### **VOTE:** 142 National Agricultural Research Organization (NARO)

Quarter 4

#### V1: Summary of Issues in Budget Execution

**Table V1.1: Overview of Vote Expenditures (UShs Billion)** 

		Approved Budget	Revised Budget	Released by End Q4	Spent by End Q4	% Budget Released	% Budget Spent	% Releases Spent
D	Wage	43.462	43.462	43.462	43.462	100.0 %	100.0 %	100.0 %
Recurrent	Non-Wage	27.489	97.489	97.489	97.467	355.0 %	354.6 %	100.0 %
Dont	GoU	34.963	34.963	34.963	34.922	100.0 %	99.9 %	99.9 %
Devt.	Ext Fin.	0.000	0.000	0.000	0.000	0.0 %	0.0 %	0.0 %
	GoU Total	105.914	175.914	175.914	175.851	166.1 %	166.0 %	100.0 %
Total GoU+Ex	xt Fin (MTEF)	105.914	175.914	175.914	175.851	166.1 %	166.0 %	100.0 %
	Arrears	0.087	0.087	0.087	0.087	100.0 %	100.0 %	100.0 %
	Total Budget	106.001	176.001	176.001	175.938	166.0 %	166.0 %	100.0 %
	A.I.A Total	0.000	0.000	0.000	0.000	0.0 %	0.0 %	0.0 %
	<b>Grand Total</b>	106.001	176.001	176.001	175.938	166.0 %	166.0 %	100.0 %
Total Vote Bud	lget Excluding Arrears	105.914	175.914	175.914	175.851	166.1 %	166.0 %	100.0 %

# VOTE: 142 National Agricultural Research Organization (NARO)

Table V1.2: Releases and Expenditure by Programme and Sub-SubProgramme\*

Billion Uganda Shillings	Approved Budget	Revised Budget	Released by End Q4	Spent by End Q4	% Budget Released	% Budget Spent	%Releases Spent
Programme:01 Agro-Industrialization	105.902	175.902	175.902	175.839	166.1 %	166.0 %	100.0%
Sub SubProgramme:01 Agricultural Research	105.902	175.902	175.902	175.839	166.1 %	166.0 %	100.0%
Programme:17 Regional Balanced Development	0.099	0.099	0.099	0.099	100.0 %	100.0 %	100.0%
Sub SubProgramme:01 Agricultural Research	0.099	0.099	0.099	0.099	100.0 %	100.0 %	100.0%
Total for the Vote	106.001	176.001	176.001	175.938	166.0 %	166.0 %	100.0 %

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Table V1.3: High Unspent Balances and Over-Expenditure in the Approved Budget (Ushs Bn)

# VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

#### V2: Performance Highlights

#### Table V2.1: PIAP outputs and output Indicators

Programme:01 Agro-Industrialization			
SubProgramme:01 Institutional Strengthening and Coordination			
Sub SubProgramme:01 Agricultural Research			
Department:007 NARO-SECRETARIATE			
Budget Output: 000001 Audit and Risk Management			
PIAP Output: 01910101 Audit and Risk Management coordinated			
Programme Intervention: 019101 Strengthen government institution	ons for effective and o	efficient service delive	ry.
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
No. of audit reports produced and submitted	Number	8	8
PIAP Output: 10412026 Leadership and Management coordinated		•	
Programme Intervention: 010601 Strengthen coordination of publiquality food and food security	ic institutions in desig	n and implementatio	n of policies including access to
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
No. of oversight visits undertaken	Number	12	12
Budget Output: 000013 HIV/AIDS Mainstreaming	•	•	
PIAP Output: 10412026 Leadership and Management coordinated			
Programme Intervention: 010601 Strengthen coordination of publiquality food and food security	ic institutions in desig	n and implementatio	n of policies including access to
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
No. of oversight visits undertaken	Number	2	2
Budget Output: 000014 Administrative and Support Services	1	1	
PIAP Output: 10412026 Leadership and Management coordinated			
Programme Intervention: 010601 Strengthen coordination of publiquality food and food security	ic institutions in desig	n and implementatio	n of policies including access to
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
No. of oversight visits undertaken	Number	8	8

### **VOTE:** 142 National Agricultural Research Organization (NARO)

Programme:01 Agro-Industrialization			
SubProgramme:01 Institutional Strengthening and Coordination			
Sub SubProgramme:01 Agricultural Research			
Department:007 NARO-SECRETARIATE			
Budget Output: 000089 Climate Change Mitigation			
PIAP Output: 10412026 Leadership and Management coordinated			
Programme Intervention: 010601 Strengthen coordination of publiquality food and food security	c institutions in desig	n and implementatio	n of policies including access to
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
No. of oversight visits undertaken	Number	8	8
Budget Output: 000090 Climate Change Adaptation			
PIAP Output: 10412026 Leadership and Management coordinated			
Programme Intervention: 010601 Strengthen coordination of publiquality food and food security	c institutions in desig	n and implementatio	n of policies including access to
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
No. of oversight visits undertaken	Number	2	2
SubProgramme:02 Agricultural Production and Productivity			
Sub SubProgramme:01 Agricultural Research			
Department:001 Abi Zonal Agriculture Research Institute(ZARDI)	)		
Budget Output: 010010 Technology Generation			
PIAP Output: 0103020111 Agri Research IP and innovations comm	ercialised		
Programme Intervention: 010407 Strengthen agricultural research	and technology deve	lopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of Agriculture Research Innovations and IPs commercialised	Number	6	6
PIAP Output: 01040705 Demand driven agriculture technologies d	eveloped		
Programme Intervention: 010407 Strengthen agricultural research	and technology deve	lopment	
PIAP Output Indicators	Indicator Measure	Planned 2024/25	Actuals By END Q 4
Number of research products and services for food and nutrition security generated	Number	6	6
PIAP Output: 01040706 Research-extension farmer linkages development	pped and strengthene	d	
Programme Intervention: 010407 Strengthen agricultural research	and technology deve	lopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of technologies adopted	Number	4	4

