuma districts by 28th February 2015 is presented in Table 5.68.

Table 5.68: Physical performance of VODP2 Oil Palm Component by 28th February 2015

Annual output	Achievement	Remark
Environment and Social Impact Assessments (ESIA) carried out in Kalangala and Buvuma	Conducted a meeting with the National Environment Management Authority (NEMA) on the progress of the review of the draft ESIA report. Response was awaited from NEMA.	*Target achieved*
450 hectares of oil palm planted in Kalangala	85,000 seedlings were maintained in oil palm nursery at OPUL. Planting expected to commence in March 2015.	*Target was partially achieved*
One fertilizer store constructed in Kalangala	Sub-structure, walling, roofing completed and plastering ongoing. Civil works were at 75% completion rate	*To be completed in May 2015*

1,500 hectares of land procured, surveyed and handed over to OPUL for the nucleus estate in Buvuma.	Survey, valuation, disclosure of potential land for purchase carried out on 1,200 hectares in Buvuma	*Half year target was 100% achieved*
66 kms of road boundaries opened in Buvuma	30kms of road boundaries were opened.	*91% of half year target was achieved.*
Maintain 3,863 hectares of oil palm planted by the smallholder farmers in, Kalangala district	A total of 3,863 hectares were maintained.	*Target achieved.*
1,610 smallholder farmers provided with extension services by KOPGT	1,544 farmers were trained and offered extension advice.	*Half year target 100% achieved*
1,500 tons of fertilizers distributed to farmers in Kalangala on credit	217 tonnes of fertilizers were distributed to farmers.	*29% of half year target was achieved*

Source: VODP progress report; field findings

Kalangala district

- **Plantation development**

The FY 2014/15 target for KOPGT was to plant 440 hectares oil palm from 100,000 seedlings. By 29th January 2015, a total of 85,000 oil palm seedlings were in the nursery at OPUL awaiting planting in March 2015.

Oil palm seedlings in nursery at OPUL in Kalangala district

- **Credit provision and recovery**

Credit for plantation maintenance is provided to farmers who have immature oil palm trees that are less than five years old. By 31st December 2014, 2,413 ha out of 3,863 ha of small holder plantations were immature and their owners benefitted from credit support. A total of Ug shs 709,550,000 was disbursed by KOPGT to farmers as credit.

It was planned that Ug shs 668,270,420 would be recovered as loan repayments from smallholder farmers. By 31st December 2014, Ug shs 598,257,225 (90%) was recovered from farmers which was good performance.

- **Farmer training**

By 29th January 2015, a total of 1,544 farmers in Kalangala district out of the annual target of 1,610 were trained and offered extension advice. The training and advisory services focused on use of Malaysian harvesting knives, loan availability and application, fertilizer management, environmental awareness, gender and business management.

- **Construction of a fertilizers store**

Moga Services Ltd was contracted at a sum of Ug shs 1,051,075,263 to construct a fertilizer store (700m^2 space), with an office and a guard`s house at KOPGT offices in Kibanga village Bugala parish Kalangala Town Council. Construction works started on 23rd April 2014 with the expected completion date on 22nd December 2014.

A Fertilizer store at KOPGT Secretariat in Kalangala District

By 29th January 2015, the store civil works were 75% completed and the contractor had been paid Ug shs 828,116,460 (79%). The structure had been roofed and interior and external plastering was ongoing. Pending works included electrical installations, flouring, painting, shuttering, landscaping and constructing the rumps.

The project was behind schedule due to delayed payments of the contractors' certificates by VODP Secretariat by a period of two months. The project completion date was extended up to 22nd May 2015.

- **Fertilizers**

The level of provision of fertilizers to farmers was below target (Table 5.68). This was due to key factors: i) Delayed payment for earlier consignments of fertilizers that were provided by OPUL which resulted in low supply by the private investor ii) lack of storage space for the fertilizer at OPUL.

- **Equipment**

By 29th January 2015, the procurement process was ongoing for eight motorcycles and one motor boat for KOPGT.

- **Fruit sales**

The annual target is for farmers to sell 13,309 tonnes of fresh fruit bunches (FFB) to OPUL. By 31st December 2014, a total of 5,596 tonne of FFB (84% of half year target) were harvested and sold to OPUL by 521 out of 1610 farmers.

Left: Ongoing sorting of the FFB at the mill, Right: the KOPGT truck delivering FFB to the mill

Implementation challenges

1) Low supply of fertilisers by OPUL due to the delayed payments for earlier consignments by VODP Secretariat.
2) High costs of transporting the FFB to the mill, due to higher prices of fuel compared to the prices in Kampala.
3) Rotting of fruit bunches in the garden due to poor road network and equipment.
4) Inadequate vehicles for handling all KOPGT planned activities

Recommendations

1) The MAAIF/VODP should streamline payment procedures and ensure that OPUL is paid in time for fertiliser deliveries.
2) The MAAIF and District leadership should dialogue with fuel dealers to get a franchise with OPUL so that fuel for the out growers is supplied at the market price.
3) The District should repair the road equipment and ensure that farm roads in the plantations are opened up.
4) The MAAIF/VODP should provide additional vehicles to the KOPGT.

Three case study farmers were visited to verify receipt of inputs as reported by the KOPGT. The findings are presented below.

Case studies:

Mr. Balyanomutanda Ssekagya James

The farmer resides in Buswa village Bujumba parish Bujumba sub-county in Kalangala district. He had 10 acres of oil palm plantation of which two were still young. By 31st December 2014, he had received extension advice from KOPGT staff and Ug shs 300,000 loan for maintenance of the two acres of plantation.

Challenges

1) Difficulty of accessing fertilisers and transport to deliver them to the farmers 'gardens due to bureaucracies at KOPGT; one had to go through the field officers, Field Operations Manager and Credit Officer to access the fertilisers and vehicles.
2) Low production due to inadequacy of fertilizers provided by KOPGT
3) Delays in payment of loans to farmers for maintenance of fields by KOPGT. This negatively affected maintenance of farmer fields as workers were not paid in time. Releases were made late in October 2014.

Recommendations

1) The KOPGT should transport the fertilizers to the farmers gardens.
2) The MAAIF/KOPGT should provide adequate fertilisers to the farmers
3) The MAAIF/KOPGT should ensure timely disbursement of maintenance loans to small holder farmers.

Mr. Bukoholo Edward

The farmer resides in Kulugulu village Buswa parish Bujumba sub-county. He planted seven acres of oil palm in 1998 and an additional nine acres in 2013. By 31st December 2014, he had received Ug shs 675,000 loan for maintenance of his palm oil garden, eight bags of NPK fertilizers and extension advice from KOPGT. On average, the farmer harvested 90 to 100 bunches of fresh fruits each week. He used the profits to buy an additional nine acres of land, constructing a permanent house and commercial plot in Kalangala Town Council.

Challenges

1) Low returns to oil palm growing due to the low price of FFB offered by OPUL/KOPGT and high cost of labour; a bunch of fresh fruits was bought at Ug shs 346 to 358.
2) It is difficult and costly to transfer fertilizers from the main road to the oil palm garden, due to poor community road network. Each bag of fertilizer is transported at Ug shs 300 to the site.

Recommendations

1) The OPUL/KOPGT should increase the price for each fresh fruit bunch in order for the farmers to cover the costs of managing the oil palm gardens.
2) The district working with KOPGT should carry out routine road maintenance to ease movement of fertilizers and FFB.

Mr. Aluuna Katayi

The farmer resides in Kizzi village Zone B, Kalangala Town Council. He planted 18 acres of oil palm trees in 2006 and an additional 18 acres in 2010. By 31st December 2014, he received a loan worth Ug shs 700,000 for maintenance of 10 acres.

Challenges

1) Part (8 acres) of the oil palm plantation was cut off maintenance before maturity; the trees were still four years old and the farmer did not have money to carry out maintenance on the unfunded acres.
2) Losses in the oil palm growing business due to the high prices of fertilizers and low prices of FFB.
3) Unavailability and unafforbility of fertilisers for maintaining the mature plantations.
4) Delays in release of funds for maintenance of oil palm gardens, which affects payments for the labor.

Recommendations

1) The KOPGT should provide funds for maintenance of oil perm trees up to maturity for example 5 years for maintenance and fertilizer loan should go up to six years.
2) The VODP/KOPGT should lower the prices of fertilizers for the farmers to benefit in this venture.
3) The Government through VODP should increase the farm gate prices of fresh fruits oil palm bunches.
4) The KOPGT should provide loans to farmers that were weaned off the credit programme for buying fertilizers.
5) The MAAIF/VODP should ensure timely release of funds to farmers for oil palm garden maintenance.

Buvuma district

Background

Due to the success of the oil palm development component in Kalangala, it is planned under VODP2 to replicate the project model in Buvuma district with 10,000 ha of oil palm planted out of which 6,500 ha shall be the nucleus estate and 3,500 ha smallholder plantations. OPUL was also to construct a Palm Oil Mill and supportive infrastructure for the ease of transportation of inputs and produce.

The annual planned outputs for Buvuma district during FY 2014/15 are:

- 1,500 hectares of land procured and handed over to OPUL for the nucleus estate in Buvuma.
- 66 Kms of road boundaries opened in Buvuma

Financial performance

Refer to Table 5.67 for overall financial performance of VODP for Kalangala and Buvuma districts. Funds were spent directly by the VODP Secretariat on valuation of land while transfers were made to Buvuma DLG to open road boundaries and mobilize farmers to sell land to the project.

By 31st December 2014, the VODP had released Ug shs 263,544,700 to Buvuma DLG, of which Ug shs 189,126,700 (72%) was spent on opening road boundaries, Ug shs 34,418,000 (13%) was

spent on farmer mobilization and sentization and Ug shs 40 million (15%) was on account unspent.

Physical performance

Progress on land acquisition

The land acquisition process targeted public land and Private Mailo land. The price for the land is determined by the Central Government Valuer (CGV). The average price of land was Ug shs 1.5million per acre. For encumbered land, the owner would get 60% and the tenant 40% of the compensation. The status of land acquisition by November 2014 is shown in Table 5.69.

Table: 5.69 Status of land acquisition in Buvuma district between 2008 and November 2014

	Available and free of encumbrances (ha)	Purchased: Tenants plots undergoing valuation (ha)	Land valued And Approved by CGV (ha)	Identified and MOUs signed (ha)	Total (ha)
Private (Mailo) land	2,618	1,632	1,596	1,002	6,848
Public land	1,253	0	0	0	1,253
Total	**3,871**	**1,632**	**1,596**	**1,002**	**8,101**

Source: MAAIF, 2014a, VODP 2 Mid-term report.

The project has since 2008 cumulatively bought 5,503 hectares of land in Buvuma comprising of land available and free of encumbrances (3,871 hectares) and the land purchased but with tenants and undergoing evaluation (1,632 hectares). The project has compensated 707 tenants for their interests on the 1,408 hectares acquired by the project.

Field findings

Between the period July 2014 to 30th January 2015, a total of 330 hectares (44% of half year target) of land had been purchased and fully paid. However, around 10% of the tenants were still on this land. A total of 33Kms (100% achievement of half year target) out of the planned 66kms road boundaries were opened and farmers mobilized to participate in the VODP2 project.

Left: Road boundaries opened in Buvuma district, Right: Land procured by Government in Buvuma district

Implementation challenges

1) Delayed payments (by two years) to the land owners who sold land to Government. This was associated with lack of a District Land officer, auditors and private valuers in Buvuma district to expedite the processes.
2) Slow processing of documents and inefficiencies in Mukono Land office. *"Blue prints are produced for land that has not been surveyed* "said the Buvuma District officials.
3) Encroachers were increasing on the procured land due to delayed implementation of the project.
4) Delayed implementation of the project has discouraged farmers to give away their land to government for oil palm growing.
5) Poor valuation of land and low prices offered due to lack of a District Land Board in Buvuma to set appropriate land rates.
6) Private valuers hired by the government do not provide valuation reports to the key stakeholders. The Ministry of Lands delays in processing the valuation reports.
7) Tenants are often not consulted when payments are being made to the landlords.
8) Lack of funding to address gender related problems arising from sale of land. For example, women and children lost their homes after the men sold off the family land without consulting their spouses.

Recommendations

1) The MAAIF should ensure timely payments to the people who sell their land to Government.
2) The Ministry of Lands should strengthen the capacity of Mukono Land Office to handle documents expeditiously.
3) The MAAIF should fast track implementation of the VODP2 in Bugala district.
4) The DLG should hire a District Land Officer and at least one Permanent Auditor.
5) The district should put in place and operationalise the Buvuma District Land Board.
6) The MAAIF/VODP2/Government Valuer should provide valuation reports and feedback to the people who sell their land in time.
7) The DLG should integrate and fund gender programmes within the district workplans and budgets.
8) The VODP2 Secretariat should dialogue with the Government Valuer to ensure that the pricing of land is improved to at least Ug shs 5 million per acre.

B. Oil Seeds Component

The VODP2 oil seeds component is implemented in four hubs namely Arua, Lira, Gulu and Mbale/Eastern. The target oilseed crops are mainly sunflower, groundnuts and soybean, grown as both cash and food crops. The overall performance of the oil seeds component by 30th February 2015 is summarized in Table 5.70. Three of the five planned targets were fully achieved which is good performance.

Table 5.70: Physical performance of VODP 2 Oil Seed Component by 30th February 2015

Annual output	Achievement	Remark
Market linkages established along the oil seeds value chain(10 millers linked to farmer groups)	4 new millers (Lira - 2, Eastern – 1, Gulu – 1) identified for linking to farmer groups for market. 46 field extension staff and 3,020 farmers trained in oil seeds production and post-harvest technologies.	*Half year target substantially achieved*
Hub offices operationalized	Two Private Service Providers (PSPs) started implementing field activities in West Nile and Lira Hubs. Contracting of the four remaining PSPs was completed. Three joint meetings between the Uganda Development Bank Ltd (UDBL), District Farmer Associations, Nile Agro and VODP 2 in Eastern Hub and one joint meeting in Lira were held	*Target achieved*
NaSARRI and NaCRRI supported to produce 12 MT of soybeans, 10 MT of hybrid parental lines of sunflower, 10 MT of simsim and 12 MT of ground nuts improved varieties.	Planting was done, the crop was still maturing	*Target was partially achieved*
542 farmer groups mobilized and provided with extension services	1,279 farmer groups received extension support from the Pay for Service Providers	*The target was achieved*
320 farmer learning platforms established	697 farmer groups were supported to establish farmer learning platforms in 29 districts	*The target was achieved*

Source: VODP 2 Performance report for FY 2014/15; Field findings

Field findings

The monitoring work covered the four VODP2 hubs (Arua, Lira, Gulu and Mbale/Eastern). The findings are presented below.

a) Eastern/Mbale Hub

Background

The VODP2 project started in the Eastern Hub in 2013 with ten pilot districts namely: Kumi, Pallisa, Bukedea, Sironko, Mbale, Manafwa, Tororo, Busia, Bugiri and Bulambuli. The project was rolled out in July 2014 to three additional districts namely Iganga, Jinja and Mayuge. The three districts have a public private partnership with the Uganda Development Bank Ltd (UDBL)

to develop the soyabean value chain as a commercial crop through the District Farmers Associations (DFAs).

The monitoring work covered the Eastern Hub in general and focused on Mbale, Mayuge, Iganga and Jinja districts.

Financial performance
By 16th/02/2015, the Eastern VODP Hub office had received 49,672,000 that was spent on operational expenses, farmer mobilization, distribution of inputs to farmers, follow up training on management of the crops, establishment of market linkages, meetings and technical reviews.

Overall performance in Eastern Hub
The annual planned activities were that farmers were assisted to access extension services from service providers, form farmer groups and farmer learning platforms and access inputs.

Provision of extension services

By 16th/02/2015, two extension services providers were contracted in the Eastern hub. These were:

- M/s Community resource Development initiative, was contracted at a sum of Ug shs 337,480,000 to implement a number of activities in the five districts of Mbale, Sironko, Bulambuli, Manafwa and Tororo during October 2014 to October 2015;
- M/s Eastern Private sector development Center (EPSEDEC), contracted at a sum of Ug shs 389,544,000 to implement activities in the five districts of; Busia, Bugiri, Paliisa, Kumi and Bukedea targeting 213 farmer groups. The contract period was one year (October 2014 to October 2015).

The two contractors received 20% disbursements of their contract sums and implemented the following activities:

- Mobilized 200 farmer groups of which 100 farmer groups were registered and engaged.
- Mobilized and verified existing farmer groups and capacity building needs.
- Initiated formation of FLPs
- Built capacity of farmers in oil seed farm development.
- Provided support to stakeholders on business development services, market information, agriculture extension services, main streaming and integrating capacity issues and market linkages.