### **VOTE:** 142 National Agricultural Research Organization (NARO)

Programme:01 Agro-Industrialization			
SubProgramme:02 Agricultural Production and Productivity			
Sub SubProgramme:01 Agricultural Research			
Department:001 Abi Zonal Agriculture Research Institute(ZARD	(I)		
Budget Output: 010011 Technology Promotion			
PIAP Output: 01040705 Demand driven agriculture technologies	developed		
Programme Intervention: 010407 Strengthen agricultural research	h and technology deve	elopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of research products and services for food and nutrition security generated	Number	6	6
PIAP Output: 01040706 Research-extension farmer linkages devel	loped and strengthene	ed	
Programme Intervention: 010407 Strengthen agricultural research	h and technology deve	elopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of technologies adopted	Number	4	4
Department:002 Buginyaya Zonal Agriculture Research Institute(	ZARDI)		
Budget Output: 010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies	developed		
Programme Intervention: 010407 Strengthen agricultural research	h and technology deve	elopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of research products and services suitable for industry developed	Number	2	2
PIAP Output: 01040706 Research-extension farmer linkages deve	loped and strengthene	ed	
Programme Intervention: 010407 Strengthen agricultural research	h and technology deve	elopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of technologies adopted	Number	8	8
Department:003 Bulindi Zonal Agriculture Research Institute(ZA	RDI)	•	
Budget Output: 010011 Technology Promotion			
PIAP Output: 01040706 Research-extension farmer linkages devel	loped and strengthene	ed	
Programme Intervention: 010407 Strengthen agricultural research	h and technology deve	elopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of District Adaptive Research Support Teams (DARSTs) developed	Number	0	0
Number of technologies adopted	Number	6	6

### **VOTE:** 142 National Agricultural Research Organization (NARO)

Programme:01 Agro-Industrialization					
SubProgramme:02 Agricultural Production and Productivity					
Sub SubProgramme:01 Agricultural Research					
Department:004 Kachwekano Zonal Agriculture Research Institut	e(ZARDI)				
Budget Output: 010011 Technology Promotion					
PIAP Output: 01040706 Research-extension farmer linkages development	oped and strengthene	d			
Programme Intervention: 010407 Strengthen agricultural research and technology development					
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4		
Number of technologies adopted	Number	6	6		
Department:005 Mbarara Zonal Agriculture Research Institute(ZA	ARDI)				
Budget Output: 010011 Technology Promotion					
PIAP Output: 01040706 Research-extension farmer linkages development	oped and strengthene	d			
Programme Intervention: 010407 Strengthen agricultural research and technology development					
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4		
Number of technologies adopted	Number	4	4		
Department: 006 Nabuin Zonal Agriculture Research Institute (ZAI	RDI)				
Budget Output: 010011 Technology Promotion					
PIAP Output: 01040705 Demand driven agriculture technologies d	eveloped				
Programme Intervention: 010407 Strengthen agricultural research	and technology deve	lopment			
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4		
Number of improved technologies and innovations adopted	Number	5	5		
PIAP Output: 01040706 Research-extension farmer linkages development	oped and strengthene	d			
Programme Intervention: 010407 Strengthen agricultural research	and technology deve	lopment			
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4		
Number of technologies adopted	Number	5	5		
Department:007 NARO-SECRETARIATE					
Budget Output: 010008 Capacity Strengthening					
PIAP Output: 01040705 Demand driven agriculture technologies d	eveloped				
Programme Intervention: 010407 Strengthen agricultural research	and technology deve	lopment			
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4		
Number of research products and services for food and nutrition security generated	Number	8	8		

### **VOTE:** 142 National Agricultural Research Organization (NARO)

Programme:01 Agro-Industrialization			
SubProgramme:02 Agricultural Production and Productivity			
Sub SubProgramme:01 Agricultural Research			
Department:007 NARO-SECRETARIATE			
Budget Output: 010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies of	leveloped		
Programme Intervention: 010407 Strengthen agricultural research	n and technology deve	lopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of research products and services suitable for industry developed	Number	8	8
PIAP Output: 01040706 Research-extension farmer linkages devel	oped and strengthene	d	
Programme Intervention: 010407 Strengthen agricultural research	n and technology deve	lopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of technologies adopted	Number	4	4
Budget Output: 010011 Technology Promotion			
PIAP Output: 01040705 Demand driven agriculture technologies of	leveloped		
Programme Intervention: 010407 Strengthen agricultural research	n and technology deve	lopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of research products and services for food and nutrition security generated	Number	12	12
Department:008 National Agricultural Research Laboratories		1	
Budget Output: 010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies of	leveloped		
Programme Intervention: 010407 Strengthen agricultural research	n and technology deve	lopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of research products and services for food and nutrition security generated	Number	10	10
Number of research products and services suitable for industry developed	Number	10	10
Budget Output: 010011 Technology promotion			
PIAP Output: 01040705 Demand driven agriculture technologies o	leveloped		
Programme Intervention: 010407 Strengthen agricultural research	n and technology deve	lopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of improved technologies and innovations adopted	Number	8	8

# **VOTE:** 142 National Agricultural Research Organization (NARO)

Programme:01 Agro-Industrialization			
SubProgramme:02 Agricultural Production and Productivity			
Sub SubProgramme:01 Agricultural Research			
Department:008 National Agricultural Research Laboratories			
Budget Output: 010011 Technology promotion			
PIAP Output: 01040706 Research-extension farmer linkages development	oped and strengthene	d	
Programme Intervention: 010407 Strengthen agricultural research	and technology deve	lopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of technologies adopted	Number	8	8
Department:009 National Coffee Research Institute			
Budget Output: 010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies d	eveloped		
Programme Intervention: 010407 Strengthen agricultural research	and technology deve	lopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of research products and services suitable for industry developed	Number	4	4
Budget Output: 010011 Technology Promotion			
PIAP Output: 01040705 Demand driven agriculture technologies d	eveloped		
Programme Intervention: 010407 Strengthen agricultural research	and technology deve	lopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of research products and services suitable for industry developed	Number	1	1
Department:010 National Crops Resources Research Institute			
Budget Output: 010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies d	eveloped		
Programme Intervention: 010407 Strengthen agricultural research	and technology deve	lopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of research products and services suitable for industry developed	Number	5	5