Establishment of farmer learning platforms

Different plots of sunflower and soybean varieties were established in thirteen (13) districts during season B 2014 of; Mbale, Sironko, Bulambuli, Bukedea, Kumi, Tororo, Bugiri, Manafwa, Busia, Namutumba, Kamuli and Iganga. A total of 96 farmer groups were mobilized in 14 districts to participate in the establishment of FLP with support of VODP.

Inputs deliveries

In an effort to enhance access to improved seed for the FLP, three seed companies namely; East African Seeds limited, UOSPA and Mukwano were contracted to supply FLP oilseed for the FLP. The seed type and varieties include; Sunflower; 700kg of Hybrid Pannar 7033 by Mukwano; New sunfola, Sesun 1and Sesun 2 from UOSPA; EASF 1 and 2 from EASEED(U) Ltd. Sesan 1 and 2 from UOSPA; and groundnuts varieties Serenut 4,5R and 6T delivered by EASED (U) Ltd.

Deliveries of groundnuts and EASF 1&2 varieties was made late in September 2014. This led to the halting of distribution of oilseeds to farmers to minimize on the risk of total crop failure. The hub carried over seed stocks of groundnuts (Sere nut 2, 4, 5R and 6T) and EASF 1H & 2H varieties for the next 2015 A season. Table 5.71 shows the oilseeds varieties that were distributed to farmers in this hub.

Table 5.71: Seed deliveries to farmers in the Eastern Hub by February 2015

Item	Company	Seed Type	Variety	Qty distributed (Kgs)
1	A.K Oils & Fats (U) Ltd	Sunflower	PAN 7033	700
2	UOSPA		New Sunfola	100
			Sesun 1H	200
			Sesun 2H	150
		Sesame	Local	50
		Sesame	Sesame 2	170
3	EASEED (U) Ltd	Sunflower	EASF 1H	56
		Sunflower	EASF 2H	96
4	NARO/NaCRRI	Soybean	Maksoy 1N	400
			Maksoy 2N	400
			Maksoy 3N	100
			Maksoy 4N	40
			Maksoy 5N	60
5	Makerere University		Rhizobia	75

Source: Field findings

Soyabean value chain development

The UDBL provided a loan facility and related financial services for investment in soy bean vale chain to the Jinja, Mayuge and Iganga District Farmers Associations (DFAs). The three DFAs were assisted by VODP 2 to negotiate a loan for investing in the Soybean with a market opportunity outlet (Nile Agro Limited) in Jinja. Nile Agro Limited agreed to buy the Soybeans from the three DFAs and VODP provides technical support mainly negotiating the farm gate prices for the DFAs.
The DFAs received a loan of Ug shs 710.4 million between August and December 2014 (second planting season) intended to achieve the the agreed targets (Table 5.72).

Table 5.72: UDBL and District Farmers Associations agreed targets in the Eastern Hub in FY 2014/15

DFA	Area planted (acres)	Seed to be produced (tonnes)	Farmers	Loan Investment (Ug shs in Millions)
Mayuge	362	6.45	250	201
Iganga	280	6.0	280	180
Jinja	576	5.8	195	329.4
Total	1,218	18.2	725	710.4

Source: Eastern Hub VODP office

The districts of Mbale, Iganga, Mayuge and Jinja were visited to assess progress in project implementation.

Iganga district

Background

Formed in 1998, the Iganga DFA (IDFA) is involved in lobbying for agricultural services for its 36,000 members. The IDFA operates in the districts of Namutumba, Luuka, Mayuge and Iganga. With support from the VODP2 Eastern Hub office, the DFA negotiated a loan facility from UDBL in June 2014 for growing soyabean commercially.

Financial performance

The IDFA received a loan facility of Ug shs 180 million from UDBL in August 2014. The purpose of the loan was to support soyabean production expenses including seed, fertilizer, insecticides, inoculants, ploughing, weeding, planting, and harvesting. The loan facility was at 1% interest rate per month and 70% of the loan had to be paid back by March 2015. By 17th/02/2015, all the funds were 100% spent as shown in Table 5.73.

Table 5.73: Expenditures by Iganga DFA from UDBL loan facility by February 2015

Item	Amount spent (Ug shs)
First and second ploughing	42,000,000
Soyabean seed and innoculant	24,000,000
Insect kill insecticides	7,750,000
First and second weeding	27,500,000
Labour for planting	11,200,000
Fertilizer	33,750,000
Harvesting labour, transport, stores	33,800,000
Total	**180,000,000**

***Source: Field findings*.**

Physical performance

The soyabean seeds were planted late in August to September 2014 and harvested from December 2014 to February 2015. By 17th/02/2015, 35 tonnes of soyabean had been bulked at

various centres awaiting submission to Nile Agro Industries. The negotiated price was Ug shs 1,500/= per kg. The IDFA expected to be paid Ug shs 52,500,000 for this consignment.

The IDFA still expected an additional 70 tonnes of soyabean from other areas that planted late and would harvest at the end of February 2015. The IDFA noted that the loan would not be covered by yields from one season alone. They planned to borrow from other sources of funds to cover the remaining part of the loan.

Challenges

i) Payment of loan would be difficult because the crop underperformed due to heavy rains and flooding of fields.
ii) Lower yields due to lack of extension services for farmers.
iii) The loan period was too short to enable farmers produce sufficient volumes to pay back the loan.

Recommendations

i) The UDBL should consider extending the loan period by an additional three months. This would allow the IDFA to plant another crop and raise more funds.
ii) The MAAIF/VODP should provide extension services to the soyabean farmers.
iii) The UDBL should provide loans to the DFA that covers two seasons.

Jinja district

Background
The Jinja District Farmers Association (JDFA) started in 1993 and operates in Jinja, Kamuli and Bugiri districts. It has 4,000 members. The JDFA was supported by the VODP2 Eastern Hub office to access a UDBL loan for production of soyabean.

Financial performance
The JDFA received a loan facility of Ug shs 329,400,000 from UDBL in August 2014. The loan period was eight months from August 2014 to March 2015. The repayment terms were 70% paid by March 2015 and the rest by May 2015. The funds were spent as shown in Table 5.74. By 18th/02/2015, Ug shs 289,635,000 (88%) was spent and Ug shs 39,765,000 was on account, reserved for marketing expenses.

Table 5.74: Expenditures by Jinja DFA of the UDBL loan by February 2015

Item	Amount spent (Ug shs)
Bush clearing	30,400,000
First and second ploughing	110,500,000
Rhizobia/innoculant (670 sackets)	2,000,000
Planting	26,660,000
Pesticide (550 litres)	11,000,000

Seed (13,500kgs)	54,000,000
Weeding	55,075,000
Total	**289,635,000**

Source: Field findings

Physical performance

The loan was disbursed to 232 farmers in Jinja, Kamuli and Bugiri districts. Planting of soyabean took place during August to September 2014. Harvesting started in December 2014 up to February 2015. By 18th/02/2015, 15 tonnes of soyabean grain (1/3 of the expected harvest) had been harvested and was in the bulking centre. Harvesting was still ongoing.

Challenges

i) Low yields due to late disbursement of funds by UDBL. The funds were disbursed when the rain season was ending and planting was late.
ii) Poor agronomic practices were applied by farmers due to lack of extension and advisory services.
iii) Low returns to the investment due to high operational costs that were not catered for in the loan facility.

Recommendations

i) The UDBL should disburse funds early and for two seasons to spread the risks. The disbursements should be as follows: in January for the first season and May-June for the second season.
ii) The VODP2 should hire service providers that can support the farmers.
iii) The UDBL should restructure the agricultural loans so that 5% of the disbursed amount is for operational expenses such as fuel, supervision and monitoring and hiring stores.

Mayuge

Background

The Mayuge District Farmers Association (MDFA) started in 2000 and has 20,000 members. It operates in Mayuge district. The MDFA was supported by the VODP2 Eastern Hub office and Uganda Subsector Oil Seed Platform to access a loan facility from UDBL for commercializing soyabean production.

Financial performance

The MDFA received a loan facility of Ug shs 201,696,000 from UDBL during August 2014 for a loan period of August 2014 to May 2015. The loan terms were 1% interest rate per month and 70% loan repayment by April 2015 and the balance at the end of the loan period. The loan was disbursed to 150 beneficiaries and was fully spent. Information was not available on the detailed expenditures.

Physical performance
A total of 362 acres of soyabean where planted in Mayuge district by the MDFA farmers during August to September 2014. By 17th/02/2015, 30.30 tonnes of soyabean had been harvested and delivered to Nile Agro Industries by the MDFA. Payments had been effected at Ug shs 1,500 per kg. The seed bulking process was still ongoing; eight tonnes of seeds were in storage.

Challenges

i) Inability to pay the loan in time due to the low crop yield performance arising from heavy rains.
ii) Late planting and poor harvests due to delayed disbursement of funds and procurement of inputs. The process of accessing the loan was too lengthy (May – August 2014) such that inputs were procured late.
iii) Returns to the investment were lowered by the high seed storage costs that were not covered by the loan.

Recommendations

i) The UDBL should consider extending the loan period to July 2015.
ii) The UDBL should disburse loans in time for the cropping seasons: Disbursements for the first season should be in February and for the second season in July.
iii) The MAAIF/VODP and UDBL should support the DFA to establish storage facilities or internalize the storage expenses in future loan facilities.

Mbale district

The monitoring team sampled three farmer groups that were reported to have benefited from these inputs during the period under review, to assess progress in project implementation.

Case study 1: Hamolo farmers group

The group which was formed in 2012 operates in Khamato village Bushikori parish, Bughoko sub-county. The group had 20 members of whom 10 are males. Mr. Muhammed Musalala a member of the group acknowledged receipt of 10kgs of Soybean seeds in August 2014 that was shared among the group members and he was given 2kgs. He planted half an acre and harvested 70Kgs in December 2014, of which he sold 50Kgs at Ug shs 1500 per Kg. The 20Kgs were left for replanting in the following planting season. He used the money to pay school fees for his children. The major challenge he faces is the expensive weeding and pesticides.

Case study 2: Wafenya Dauson chapa group

The group which was formed in 2012 operates in Hamoto village Hamoto parish Bughoko sub-county. The group had 35 members of whom 20 are females. The group acknowledged receipt of 5Kgs of soybean in October –November 2014. The seeds were not planted since they come late and were to be planted in the following planting season.

Case study 3: Khamoto Furisa Group

Formed in 2012, the group operates in Khamoto village Bushikori parish, Bughoko sub-county. The group received 10kgs of soyabean seed in August 2014. The seeds were delivered late when the rain season was ending. Hence, they were not planted awaiting the rain seasons.

Overall implementation challenges in Mbale/Eastern Hub

1) Tthe VODP Hub office in Mbale was understaffed and could not reach all farmers in the region
2) Low yields due to late planting associated with delayed delivery of seeds by the VODP office to farmers.
3) The DFAs lacked transport to collect the grains from the farmer fields to the collecting centers.

Recommendations

1) The MAAIF/VODP should recruit additional staff (drivers and a hub assistant) for the region.
2) The MAAIF/VODP should deliver seeds to farmers early at the start of the planting season.
3) The UDBL should include operational costs in the loan facilities to DFAs.

b) Gulu hub

The first intervention of VODP in Gulu Hub was in 2012, with five districts of Gulu, Amuru, Kitgum, Pader and Lamwo. It was extended to Adjumani, Nwoya and Agago in 2014.

In October 2014, the service provider International Institute of Rural Reconstruction (IIRR) was recruited; however, there were issues of recruiting extension works in each district to manage VODP activities in those districts. The service provider received Ug shs 71,423,785 in January 2015. The funds were not yet spent, as on 9th February 2015. By 31st December 2014, the hub office had received Ug shs 70,090,000 in three tranches. The following activities were undertaken in the above mentioned districts.

Extension and capacity building services

- Two radio talk shows were successfully conducted and farmers were sensitized on the VODP activities in Gulu district.
- Five farmer field days were conducted and 612 farmers participated. They attracted different stake holders in the VODP activities
- 225 farmer groups were mobilized and 249 farmer learning platforms were established
- Five introductory/sensitization meetings were conducted to introduce the IIRR in Local governments.
- Six monitoring and technical back stopping visits were conducted
- Two technical back stopping meetings conducted in the new district under VODP

- Twenty eight (28) FEWs were sensitized on VODP2 implementation modalities, their roles and responsibilities in VODP2
- 265 Farmer groups were mobilized and 247 farmer learning platforms/seed multiplication sites planted
- Two farmer groups in Gulu and 3 individuals in Amuru and Nwoya were linked to Mukwano Agents and bulk purchased 100 kg of Pannar 7033; 2 farmer groups linked to Global Traders Limited and sold 1.2 MT of sunflower

Input distribution

A total of 1,148 kg of assorted sunflower seed; 585 kg of assorted soybean seed were distributed to farmer groups for establishment of FLPs. Some 81kg of sunflower, 260 kg of soybean and 377 kg of unshelled groundnuts was not planted due to late delivery. The seed were in the store and were to be distributed in the following planting season. At least 574 acres of sunflower was planted, harvesting was still ongoing and the expected yield was about 350 MT. 24 acres of soybean planted and the expected yield was 15 MT.

Implementation Challenges:

1) Flooding in some Sub-Counties affected the establishment of farmer learning plat foams and made it difficult to access some FLPs;
2) The phasing out of NAADS service providers negatively affected implementation and follow up of activities at sub-county level;
3) Delay in acquiring inputs for farmer learning plat foams negatively affected establishment of FLPs;
4) Sesame 2 seed purchased from Agricultural Productivity Enhancement Forum was mixed seed.

Recommendations

1) The Sub-County Extension workers should be brought on board on voluntary basis to assist in implementation of project activities;
2) There is need to ensure timely procurement and delivery of agro inputs for timely establishment of FLPs;
3) There is need to intensify information dissemination – communication materials, radio talk shows, and continuous sensitization
4) The VODP should investing some funds on post-harvest handling equipment is key to reduce post-harvest losses and ensure visibility of the project;
5) Procurement of sensitive seed for multiplication should be procured from breeders directly.

The monitoring team visited three farmer groups in Kitgum and Amuru districts under this hub to verify receipts of inputs. Findings are indicated below.

Case study 1: Agwayuge and Coke farmer group

The group which was started in 1994 operates in Agwayuge Village, Agwayuge Parish, Lamogi sub County Amuru district. It aims at reducing poverty; get a higher bargaining power for their outputs and helping its members to solve family problems. The group has 41 members of which 8 are males and started working with VODP 2 in the year2013.

The group acknowledged receipt of soya been and simsim each 10Kgs, 50Kgs of fertilizers and two tins of pesticides between April and August 2014. Members were also trained on sunflower growing on the 20th June 2014. The soya been was planted on one acre piece of land and the simsim was shared among members who planted it individually.

A total of 20Kgs of Soybeans were harvested and were to be re-planted in May 2015. The simsim did not germinate well because it was planted very late. Each farmer harvested an average of 3Kgs each, to be replanted in June 2015.

Challenges

1) The Soybeans were destroyed by pesticides hence did not germinate well.
2) Late distribution of inputs hindered some farmers to grow oilseeds.
3) Limited man power to open up bigger pieces of land for sun flower growing.
4) Low prices of sunflower discourage farmers to continue with the crop.

Recommendations

1) The VODP farmers should be given effective pesticides.
2) The sunflower seedlings should be distributed in time i.e. early July for early planting.
3) The Government should avail farmers with Ox-ploughs to open up land for sunflower growing.
4) The Prices of sunflower should be raised to attract more farmers in this venture.

Cases study 2: Adyee Foster parent Restock project

The group was formed in 2005 and operates in Adyee LC1, Lamit parish, Akwango Sub County, Kitgum district. It aims at generating income for house hold needs. The group has 10 members of which 3 are males.

Mr. Lapart Ernest, the chairperson of the group acknowledged receipt of the following inputs;

- 4Kgs of sun flower and 15Kgs of Soybeans which were used to plant 4 acres of both Soybeans and sun flower.
- 4Kgs of sun flower seeds in May 2014 and planted three acres.
- 20Kgs of DK 4040 sunflower seed variety from which they planted 2 acres.

A total of 311Kgs of sun flower seeds were harvested and sold at Ug shs 700 per Kg and 250Kgs of Soybeans which was sold at Ug shs 1000 per Kgs. For the sunflower which was planted in September 2014, they harvested 686Kgs and sold it at Ug shs 700 per Kg.

By 10th February 2015, the group had 7bags of sunflower each 65Kgs, which were yet to be sold. Members have used the money to pay school fees for their children, trade in sorghum and the chairperson of this group has also used part of the money to make breaks, for a permanent house construction.