### **VOTE:** 142 National Agricultural Research Organization (NARO)

Programme:01 Agro-Industrialization			
SubProgramme:02 Agricultural Production and Productivity			
Sub SubProgramme:01 Agricultural Research			
Department:011 National Fisheries Resources Research Institute			
Budget Output: 010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies d	eveloped		
Programme Intervention: 010407 Strengthen agricultural research	and technology deve	lopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of improved technologies and innovations adopted	Number	0	0
Number of research products and services for food and nutrition security generated	Number	4	4
Department:012 National Forestry Resources Research Institute			
Budget Output: 010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies d	eveloped		
Programme Intervention: 010407 Strengthen agricultural research	and technology deve	lopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of research products and services for food and nutrition security generated	Number	2	2
Number of research products and services suitable for industry developed	Number	4	4
PIAP Output: 01040706 Research-extension farmer linkages development	oped and strengthene	d	
Programme Intervention: 010407 Strengthen agricultural research	and technology deve	lopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of technologies adopted	Number	4	4
Budget Output: 010011 Technology Promotion			
PIAP Output: 01040706 Research-extension farmer linkages development	oped and strengthene	d	
Programme Intervention: 010407 Strengthen agricultural research	and technology deve	lopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of technologies adopted	Number	4	4

### **VOTE:** 142 National Agricultural Research Organization (NARO)

Programme:01 Agro-Industrialization			
SubProgramme:02 Agricultural Production and Productivity			
Sub SubProgramme:01 Agricultural Research			
Department:013 Mukono Zonal Agriculture Research Institute (Z	ARDI)		
Budget Output: 010011 Technology Promotion			
PIAP Output: 01040705 Demand driven agriculture technologies	developed		
Programme Intervention: 010407 Strengthen agricultural research	h and technology deve	lopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of research products and services for food and nutrition security generated	Number	2	2
Number of research products and services suitable for industry developed	Number	3	3
PIAP Output: 01040706 Research-extension farmer linkages devel	loped and strengthene	d	
Programme Intervention: 010407 Strengthen agricultural research	h and technology deve	lopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of technologies adopted	Number	8	8
Department:015 National Semi Arid Resources Research Institute	(NaSARRI)		
Budget Output: 010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies	developed		
Programme Intervention: 010407 Strengthen agricultural research	h and technology deve	lopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of research products and services for food and nutrition security generated	Number	11	11
Number of research products and services suitable for industry developed	Number	11	11
Department:016 Ngetta ZARDI		1	
Budget Output: 010011 Technology Promotion			
PIAP Output: 01040705 Demand driven agriculture technologies	developed		
Programme Intervention: 010407 Strengthen agricultural research	h and technology deve	lopment	
PIAP Output Indicators	Indicator Measure	Planned 2024/25	Actuals By END Q 4
Number of research products and services suitable for industry developed	Number	4	4

### VOTE: 142 National Agricultural Research Organization (NARO)

Programme:01 Agro-Industrialization			
SubProgramme:02 Agricultural Production and Productivity			
Sub SubProgramme:01 Agricultural Research			
Department:016 Ngetta ZARDI			
Budget Output: 010011 Technology Promotion			
PIAP Output: 01040706 Research-extension farmer linkages deve	loped and strengthene	ed	
Programme Intervention: 010407 Strengthen agricultural researc	h and technology deve	elopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of technologies adopted	Number	4	4
Department:017 Rwebitaba ZARDI			
Budget Output: 010011 Technology Promotion			
PIAP Output: 01040705 Demand driven agriculture technologies	developed		
Programme Intervention: 010407 Strengthen agricultural researc	h and technology deve	lopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of research products and services for food and nutrition security generated	Number	2	2
Number of research products and services suitable for industry developed	Number	3	3
PIAP Output: 01041103 Research-extension-farmer linkages deve	loped and strengthene	ed	
Programme Intervention: 010411 Strengthen the agricultural exte	ension system		
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of demonstrations sites for the different value chain innovations demonstrated established	Number	4	4
Project:1560 Relocation and Operationalisation of the National L	ivestock Resources Re	search Institute(NAL	JIRRI)
Budget Output: 000017 Infrastructure Development and Management			
PIAP Output: 01040705 Demand driven agriculture technologies	developed		
Programme Intervention: 010407 Strengthen agricultural researc	h and technology deve	elopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of research products and services suitable for industry developed	Number	8	8

### **VOTE:** 142 National Agricultural Research Organization (NARO)

Programme:01 Agro-Industrialization			
SubProgramme:02 Agricultural Production and Productivity			
Sub SubProgramme:01 Agricultural Research			
Project:1560 Relocation and Operationalisation of the National Li	vestock Resources Re	search Institute(NAL	LIRRI)
Budget Output: 010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies of	leveloped		
Programme Intervention: 010407 Strengthen agricultural research	and technology deve	lopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of research products and services suitable for industry developed	Number	8	8
Project:1619 Retooling of National Agricultural Research Organiz	ation	•	
Budget Output: 000003 Facilities and Equipment Management			
PIAP Output: 01040705 Demand driven agriculture technologies of	leveloped		
Programme Intervention: 010407 Strengthen agricultural research	and technology deve	lopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of research products and services for food and nutrition security generated	Number	24	24
Budget Output: 000017 Infrastructure Development and Management			
PIAP Output: 01040705 Demand driven agriculture technologies of	leveloped		
Programme Intervention: 010407 Strengthen agricultural research	and technology deve	lopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of research products and services for food and nutrition security generated	Number	24	24
Budget Output: 010008 Capacity Strengthening	•	1	
PIAP Output: 01040705 Demand driven agriculture technologies of	leveloped		
Programme Intervention: 010407 Strengthen agricultural research	and technology deve	lopment	
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4
Number of research products and services for food and nutrition security generated	Number	24	24