Left: Breaks made out of the money from sell of oilseeds, Right: different varieties of cereals and the seven bags of sunflower seeds stored for bulk selling in Akwango Sub County

Challenges

1) The DK 4040 and H2 variety of sunflower, have thin seeds with low yield and they do not germinate well.
2) For the Soybean N2, they produce few seeds leading to low yield and the seeds are lighter compared to N1 variety in the similar field.
3) Weeding is very expensive for VODP farmers and yet at the end of the day the prices are low discouraging farmers to continue with the crop.
4) High costs associated in processing of sunflower in to oil at the mill which discourages processing. Each Kg milled oil they pay Ug shs 300 per Kg, for the cake (for animal feeds) the farmer pays Ug shs 250(if the VODP famer is to take the cake).

Recommendation

1) The VODP should avail them with Pan 7033 variety which grows very well and the seeds are good.
2) The VODP farmers should be availed with N1 seed variety with a high yield.
3) The VODP/ Government should increase the farm gate prices for the sun flower to cover the costs of weeding.
4) The VODP should attract more oil millers in the district to increase production of oil.

Cases study 3: Trust Christian charity group

The group was formed in 2008 and operates in pajmo East, Pajumo Parish, Akwang sub County, Kitgum district. It aims at eradicating poverty and increasing knowledge sales and services tenant and income generation. The group has 48 members of which 15 are males.

The group received 6Kgs of sunflower seeds and 3Kgs of Soybean seeds in July 2014. A total of 5 acres of sun flower and one acre of Soybeans were planted. They harvested 15 sacks of sun flower each of 95Kgs and half a sack of sun flower. The sun flower was sold at Ug shs 700 per kg and the Soybeans were still in store. The money received from the sale of sun flower was very little and members are using it as a revolving fund. Farmers reported that; some seed varieties have a high yield compared to others. They encouraged the VODP to avail high yield seed varieties to VODP farmers. There major challenge is the termites that eat the leaves of the crop that discourages the crop to germinate very well

Recommendation; They VODP should avail the farmers with pesticides to spray the termites.

c) Lira Hub

The first intervention of VODP in Lira Hub was in 2012, with nine districts of Lira, Apac, Masindi, Serere, Kaberamaido, Oyam, Amuria, Soroti and Kiryandongo. It was extended to Dokolo, Katakwi, Amolatar, Alebtong, Kole, Otuke and Ngora districts under this hub.

It has two services providers in the region: Agency for sustainable Rural Transformation (AFSRT) that came on board in September 2014. It covers Apac, Lira, Kaberamido, Oyam, Masindi and Kiryandongo districts with 220 farmer groups and Uganda oilseeds Producers and Processors Association (UOSPPA) which come on board in December 2014. It covers Soroti, Serere and Amuria districts with 100 farmer groups.

Discussions were held with one services provider in this hub and the findings are presented below.

<u>Agency for sustainable Rural Transformation (AFSRT)</u>

This is an NGO aiming at improving livelihood in the region, through extension services and capacity building trainings. The organization received Ug shs 118.7 Million in November 2014 and since September 2014; they undertook the following activities;

- Mobilized 220 farmer groups from September to December 2014, in the districts of Lira, Oyam, Apac, Kaberamaido, Kiryandongo and Masindi.
- They received and distributed three varieties of sun flower; 200Kgs of pan 7033, 50kgs of new sun flower variety and 50Kgs of Sesun 1H from the VODP and they carried out 118 FLPs and demonstration sites in the above mentioned districts.
- Received 200Kgs of Soybean (MAK soya 3N) variety from VODP, 70Kgs were planted and the balance was stored in offices due to late delivery of these seeds.
- Received 10liters of pesticides (Dimethoate) in September 2014, whose expiry date was October 2014. They distributed five liters and the balance was stored.

Implementation Challenges

1) Late release of funds; the funds to initiate the activities in this collaboration were received late. The organization used own funds to implement the VODP activities.
2) Inadequate seeds provided by the VODP; the demand for seeds is greater than the supply. Each group on average has between 20 - 30 farmers; they were given 1Kg of Pan 7030 variety and needed more than 10Kgs.
3) Untimely implementation of the planned activities to due late delivery of seeds coupled with all the inputs needed for demonstration like fertilizers and other varieties of Soybeans.

Recommendations

1) The VODP should release funds in time for effective implementation of project activities.
2) The Government/VODP should source the improved varieties like Pan 7030 from other sources and at a cheaper price.
3) Inputs should be distributed in time before the rains start.

By 31st December 2014, the hub office had received Ug shs 56,256,000 in three tranches to undertake a number of activities. Table 5.75 shows the expenditures and activities undertaken in the hub.

Table 5.75: Expenditures and activities under taken in Lira hub by 31st December 2014

Tranches	Period	Amount spent (Ug shs)	Activities
1st	July	19,166,000	Office operation, Establishing FLP. Orientation of Area Extension workers and Training working group on Oil seeds conducted.
2nd	September	19,909,000	Office operation, Establishing FLP, training Area Extension workers on yield data collection, conducting introductory meetings in new districts, validating five year strategic plan for oilseeds, Holding Tal shows.
3rd	December	17,181,000	Building capacity of three cooperatives/Association which VODP2 linked to UDBL for loan in the following area; Agronomic practices, post harvesting handling, group dynamics, soil fertility management, book keeping and record keeping.
Total		**56,256,000**	

Source: Field findings

Establishment of FLP

The Hub office together with the pay for services provider (AFSART) established the following FLPs (Table 5.76) for sunflower, soybeans and simsim in the 16 districts under this Lira Hub.

Table 5.76: Oilseed FLPs established in Lira hub by 31st December 2014

Oilseed	Varieties	No. of FLPs	Total Acreage	Acreage of each FLP
Sunflower	Pan 7033, New Sunfola, Sesun 1H, Sesun 2H, EASAF1H and EASAF2H.	169	676.5	1-5 acres depending on the Number of varieties.
Soybeans	Maksoy 1N, Maksoy 2N and Maksoy 3N.	38	35	Half acre to one acre
Semis	Sesame 1, Sesame 2 and local variety	118	112.5	Three quarters to one acre

Source: Field findings

The target for the simsim seed varieties for the FLPs were not achieved due to late delivery of simsim seeds. In the reporting period, 35 FLP were established and the rest to sum up the 118 FLPs established in subsequent season.

Field days

Two field days were held in the two districts of Kaberamaido and Apac. A total of 282 farmers in 11 farmer groups were involved of which 159 farmers were males. Other participants included; District VODP2 focal point persons, representatives from Financial institutions (FINCA & PRIDE), Etop FM, Miller and Agro-input dealers.

Trainings

Cooperatives that got loans from Uganda Development Bank through VODP2 linkage were trained on; Oilseed Agronomic practices, Oilseed post-harvest handling, gross margin analysis, group dynamics, book and record keeping and soil fertility management.

Input distribution

The Hub received 845Kgs of Sunflower, 700Kgs of Soybean and 472Kgs of Sunflower that were used to establish FLP and multiplication gardens in the subsequent seasons. Some farmers sold off the soybeans and there was no multiplication of Soybeans in the region.

Agribusiness linkages

Three cooperatives were linked to Uganda Development Bank Limited (UDBL) to enable them access loans for commercial oilseeds production. The cooperatives accessed the loans as shown in Table 5.77.

Table 5.77: Cooperatives that received loans and performance by January 2015

Cooperative	District	Sub-county	Amount received (Ug shs)	Loan repayment (Ug shs)	Beneficiaries
Acwe Omio	Oyam	Loro	497,500,000	20,000,000	221
Alito Joint	Kole	Alito	369,500,000	185,000,000	380
Angette Farmers	Alebtong	Omoro	500,000,000	41,000,000	273

Source: Field findings

Implementation challenges

1) Delay in funds access for field operations affects even the activities of the services providers. When a request is made, it matures in two months.
2) Low staffing hampers effective implementation of project activities. The hub coordinator does not have an administrator and a driver.
3) Unavailability of oilseeds in the region for example sun flower seeds is imported by only Mukwano with no capacity to supply the whole region.
4) Fake oil seeds are sold by many companies in the region which lead to uniform growth and non-disease resistant.
5) Lack of market for the oil seed in the region has led to Manipulation oil farmers by Middle men. They buy oil seeds from farmers at a very cheap price, hence making lose.