### **VOTE:** 142 National Agricultural Research Organization (NARO)

Programme:01 Agro-Industrialization					
SubProgramme:02 Agricultural Production and Productivity					
Sub SubProgramme:01 Agricultural Research					
Project:1619 Retooling of National Agricultural Research Organiz	ation				
Budget Output: 010009 Research Partnerships					
PIAP Output: 01040705 Demand driven agriculture technologies of	leveloped				
Programme Intervention: 010407 Strengthen agricultural research and technology development					
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4		
Number of functional public-private partnerships established for technology development and promotion	Number	10	10		
Budget Output: 010010 Technology Generation		1			
PIAP Output: 01040705 Demand driven agriculture technologies of	leveloped				
Programme Intervention: 010407 Strengthen agricultural research	n and technology deve	lopment			
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4		
Number of research products and services for food and nutrition security generated	Number	24	24		
Budget Output: 010011 Technology Promotion		1			
PIAP Output: 01040705 Demand driven agriculture technologies of	leveloped				
Programme Intervention: 010407 Strengthen agricultural research	n and technology deve	lopment			
PIAP Output Indicators	<b>Indicator Measure</b>	Planned 2024/25	Actuals By END Q 4		
Number of improved technologies and innovations adopted	Number	18	18		

### VOTE: 142 National Agricultural Research Organization (NARO)

**Quarter 4** 

#### Performance highlights for the Quarter

During FY2024/25, NARO achieved significant milestones in technology generation and promotion across crop, livestock, and aquaculture sectors. It released several improved crop varieties, including four potatoes, three millet, one banana, and submitted three coffee varieties for approval (Plate: 1), enhancing yield, nutrition, and climate resilience. In livestock, NARO advanced genetic improvement by developing elite indigenous chickens, improved goat and cattle crosses, and high-yielding forages. In aquaculture, key innovations included improved feed formulations, a 20% increase in Ningu larval survival, and the development of protocols for integrated fish-vegetable systems. Infrastructure-wise, NARO established Vaccine Research and Production facility(Plate 2), completed and operationalized critical facilities including research laboratories, gene banks, vaccine production units, and livestock barns, significantly strengthening the national research system's capacity to support Uganda's agro-industrialisation agenda.

#### Variances and Challenges

During FY2024/25, NARO faced several challenges affecting its performance and sustainability. A significant increase in staff attrition was observed, largely due to salary disparities between NARO and public universities, making it difficult to retain skilled personnel. Additionally, a substantial portion of the vehicle fleet was beyond its useful life—exceeding five years or 250,000KM, thereby hampering field research activities. The organization also encountered growing pressure to cede public agricultural research land,threatening long-term research capacity. Furthermore, untimely termination of USAID-funded research contracts posed a serious risk to ongoing projects, requiring targeted interventions to preserve critical research undertakings.

### VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

#### V3: Details of Releases and Expenditure

Table V3.1: GoU Releases and Expenditure by Budget Output\*

Billion Uganda Shillings	Approved Budget	Revised Budget	Released by End Q4	Spent by End Q4	% GoU Budget Released	% GoU Budget Spent	% GoU Releases Spent
Programme:01 Agro-Industrialization	105.902	175.902	175.902	175.839	166.1 %	166.0 %	100.0 %
Sub SubProgramme:01 Agricultural Research	105.902	175.902	175.902	175.839	166.1 %	166.0 %	100.0 %
000001 Audit and Risk Management	0.130	0.130	0.130	0.130	100.0 %	100.0 %	100.0 %
000003 Facilities and Equipment Management	2.663	2.663	2.663	2.663	100.0 %	100.0 %	100.0 %
000013 HIV/AIDS Mainstreaming	0.027	0.027	0.027	0.027	100.0 %	100.0 %	100.0 %
000014 Administrative and Support Services	58.759	58.759	58.759	58.759	100.0 %	100.0 %	100.0 %
000017 Infrastructure Development and Management	9.326	9.326	9.326	9.326	100.0 %	100.0 %	100.0 %
000089 Climate Change Mitigation	0.050	0.050	0.050	0.050	100.0 %	100.0 %	100.0 %
000090 Climate Change Adaptation	0.050	0.050	0.050	0.050	100.0 %	100.0 %	100.0 %
010008 Capacity Strengthening	8.663	8.663	8.663	8.663	100.0 %	100.0 %	100.0 %
010009 Research Partnerships	1.500	1.500	1.500	1.500	100.0 %	100.0 %	100.0 %
010010 Technology Generation	20.367	20.367	20.367	20.311	100.0 %	99.7 %	99.7 %
010011 Technology Promotion	4.368	74.368	74.368	74.361	1,702.6 %	1,702.5 %	100.0 %
Programme:17 Regional Balanced Development	0.099	0.099	0.099	0.099	100.0 %	100.0 %	100.0 %
Sub SubProgramme:01 Agricultural Research	0.099	0.099	0.099	0.099	100.0 %	100.0 %	100.0 %
010010 Technology Generation	0.050	0.050	0.050	0.050	100.0 %	100.0 %	100.0 %
010011 Technology Promotion	0.049	0.049	0.049	0.049	100.0 %	100.0 %	100.0 %
Total for the Vote	106.001	176.001	176.001	175.938	166.0 %	166.0 %	100.0 %

# VOTE: 142 National Agricultural Research Organization (NARO)

Table V3.2: GoU Expenditure by Item 2024/25 GoU Expenditure by Item

Billion Uganda Shillings	Approved Budget	Revised Budget	Released by End Q4	Spent by End Q4	% GoU Budget Released	% GoU Budget Spent	% GoU Releases Spent
211102 Contract Staff Salaries	43.462	43.462	43.462	43.462	100.0 %	100.0 %	100.0 %
211104 Employee Gratuity	10.866	10.866	10.866	10.866	100.0 %	100.0 %	100.0 %
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)	1.239	1.239	1.239	1.239	100.0 %	100.0 %	100.0 %
211107 Boards, Committees and Council Allowances	0.135	0.135	0.135	0.135	100.0 %	100.0 %	100.0 %
212101 Social Security Contributions	4.364	4.364	4.364	4.364	100.0 %	100.0 %	100.0 %
212102 Medical expenses (Employees)	0.821	0.821	0.821	0.821	100.0 %	100.0 %	100.0 %
212103 Incapacity benefits (Employees)	0.075	0.075	0.075	0.075	100.0 %	100.0 %	100.0 %
221001 Advertising and Public Relations	0.268	1.168	1.168	1.168	435.5 %	435.5 %	100.0 %
221003 Staff Training	0.155	0.455	0.455	0.456	293.3 %	293.8 %	100.2 %
221004 Recruitment Expenses	0.220	0.220	0.220	0.220	100.0 %	100.0 %	100.0 %
221007 Books, Periodicals & Newspapers	0.012	0.012	0.012	0.012	100.0 %	100.0 %	100.0 %
221008 Information and Communication Technology Supplies.	0.173	0.173	0.173	0.171	100.0 %	98.7 %	98.7 %
221009 Welfare and Entertainment	0.151	0.151	0.151	0.151	100.0 %	100.0 %	100.0 %
221011 Printing, Stationery, Photocopying and Binding	0.263	0.313	0.313	0.312	119.0 %	118.6 %	99.7 %
221012 Small Office Equipment	0.000	0.050	0.050	0.050	0.0 %	0.0 %	100.0 %
221016 Systems Recurrent costs	0.095	0.095	0.095	0.095	100.0 %	100.0 %	100.0 %
221017 Membership dues and Subscription fees.	0.033	0.033	0.033	0.033	100.0 %	100.0 %	100.0 %
222001 Information and Communication Technology Services.	0.606	2.306	2.306	2.306	380.3 %	380.3 %	100.0 %
222002 Postage and Courier	0.002	0.002	0.002	0.002	100.0 %	100.0 %	100.0 %
223001 Property Management Expenses	0.081	0.081	0.081	0.081	100.0 %	100.0 %	100.0 %
223004 Guard and Security services	0.123	0.123	0.123	0.123	100.0 %	100.0 %	100.0 %
223005 Electricity	0.731	0.931	0.931	0.931	127.4 %	127.4 %	100.0 %
223006 Water	0.262	0.262	0.262	0.262	100.0 %	100.0 %	100.0 %
224002 Veterinary supplies and services	0.469	0.469	0.469	0.463	100.0 %	98.8 %	98.8 %
224003 Agricultural Supplies and Services	3.083	7.583	7.583	7.553	246.0 %	245.0 %	99.6 %
224004 Beddings, Clothing, Footwear and related Services	0.012	0.012	0.012	0.012	100.0 %	100.0 %	100.0 %

### **VOTE:** 142 National Agricultural Research Organization (NARO)

Billion Uganda Shillings	Approved Budget	Revised Budget	Released by End Q4	Spent by End Q4	% GoU Budget Released	% GoU Budget Spent	% GoU Releases Spent
224005 Laboratory supplies and services	0.841	36.573	36.573	36.565	4,349.1 %	4,348.2 %	100.0 %
224010 Protective Gear	0.006	0.006	0.006	0.006	100.0 %	100.0 %	100.0 %
224011 Research Expenses	17.923	24.230	24.230	24.217	135.2 %	135.1 %	99.9 %
225101 Consultancy Services	0.095	1.395	1.395	1.395	1,465.9 %	1,465.9 %	100.0 %
225201 Consultancy Services-Capital	0.031	0.031	0.031	0.031	100.0 %	100.0 %	100.0 %
225203 Appraisal and Feasibility Studies for Capital Works	0.250	0.250	0.250	0.250	100.0 %	100.0 %	100.0 %
225204 Monitoring and Supervision of capital work	0.209	0.209	0.209	0.209	100.0 %	100.0 %	100.0 %
226001 Insurances	0.691	1.691	1.691	1.691	244.8 %	244.8 %	100.0 %
226002 Licenses	0.050	0.050	0.050	0.050	100.0 %	100.0 %	100.0 %
227001 Travel inland	0.531	0.531	0.531	0.531	100.0 %	100.0 %	100.0 %
227004 Fuel, Lubricants and Oils	1.031	1.331	1.331	1.331	129.1 %	129.1 %	100.0 %
228001 Maintenance-Buildings and Structures	0.672	14.130	14.130	14.130	2,102.3 %	2,102.3 %	100.0 %
228002 Maintenance-Transport Equipment	0.320	4.422	4.422	4.420	1,381.8 %	1,381.2 %	100.0 %
228003 Maintenance-Machinery & Equipment Other than Transport Equipment	0.349	0.349	0.349	0.347	100.0 %	99.3 %	99.3 %
228004 Maintenance-Other Fixed Assets	0.034	0.134	0.134	0.134	398.2 %	398.2 %	100.0 %
262201 Contributions to International Organisations- Capital	1.450	1.450	1.450	1.450	100.0 %	100.0 %	100.0 %
282107 Contributions to Non-Government institutions	0.050	0.050	0.050	0.050	100.0 %	100.0 %	100.0 %
312121 Non-Residential Buildings - Acquisition	2.689	2.689	2.689	2.689	100.0 %	100.0 %	100.0 %
312221 Light ICT hardware - Acquisition	0.035	0.035	0.035	0.035	100.0 %	100.0 %	100.0 %
312233 Medical, Laboratory and Research & appliances - Acquisition	3.970	3.970	3.970	3.970	100.0 %	100.0 %	100.0 %
312235 Furniture and Fittings - Acquisition	0.528	0.528	0.528	0.528	100.0 %	100.0 %	100.0 %
313121 Non-Residential Buildings - Improvement	6.087	6.087	6.087	6.087	100.0 %	100.0 %	100.0 %
313139 Other Structures - Improvement	0.060	0.060	0.060	0.060	100.0 %	100.0 %	100.0 %
313149 Other Land Improvements - Improvement	0.311	0.311	0.311	0.311	100.0 %	100.0 %	100.0 %
352882 Utility Arrears Budgeting	0.087	0.087	0.087	0.087	100.0 %	100.0 %	100.0 %
Total for the Vote	106.001	176.001	176.001	175.938	166.0 %	166.0 %	100.0 %