Recommendations

1) There should be timely processing of funds by the VODP Head offices for timely implementation of project activities.
2) To effectively implement the project activities, the hub coordinator should be given an administrator and a driver.
3) The MAAIF should ensure that the current NAADs program focus on distribution of Pan 7033 variety in the region, with improved oil content.
4) The seed satisfaction agencies should step up and monitor all seed companies in the region.
5) Farmer groups in Lira Hub should seek VODP support in linking them with the market and services providers should provide information on the available market services in the region.

Three farmer groups in Kole, Lira and Soroti districts were visited to verify receipts of inputs. In addition, the cooperative in Alebtongo district was visited to verify the performance on loan repayment that was received from UDBL. Findings are presented below.

Kole district

Case study 1: Alito Joint Farmers Multipurpose Cooperative Society Limited (AJOFMUCOS)

The AJOFMUCOS operates in Awili Village, Okwero parish, Alito Sub County, Kole district. It was formed in 1998 as a Non-Government Organization. In 2010 it was turned up to be a cooperative society with 5,006 members' to date. The purpose of this cooperative society is to; bulk and sell oil seeds of soya been, sunflower, Sim-Sim, Ground Nuts and Maize. They started working with VODP 2 in June 2014.

The VODP2 provided training and extension advices to the farmers. In September 2014, they were given 100Kgs of Sesan 2 and 50Kgs of new sun flower, that were distributed to a total of 100 farmers each 1kg. Between September and October 2014, farmers planted about 100 acres of sun flower and harvesting was ongoing as of 20th January 2014.

The farmer group requested for a loan of Ug shs 369,500,000 which was approved on 27th March 2014 on credit terms of; interest rate of 1%, grace period of 7 months after a period of 10 months and the total loan with interest was Ug shs 405 million.

Part of the money was given to 430 farmers, of which 350 farmers used it for the intended activities of buying seeds and chemicals, opening land for agricultural production, hiring labor for harvesting and weeding. Other members misused it. Ug shs 85 million was used by the management of the cooperative to buy Soybean, maize and sunflower seeds from Equator, Otisi Seed Company and Mukwano group of companies, in the following quantities (Table 5.77).

Table 5.77: Seeds procured from the three companies by AJOFMUCOS

Company	Type seeds	Quantity (Tonnes)
Mukwano group of companies	Sunflower	1.5
Otis seed company	Maize	7
	beans	2.3
Equator	Soybean	3
Total		**14.8**

Source: Field findings

The cooperative society needed more of Soybeans and sunflower, but due to low supply they resorted to maize and beans. The soybeans seeds were not of good quality, they were mixed up with other varieties. The two tons of maize were also of poor quality and the never germinated. They have kept the balance in store and planning to take them back to the suppliers. The soybeans and sunflower were of good quality and yield was very good; farmers harvested 142,805kgs of Soybeans and 70 tons of beans which were bulked and sold. The maize was sold

individually by farmers. By 20th January 2015, they have paid back (Ug shs 265 million) 71.7% and the balance to be cleared on 27th January 2015.

Challenges:

1) Lack of capital to buy produces from the farmers.
2) Low prices and lack of market for the Soybeans.
3) Breach of agreement by Nile Agro Company. The cooperative society signed an agreement with Nile Agro Company to buy sun flower seed at Ug shs 1,000 per Kg, however sometimes the company pays Ug shs 750 per Kg which results in losses for the cooperative.
4) It is costly and expensive to collect the oil seeds from the farmers in the different parts of the region due to lack of transport means.
5) Lack of financial literacy among the farmers.
6) The improved seed varieties were not available in the region in adequate quantities; and they are only provided by Mukwano group of companies at exorbitant prices.
7) In some instances the seeds received from the private companies were of a high moisture content hence not germinating very well.

Recommendations

1) The UDBL should provide additional loans to the cooperative to enable it purchase the grains the farmers.
2) The VODP should support the cooperatives to get market outlets for the Soybean.
3) The VODP should mediate and ensure that Nile Agro Company honours the agreement.
4) They are planning to buy a lorry to collect the oil seeds from the farmers in the region.
5) The UDBL and VODP2 should train farmers on financial literacy.
6) The government should step up and multiply the improved seed varieties sun flower seed and establish more demonstration plots in this region.
7) The VODP should avail the cooperative a moisture meter for testing the moisture content in the oil seed before they are procured.

Lira District

Case Study 2: YELEN TEKO farmer group

The group was started in February 2013 and operates in Dagaawak village, Te-adwong parish, Agweng Sub county Lira district. It aims at helping farmers to improve the farming activities, link up them to the market through bulk buying, improve farmer savings and high bargaining power for the farmer`s products. The group has 30 members of which 15 are males, and started working with VODP 2 in September 2014.

The group last received training on 27th November 2014. The sun flower seeds of; Pan 7033 1.5kgs, Sesan 1H 1.5Kgs and New sun flower 0.5Kg were distributed to farmers in the group on September 2014. For all the varieties, they planted one acre and harvested 457Kgs of Pan 7033,

20Kgs of Sesan 1H and 20Kgs of new sun flower varieties. Each Kg of pan 7033 was sold at Ug shs 800 per Kg and other two varieties were sold at Ug shs 600 per Kg.

Challenges

1) Late distribution of oil seeds leading to low output.
2) High post harvest losses due to lack of tarpaulins to dry the produce.
3) Low prices of sunflower in the region.
4) Low yields due to the poor quality seeds sold in the region.

Recommendation

1) The VODP should ensure timely distribution and improved oil seed distribution in the region.
2) The MAAIF/VODP should provide tarpaulins to farmer groups at subsidized prices
3) The VODP should encourage bulk buying and selling by cooperatives to attract high prices.
4) The VODP/National Bureau of Standards should ensure that the oilseeds distributed to farmers are of good quality and higher yield.

Soroti District

The district received the following inputs (Table 5.78) in the second season that were distributed to farmers.

Table 5.78: Inputs distributed by February 2015

Inputs	Varieties	Quantities Distributed	No. of beneficiaries	Beneficiary sub-counties
Sun flower seeds (Kgs)	Pan 7033 & EASF 1H & 2H	240	88	Asuret, Arapai, Gweri, Kamuda, Katine, Soroti and Tubur
Soybean seed (Kgs)	Maksoy 3N	80	8	
Simsim (Kgs)	Sesame 2	70	18	
Pesticides (liters)		10	10	
Spray pumps		3	3	

Source: Field findings

In Soroti district, 82 farmer groups were mobilized and 39 farmer groups benefited from the above inputs. The eight sub counties were involved in the VODP 2 activities while the three Municipal divisions did not take part in the planting, because of its urban nature.

Challenges

1) Lack of transport to implement activities in the field.
2) There are no satisfied seeds for pan 7033 in the district. Farmers go as far as Lira to find these seeds.

3) Overwhelming demand for oil seeds in the district mainly the semis and soybean, and the farmer learning plat form for the inputs.

Recommendations

1) They need motorcycles for the focal point person to oversee the VODP activities of the services providers.
2) The VODP should increase the quantity of oilseeds distributed to farmers in the Soroti district to meet the demand.

Case study 3: Aide awaliwal youth integrated development

The group which was formed in 1999 operates in Arubela Village, Awaliwal Parish, Gweri Sub-County, Soroti district. It aims at generating income through agricultural production. The group has 15 members of which 9 are males.

Mr. Oroni Moses, the chairperson of the group reported that, the group received 8kgs each of sun flower seeds and Soybeans, and 4Kgs of simsim. They were received in September 2014 for demonstration purpose in this village. They planted 4 acres of Soybean and simsim in September 2014, and harvested 700Kgs of grain. The grains were sold at Ug shs 1,000 per Kg and used the money to buy a bull for land opening. By 22nd January 2015, the farmer group had prepared land waiting for guidance from VODP to provide seeds.

Challenges

1) The planting seeds are not readily available at the time of planting and yet the farmers are always willing to buy.
2) Low acreage opened for oil seed growing due to the one pair of oxen and one Ox-plough given to a group of 15 members to be used at the start of planting season.
3) Lack of value addition to the oil seed products; they use manual methods to process the oil seed.

Recommendations

1) The VODP should ensure that the oilseed inputs are available at the time of planting.
2) The VODP should link the farmer group to financial institution to acquire loan for land opening.
3) The VODP should provide motorized machines for processing sunflower and other oil seed products.

Mr. Ogwanga`s sunflower garden that was yet to harvest in Gweri Sub County Soroti District

Case study 4: Osipok Sunflower growers

The group which was formed in 2003 operates in Opucet Village, Gweri Parish, Gweri Sub County Soroti district. It aims at growing and producing oil seed grains for income generation. The group has 10 members of which 6 are males.