# VOTE: 142 National Agricultural Research Organization (NARO)

Table V3.3: Releases and Expenditure by Department and Project\*

Billion Uganda Shillings	Approved Budget	Revised Budget	Released by End Q4	Spent by End Q4	% GoU Budget Released	% GoU Budget Spent	% GoU Releases Spent
Programme:01 Agro-Industrialization	105.902	175.902	175.902	175.839	166.10 %	166.04 %	99.96 %
Sub SubProgramme:01 Agricultural Research	105.902	175.902	175.902	175.839	166.10 %	166.04 %	100.0 %
Departments							
001 Abi Zonal Agriculture Research Institute(ZARDI)	0.100	0.100	0.100	0.100	100.0 %	100.0 %	100.0 %
002 Buginyaya Zonal Agriculture Research Institute(ZARDI)	0.250	0.250	0.250	0.250	100.0 %	100.0 %	100.0 %
003 Bulindi Zonal Agriculture Research Institute(ZARDI)	0.100	0.100	0.100	0.100	100.0 %	100.0 %	100.0 %
004 Kachwekano Zonal Agriculture Research Institute(ZARDI)	0.100	0.100	0.100	0.100	100.0 %	100.0 %	100.0 %
005 Mbarara Zonal Agriculture Research Institute(ZARDI)	0.100	0.100	0.100	0.100	100.0 %	100.0 %	100.0 %
006 Nabuin Zonal Agriculture Research Institute(ZARDI)	0.100	0.100	0.100	0.100	100.0 %	100.0 %	100.0 %
007 NARO-SECRETARIATE	68.678	138.678	138.678	138.657	201.9 %	201.9 %	100.0 %
008 National Agricultural Research Laboratories	0.250	0.250	0.250	0.250	100.0 %	100.0 %	100.0 %
009 National Coffee Research Institute	0.175	0.175	0.175	0.175	100.0 %	100.0 %	100.0 %
010 National Crops Resources Research Institute	0.175	0.175	0.175	0.175	100.0 %	100.0 %	100.0 %
011 National Fisheries Resources Research Institute	0.175	0.175	0.175	0.175	100.0 %	100.0 %	100.0 %
012 National Forestry Resources Research Institute	0.100	0.100	0.100	0.100	100.0 %	100.0 %	100.0 %
013 Mukono Zonal Agriculture Research Institute (ZARDI)	0.175	0.175	0.175	0.175	100.0 %	100.0 %	100.0 %
015 National Semi Arid Resources Research Institute (NaSARRI)	0.100	0.100	0.100	0.099	100.0 %	99.0 %	99.0 %
016 Ngetta ZARDI	0.100	0.100	0.100	0.100	100.0 %	100.0 %	100.0 %
017 Rwebitaba ZARDI	0.175	0.175	0.175	0.175	100.0 %	100.0 %	100.0 %
Development Projects					<u>'</u>		
1560 Relocation and Operationalisation of the National Livestock Resources Research Institute(NALIRRI)	5.000	5.000	5.000	4.996	100.0 %	99.9 %	99.9 %
1619 Retooling of National Agricultural Research Organization	30.050	30.050	30.050	30.013	100.0 %	99.9 %	99.9 %

### **VOTE:** 142 National Agricultural Research Organization (NARO)

Billion Uganda Shillings	Approved Budget	Revised Budget	Released by End Q4	Spent by End Q4	% GoU Budget Released	% GoU Budget Spent	% GoU Releases Spent
Programme:17 Regional Balanced Development	0.099	0.099	0.099	0.099	100.00 %	100.00 %	100.00 %
Sub SubProgramme:01 Agricultural Research	105.902	175.902	175.902	175.839	166.10 %	166.04 %	100.0 %
Departments							
002 Buginyaya Zonal Agriculture Research Institute(ZARDI)	0.099	0.099	0.099	0.099	100.0 %	100.0 %	100.0 %
Development Projects							
N/A							
Total for the Vote	106.001	176.001	176.001	175.938	166.0 %	166.0 %	100.0 %

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Table V3.4: External Financing Releases and Expenditure by Sub-SubProgramme and Project

# VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

#### **Quarter 4: Outputs and Expenditure in the Quarter**

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
Programme:01 Agro-Industrialization		
SubProgramme:01 Institutional Strengthening an	d Coordination	
Sub SubProgramme:01 Agricultural Research		
Departments		
Department:007 NARO-SECRETARIATE		
Budget Output:000001 Audit and Risk Managemo	ent	
PIAP Output: 01910101 Audit and Risk Managen	ent coordinated	
Programme Intervention: 019101 Strengthen gove	ernment institutions for effective and efficient service delivery.	
6 Audit reports including asset, value for money,compliance,risk human resource and systems prepared	Towards enhancing accountability, six (06) audit reports including value for money, compliance, human resource and asset were prepared and submitted to relevant authorities	Performance on target
Expenditures incurred in the Quarter to deliver o	utputs	UShs Thousana
Item		Spent
221003 Staff Training		14,665.000
224011 Research Expenses		17,873.420
227001 Travel inland		17,160.000
	Total For Budget Output	49,698.420
	Wage Recurrent	0.000
	Non Wage Recurrent	49,698.420
	Arrears	0.000

# **VOTE:** 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
PIAP Output: 01040701 Demand driven agriculture tech	hnologies developed	
Programme Intervention: 010407 Strengthen agricultur	al research and technology development	
Appropriate market segments in commodity value chains for the youth participation for gainful employment identified.	Towards boosting youth employment and incomes, five market segments in maize, coffee, and pigeon pea processing engaged 1,100 youth and 716 women across 11 districts. In addition, 18 youth groups were trained in five districts, six groups supported in sorghum production in Soroti and Arapai, and seven trained in yam management in Adjumani and Karenga. Another 283 youth received training in vegetable production and market extension, while 25 youth and women leaders were linked to cooperative financial services.	Performance on target
PIAP Output: 10412026 Leadership and Management c	oordinated	I
Programme Intervention: 010601 Strengthen coordinate quality food and food security	ion of public institutions in design and implementation of p	policies including access to
	No planned output in Q4	
<b>Expenditures incurred in the Quarter to deliver outputs</b>		UShs Thousand
Item		Spen
224011 Research Expenses		18,649.000
	Total For Budget Output	18,649.00
	Wage Recurrent	0.00
	Non Wage Recurrent	18,649.00
	Arrears	0.00
	AIA	0.00
Budget Output:000014 Administrative and Support Ser	vices	
PIAP Output: 10412026 Leadership and Management c	oordinated	
Programme Intervention: 010601 Strengthen coordinate quality food and food security	ion of public institutions in design and implementation of p	policies including access to
816 staff renumerated for improved service delivery 1 final account developed and approved 1 quarterly monitoring and evaluation reports compiled to support management, 1 final annual work plan and budget developed FY 2025-2026 developed.	Towards creating a research enabling environment, 816 staff were renumerated. Additionally, one (01) Quarter four monitoring and evaluation report was compiled to support management. One (01) final annual work plan and budget for FY 2025/26 was developed to provide guidance on implementation of NARO mandate	Performance on target

### VOTE: 142 National Agricultural Research Organization (NARO)

**Ouarter 4** 

0 / / W 11 0 /	Actual Outputs Achieved in	Reasons for Variation in
Outputs Planned in Quarter	Quarter	performance

PIAP Output: 10412026 Leadership and Management coordinated

Programme Intervention: 010601 Strengthen coordination of public institutions in design and implementation of policies including access to quality food and food security

Four Agricultural Research Compliance Committees-Institutional Animal Care and use Committee (IACUC), Institutional Biosafety committee (IBC), and Access Benefit and Sharing Committee (ABS) supported to guide research Four Agricultural Research Compliance Committees-Institutional Animal Care and use Committee (IACUC), Institutional Biosafety committee (IBC), and Access Benefit and Sharing Committee (ABS) were supported to guide research. One protocol for pharmacovigilance of the NAROVAC® antitick vaccine was reviewed and approved. Two confined field trial protocols on transgenic cassava for whitefly resistance and cisgenic bananas for BXW control were approved.

A study on adjuvant antitick antigen formulations was also approved.

An MTA for 300kg of coffee green beans was processed to boost coffee productivity. The NARO Research Ethics Committee was formed, and UNCST accreditation initiated. The NARO Research Standards Manual was developed.

Performance on target

<b>Expenditures incurred in the Quarter to deliver out</b>	tputs	UShs Thousand
Item		Spent
211102 Contract Staff Salaries		11,097,064.273
211104 Employee Gratuity		2,716,381.830
212101 Social Security Contributions		1,154,516.000
224011 Research Expenses		49,213.589
	Total For Budget Output	15,017,175.692
	Wage Recurrent	11,097,064.273
	Non Wage Recurrent	3,920,111.419
	Arrears	0.000
	AIA	0.000
Budget Output:000089 Climate Change Mitigation		

# VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

0.000

0.000

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
PIAP Output: 01040701 Demand driven agriculture tech	nnologies developed	
Programme Intervention: 010407 Strengthen agricultur	al research and technology development	
Emerging climate change issues (anti-microbial resistance, drought tolerance, tolerance and resistance to pests and diseases; parasitoids and AI) integrated into research interventions across 4 Public Research institutes in 57 research streams.	Towards strengthening climate change mitigation and adaptation in agriculture, NARO deployed five Remote Telemetry Units (RTUs) across key Agro-Ecological Zones for real-time weather data access, and developed two tools—the Seasonal Characteristics Tool (SCT) and CRiSTAL—to provide localized, actionable climate advisories that support timely agronomic decisions, enhance resilience, and sustain farmer productivity and livelihoods. Additionally, 52 climate smart agricultural technologies (practice demonstrations on farm and field were conducted in eight (08) PARIs	Performance on target
PIAP Output: 10412026 Leadership and Management co	oordinated	
Programme Intervention: 010601 Strengthen coordinati quality food and food security	on of public institutions in design and implementation of p	policies including access to
	No planned output for Q4	
Expenditures incurred in the Quarter to deliver outputs		UShs Thousa
Item		Spe
224011 Research Expenses		27,000.0
	Total For Budget Output	27,000.0
	Wage Recurrent	0.0
	Non Wage Recurrent	27,000.0

Arrears

AIA

**Budget Output:000090 Climate Change Adaptation** 

# **VOTE:** 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
PIAP Output: 10412026 Leadership and Management	coordinated	
Programme Intervention: 010601 Strengthen coordina quality food and food security	tion of public institutions in design and implementation of p	olicies including access to
One state-of-art ago-meteorological research facility established at NARL-Kawanda to support generation of climate adaptation data for farm use.	NARO continued to operationalize the state of art agrometeorological research facility equipped with functional solar radiation, temperature, humidity, wind among other variables at National agricultural research laboratories Kawanda. These are instrumental in timely rainfall data, temperature and relative humidity critical for scientists and farmers for climate mitigation and adaptation data to inform planting, seasons, harvesting, disease surveillance among others	Performance on target
<b>Expenditures incurred in the Quarter to deliver output</b>	s	UShs Thousand
Item		Spent
224011 Research Expenses		42,081.856
	Total For Budget Output	42,081.856
	Wage Recurrent	0.000
	Non Wage Recurrent	42,081.856
	Arrears	0.000
	AIA	0.000
	Total For Department	15,154,604.968
	Wage Recurrent	11,097,064.273
	Non Wage Recurrent	4,057,540.695
	Arrears	0.000
	AIA	0.000
Develoment Projects		
N/A		
SubProgramme:02 Agricultural Production and Produ	ectivity	
Sub SubProgramme:01 Agricultural Research		
Departments		
Department:001 Abi Zonal Agriculture Research Instit	cute(ZARDI)	
Budget Output:010010 Technology Generation		