Mr. Ogwang Peter, the chairperson of this group acknowledged receipt of 4Kgs of sunflower Pan 7033 in October 2014 which was given to three members of the group to plant. Other members of the group feared to plant due to late receipt of these seeds and the season was coming to an end. The rains disappeared in October 2014 after he has planted and

By 22nd January 2015, he has just started harvesting; however the yield was low due late planting. The crops which did yielded very well were planted in the swamp. The major challenge for this group is the Lack of labor force to prepare gardens for oil seed growing; they do not have sufficient funds to prepare gardens for oil seed growing.

d) West Nile Hub

Background

The first intervention of VODP 2 in West Nile was in August 2012. Activities in the hub cover the districts of Zombo, Nebbi, Arua, Maracha, Koboko and Yumbe. In 2013, the VODP2 advertised for the services providers, who come on board in July 2014. The three services providers were; West Nile Private Sector Promotion Center (WENIPS), Arua District Farmers Association (ADFA) and Nile pro trust formed a consortium called WENAC. Under this consortium, WENAC is the services provider and WENIPS is the lead implementer.

The role of WENAC is to; i) Provide quality extension services to the oil seed farmers, ii) Link the oil farmer groups to the buyers, iii) Lead farmers to possible agricultural credit facilities, iv) Carry out demonstrations to the farmer groups, the best agronomics practices through the farmer learning plat forms, and v) Linking farmer groups to access the agricultural inputs.

The WENAC also links farmers to input dealers, since they are in the Area Cooperative Enterprises in Sub Counties. Some of the Sub Counties have become local seed business groups. They access the foundation seeds through the NARO and distribute them to other farmers in the region and in most cases on credit/ Seed loan.

Physical performance

The consortium started operationalizing and undertaking its activities in August 2014. The first release for this project comes on 23rd December 2014. A number of activities were implemented in Arua, Moyo and Yumbe districts during the period as indicated below:

- Carried out 13 demonstrations of Simsimp, sun flour and Soybean. By January 2015, the demonstration gardens were already harvested.
- Established 54 farmer learning plat forms in 25 sub counties.
- Trained farmers and district staff in oil seed agronomy and farming as a business.
- Organized farmers into area cooperatives.

- Farmer institutional development i.e. farmers in Vurra sub County have been trained in producing seeds for sale.
- Provided aagricultural technology advisory services.
- Supported farmer groups to undertake eenterprise identification
- Carried out Demonstrations to farmers.
- Carried out farmer capacity needs assessment.

Inputs received

By February 2015, sunflower seeds were received from VODP2 Secretariat for distribution to farmers. They were not distributed as they were delivered in the middle of the planting season. They were stored for distribution in the next planting season.

The VODP 2 Sunflower varieties that were delivered late, stored for distribution in the next planting season at the hub offices

Challenges

1) The Sun flower has a low adoption rate in Nebbi district due to lack of market.
2) Procurement of agriculture inputs for demonstration always start late, which affects the sensitive soya been and sunflower.
3) There is no field operation due to the halting of the NAADs program. For example all local governments in West Nile have less than four Agriculture officers.
4) Late releases of funds, the first instalment for FY 2013/14, come in the half year of the FY 2014/15.
5) Lack of transport to follow up activities in the field.
6) Low prices of semis discourage farmers to continue with the crop.

Recommendations

1) The VODP 2 should ensure timely procurement of inputs in the next planting season.
2) The VODP should ensure timely release of funds and in every quarter to effectively implement activities in the region.
3) The district officials should be given motorcycles to follow up activities in the sub counties.
4) The VODP should facilitate formation of marketing linkages with the buyers of sun flowers.
5) The VODP farm gate prices should be increased to attract more farmers in this venture.

Farmers in this region do not have finances to push production of oil seed products to the next level. The VODP2 is creating market, linking the demand and supply of oilseeds. They have also managed to link cooperative societies to financial institutions.
Some of the cooperative societies that have been liked to financial institutions include;

Amatura Produce marketing society could absorb about Ug shs 190 million and Obengi Cooperative society could absorb about Ug shs 226 million based in Moyo district. Their main target is Simsim and they have identified the services providers for land opening and seed supply, whom the financial institution will pay directly.

During the period of July to August 2014, the services of land preparation and planting were provided to Amatura produce marketing society while Obengi Cooperative society received 300bags of SESAMI 2 in December 2014.
The hub has one functional oil mill in Odokibo parish in Yumbe district and privately owned by the Catholic Church. The oil mill acts as a learning center in this region. The six varieties of sun flower planted in April 2014 were taken to this mill to assess the oil content. It was realized that some varieties did very well at production level than the others. Those which did poorly in the field did well at the mill and the reverse is true. The imported varieties were not suitable for the mill and own country varieties had much oil content.

Five farmer groups in Arua and Yumbe districts were visited to verify receipt of inputs. The findings are presented below.

Arua district

Case study 1: NAFA farmer group

NAFA farmer group is located in Kidonga Village, Nyio Parish, Vurra Sub County in Arua district. It was formed in September 2010 with 50 members and started working with VODP 2 in May 2014 with 115 members, of which 65 are men.

In May 2014, members of the group acknowledged receipt of; 400Kgs three varieties of Soybean seeds and fertilizers (3 liters of insect kill and Risopia 20 parkates of 200gms each). The group is also supervised and members have received training from Nile Pro limited. The seeds were planted in May 2014 and harvested in August/September 2014.

The harvested 680kgs three varieties of Soybeans stored and ready for sale

By 13 January 2015, the group had harvested and stored 680kgs, three varieties of Soybeans, ready to be sold by Nile Pro trust. Mak-Soya 3N variety was identified to be of high yield in the region and has much oil than other varieties. The variety can also be consumed locally for home use.

Challenges

1) Expensive storage facilities; the group hires a store at Ug shs 30,000 per month. This money is sometimes difficult to be raised by the group members.
2) Foundation seeds (from Makerere Seed Company Limited) are not readily available at the time of planting.
3) The pesticides given to the group were not enough to stimulate production.
4) Bad weather conditions, sometimes affects oil seed growing in the region.

Recommendations

1) The group is in the process of soliciting money from its members to construct a store.
2) The VODP 2/ Arua Hub coordinator should ensure that oil seed farmers are availed with enough foundation seeds at the time of planting.
3) The input dealers should provide oil seed farmers with enough pesticides.

Case study 2: LAFA farmer association

LAFA farmer association is located in Tinyaku Village, Chiaba Parish, Logiri Sub County in Arua district. The group of 30 members was formed in 2013, with 10 members of whom three were females. The aim of starting the group was to eradicate food insecurity and poverty reduction, and corroboration with VODP 2 started in early 2014.

In April 2014, members of the group acknowledged receipt of; 180Kgs of Soybeans seeds that were shared among the members each receiving at least 10Kgs. The seeds were planted in May and on average 300Kgs were harvested per acre in September 2014. The farmers also received technical advisory services in crop growing and capacity building from the consortium.

Challenges

1) Weather changes; unpredictable rainy partners affected the yield.
2) Labor problem to open up bigger chunks of land for bumper Soybean crop.

Recommendations

1) They need loans to open up land for bumper Soybean growing.

Yumbe district

The district received input of Soybean, sunflower, Raisobia and fertilizers that were distributed during the farmer learning plat forms. Table 5.79 details the inputs distributed in second planting season. It was noted that some farmers' received seeds directly from VODP 2.

Table 5.79: Inputs distributed to farmers in second planting season in Yumbe district

No.	Variety	Quantity	No.	Variety	Quantity
1	Pan 7033	60Kgs	6	Susa IH	5Kgs
2	EA saf 2H	10Kgs	7	Sesan 2H	5Kgs
3	New Sunflower	50Kgs	8	Fertilizers	50Kgs
4	MAK soy 1N	10Kgs	9	Rhizobia	6 suckets
5	Agro-chemical	3 liters.			

Source: Yumbe Production Office

Challenges

1) Untimely distribution of Soybeans; the seeds were distributed in July/ August 2014 and yet the farmers prepared their lands in May to June 2014.
2) The project is concentrating more on farmer learning plat form than distribution of inputs to farmers.
3) Poor agronomics practices used by the farmers.
4) Lack of market for the soya been; farmers were informed of the ready market from Mukwano industries which was not true.
5) Farmers lack transport to transport the oil seeds to the Millar.
6) The oil seed are distributed late hence some farmers end up not planting in that season.

Recommendations

1) The VODP 2 should distribute inputs in June and July in every planting season.
2) The VODP 2 should sensitize farmers on good agronomics practices in Yumbe district.
3) The VODP 2 should avail more inputs to farmers to attract them in this venture.
4) The VODP 2 should ensure that WENAC extents the services (good agronomics practices) to farmers Yumbe district.
5) The VODP 2 should link farmers to the market of oil seeds in Yumbe district.

Case study 3: Waraka United farmers group

The farmer group is located in Waraka village, Lamunga Parish in Kululu Sub County, Yumbe district. It was formed in 2014, with 27 members of whom 19 are women. The intention of the group was to: reduce poverty and famine, improve life style and food security within the community. The major activities of the group are crop growing and money saving.

Mr. Jamal Mohammed a member of the group acknowledge receipt of one packet of Rhizobia fertilizer, one liter of pesticides and 2Kgs of Soybean seed in May 2014. He was also trained on the use of inputs given to him. In October 2014, he harvested 15Kgs of Soybeans, used part of harvest to feed his poultry and kept 3Kgs for next season planting season. The farmer reported

that however, Pan 7033 variety is good but cannot be replanted. He sold the cocks and used the money to pay school fees for his children.

His major challenges are: i) the unpredictable weather conditions that confuse the farmer, ii) Very little knowledge on good agronomics practices, and lack of market for the Soybeans. He recommended VODP 2 to; sensitize farmers on good agronomics practices, and availing them with information on weather forecast.

Case study 4: Odokibo agriculture Training Center

The training Center has existed for 15 years. It trains local farmers' especially women in agric. Agronomics practices and domestic violence. Started working with VODP 2 in April 2014. The training center received 50Kgs of fertilizers and a sack of sun flower seeds (20 packets) for demonstration. In April 2014, they planted 25 acres and harvested 12,861Kgs sunflower in October 2014.

The training center has its own milling machine and they process their oil seed which is sold in the local market. By 14th January 2015, they reported to have sold 580 liters of oil at Ug shs 4800 per liter the second planting season. Money from sale of oil is used to buy sunflower from farmers, cultivating gardens and hiring labor to plant more sunflower.

In the second season, they bought 2,614Kgs of oil seeds from farmers and were ready for crashing, while in the previous season they bought 1050Kgs of oil seed from Nebbi district.

Left: Oilseeds harvested and procured from farmers ready for crashing, Right: some of the packaging material and sunflower oil packed, ready for sale at Odokibo Training center in Yumbe district

Challenges

1) The production is very low due to lack of enough sunflowers in the region. All sun flower received from the farmers is crashed within less than one day.
2) The foundation seeds are not readily available in the region.

3) Lack of transport to transport the sunflower from the farmers to the oil mill.
4) It is costly to boiled oil locally using fire wood; this is due to lack of power in this village.

Recommendations

1) The VODP 2 should encouraged farmers to grow more sunflower seeds, since the oil mill needs a minimum of 50,000Kgs of oil seed in a season.
2) The VODP 2 should ensure that the foundation seeds are available during the planting season in the region.
3) Odokibo agriculture Training Center is planning to buy a lorry to transport oil seeds from farmers to the mill.
4) Uganda Electricity Distribution Company Limited (UEDCL) should extend electricity to the oil mill.

Case study 5: Canziri Farmer group

The farmer group operates in Machangana Village, Arunga Parish in Yumbe Town Council. The group was formed in the second season of 2014 with 15 members, of whom 12 are men. They started working with VODP 2 in June 2014.

Mr. Wilfred Olega, the host farmer acknowledged receipt of 2Kgs of soya been and 1.5kgs of sunflower which he used to plant three quarters of an acre in June 2014. In October 2014, he harvested 20Kgs of Soybean and 4kgs of sun flower.

His key challenges are; i) the warms that affect the crops during the flowering stage, ii) poor quality seeds of lower yield and iii) Weeding that is very costly in terms of labor. He recommended; i) The VODP 2 to provide them with pesticides and spray pumps, and also proved them with improved seed varieties for better quality and quantity.

5.9.3 Analysis

Link between financial and physical performance

There was a strong link between the financial and physical performance of the VODP2. By half year Ug shs 14,958,642,503 (49.75% of the annual budget) was expended and 10 key planned outputs out of the 14 where achieved.

Achievement of Targets

The VODP2 exhibited very good performance in achievement of set targets. Ten (71%) out of the 14 outputs for the oil palm and oil seeds components were fully achieved; three outputs were partially achieved and one output not achieved. Among the key targets achieved were valuation of land and opening road boundaries in Buvuma district, maintaining existing oil palm

plantations in Kalangala, provision of extension advice to farmers, provision of oil seeds and formation of FLPs.

Implementation challenges

1) Low supply of fertilisers to farmers due to delayed payments for earlier consignments.
2) Poor yields due to due to delays by KOPGT in payment of loans to farmers for maintenance of oil palm plantations.
3) Low returns to farmers for oil palm growing due to low price of FFB set by OPUL/KOPGT
4) Delayed payments (up to two years) to land owners for land sold to Government. This was associated with the inefficiencies in document processing in Mukono Land Office and lack of District Land officer and auditors.
5) Poor valuation of land and low prices offered in Buvuma district due to absence of a District Land Board.
6) Poor performance of oil seeds due to the late delivery of seeds by VODP Secretariat. The seeds were noted to be inadequate for the farmer groups in each hub.
7) Late disbursement of UDBL loans to DFAs negatively affected crop performance and loan recovery.

5.9.4 Conclusion

The semi-annual performance of the VODP2 during FY 2014/15 is rated as very good (71%). Most of the key planned outputs were achieved during the reporting period.

5.9.5 Recommendations

1) The MAAIF/VODP should streamline payment procedures and ensure that OPUL is paid in time for fertiliser deliveries.
2) The MAAIF/KOPGT should ensure timely disbursement of loans to farmers for maintenance of oil palm plantations.
3) The OPUL/KOPGT should revise and raise the price of the FFB
4) The Ministry of Lands should strengthen the capacity of Mukono land Office to handle documents expeditiously.
5) The District should operationalise the Buvuma District Land Board and recruit the District Land Officer.
6) The MAAIF/VODP2 should ensure timely delivery of planting materials to farmers and in adequate quantities.
7) The UDBL should ensure timely disbursement of loans to farmers.

General Conclusion

The performance of the agriculture sector was rated as fair at 54%. The projects that performed well included: Vegetable Oil Development Project (VODP2), Dairy Development Authority (DDA), Uganda Cotton Development Organisation (UCDO) and National Agricultural Research Organisation (NARO). Poor performance was noted in the Crop Pest and Disease Control Project and Farm Development Department and Increasing Mukene for Home Consumption Project.

For the projects that performed well, DDA achieved 75% of the planned outputs under the recurrent budget and 78% of the rehabilitation works under the development budget. The level of achievement of targets for provision of cotton extension services, production inputs and cotton planting seeds by the UCDO was at 75%. The VODP2 delivered 71% of the planned targets relating to maintenance of oil palm plantations in Kalangala district, valuation of land opening up of road boundaries in Buvuma district, and provision of inputs and extension services for the oil seeds in the four regional hubs.

Whereas 50% of the released funds were spent in the Crop Pest and Disease Control Project, only three of the eight planned outputs were achieved. Similarly, the Farm Development department had expended all the released funds and achieved only two of the nine key planned outputs. Three out of the planned six key outputs were achieved for the Increasing Mukene project.

Recommendations

- The MAAIF, MoPS and District Local Governments should fast track implementation of the single spine extension system in LGs and recruit the requisite staff in the Production Departments at district and sub-county level.
- The MAAIF should initiate procurements early at the beginning of the FY.
- The MAAIF should ensure that contractors hired to undertake civil works have adequate competence (staffing, equipment, sourcing materials).
- The MAAIF and MoPS should review and streamline the roles of the Crop Protection Department and Crop Regulation and Certification Department to avoid duplication of outputs and misallocations.
- The MAAIF should review the outputs and targets under the recurrent and development budget of the Farm Development Department to remove the overlaps.
- The MAAIF should ensure adequate and timely disbursement of funds from all its agencies to the regional based institutions.
- The MAAIF should strengthen the interface of work plans and budgets for the ministry and the District Production Departments.
- The NARO should allocate capital development funds to the regional institutions

- The MAAIF and districts should strengthen the regulation, supervision and monitoring of projects at the district level.

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