# **VOTE:** 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
PIAP Output: 01040705 Demand driven agriculture te	chnologies developed	
Programme Intervention: 010407 Strengthen agricultu	ral research and technology development	
One (01) Market oriented product of fish developed for improved production and market access developed	Towards enhancing production and market access, three (03) fish products (fish oil, powder, nangnang) were promoted across the zone through trainings in the districts of Koboko and Arua. Additionally, the use of black soldier fry was promoted for use in feeding for fish	Performance on target
PIAP Output: 01040706 Research-extension farmer lin	kages developed and strengthened	ı
Programme Intervention: 010407 Strengthen agricultu	ral research and technology development	
4 new demonstrations of apiary established in 2 districts. I routine maintenances	Towards enhancing production and productivity in apiary, four (04) existing apiaries in 2 districts were maintained. Towards enhancing a research enabling environment, all institute staff were renumerated, machinery, equipment mother gardens for strategic commodities were maintained	Performance on target
Expenditures incurred in the Quarter to deliver output	ts	UShs Thousan
Item		Spen
211106 Allowances (Incl. Casuals, Temporary, sitting allo	wances)	2,800.00
224011 Research Expenses		4,270.00
	Total For Budget Output	7,070.00
	Wage Recurrent	0.00
	Non Wage Recurrent	7,070.00
	Arrears	0.00
	AIA	0.00
Budget Output:010011 Technology Promotion		
PIAP Output: 01040705 Demand driven agriculture te	chnologies developed	
Programme Intervention: 010407 Strengthen agricultu	ral research and technology development	
PIAP Output: 01040706 Research-extension farmer lin	kages developed and strengthened	
Programme Intervention: 010407 Strengthen agricultu	ral research and technology development	
One Improved technology and innovation for sorghum adopted for improved production and productivity and nutrition security within the zone	Towards improving sorghum production and productivity, two (02)Sorghum varieties (NAROsorg2, Seso3) were promoted and adopted by farmers within the zone.	Performance on target
	No Planned Output	

# **VOTE:** 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
<b>Expenditures incurred in the Quarter to del</b>	iver outputs	UShs Thousand
Item		Spent
221001 Advertising and Public Relations		980.000
221008 Information and Communication Tech	nology Supplies.	1,588.000
221011 Printing, Stationery, Photocopying and	Binding	1,268.532
223004 Guard and Security services		1,400.000
224011 Research Expenses		12,836.417
227004 Fuel, Lubricants and Oils		3,120.000
228002 Maintenance-Transport Equipment		2,156.000
	Total For Budget Output	23,348.949
	Wage Recurrent	0.000
	Non Wage Recurrent	23,348.949
	Arrears	0.000
	AIA	0.000
	Total For Department	30,418.949
	Wage Recurrent	0.000
	Non Wage Recurrent	30,418.949
	Arrears	0.000
	AIA	0.000
Department:002 Buginyaya Zonal Agricultu	re Research Institute(ZARDI)	
Budget Output:010010 Technology Generat	ion	_

### VOTE: 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
PIAP Output: 01040705 Demand driven agriculture tech	nologies developed	
Programme Intervention: 010407 Strengthen agricultura	al research and technology development	
One Community seed banks, one community tree nurseries, one district tree nurseries established, one diversity fairs conducted to support smallholder men and women farmers in the diversification of their crop and fruit tree production.	Towards promoting food security and climate resistance, Two (02) community seed banks (cassava NAROCASS1, ground nuts and improved pasture species) were maintained for seed production in Amuria and Buyende districts. Two (02) community tree nurseries were established in Buyende and Kamuli districts with 68,000 assorted tree seedlings availed to farmers. Towards enhancing agro forestry production of fruit and woodlot tree seedlings, districts of Amuria, Kaberamaido, Katakwi, Buyende and Kamuli were supported in the establishment of a tree nursery to provide seedlings and support sustainable practices. A seed diversity fair to facilitate exchange of diverse seeds, knowledge, and practices among farmers was held in the Buyende, Kamuli, and Amuria districts comprising of 690 farmers (415 males and 275 females). 469 farmers (264 men and 205 women) received training in improved pasture and dry season management, seed bank and tree nursery management practices and pest management.	

### VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Outputs Planned in Quarter

Actual Outputs Achieved in Quarter

Reasons for Variation in performance

#### PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

5 technologies developed, 30,000 assorted seedlings; 20 MT of seed; 4,000 fingerlings produced & availed to farmers, 5 local seed businesses for 2 commodities supported & 3 adaptive trials & demos established

Towards enhancing production and productivity, two (02) non-QPM maize hybrids, CEL8 and CEL9, were developed and submitted to National variety release committee. National performance trials for wheat and barley were established in Kween, Bukwo and on station at Bulegeni, Buginyanya, Rwebitaba, and Kalengyere. 1.5 tons of improved maize seed (Longe 5D), 1.3 tons of beans (NAROBean1), and 1,500 KR coffee seedlings were produced and distributed to the Busoga Kingdom, directly benefiting 118 farmers in Busoga sub-region. 11,000 fish fingerlings (10,000 Nile tilapia and 1,000 Mirror carp) were produced and availed to farmers at the fish fry centre Mbale and Bulegeni Satellite stations. Pasture demonstration trials of (Lablab purpureus, Centrosema spp, Glycine spp, Pakchong and sugar napier) were established in Tororo district Five (05) local seed businesses within cooperatives were supported in Busoga and Bukedea to meet the needs of local farmers dealing in maize and rice.

Performance was on target

#### PIAP Output: 0103020112 Agricultural Research platforms established

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

5 technologies (agronomic, disease management, biofortified packages, industrial products for crop yield improvement and livestock health) developed, 52500 assorted seedlings; 5 MT of seed; 2500 fingerlings produced & availed to farmers, 5 local seed businesses for 2 commodities supported & 5 adaptive trials & demos established.

Towards enhancing agricultural production and productivity, Two (02) non-QPM maize hybrids (CEL 8 and CEL 9) were developed and submitted to National variety release committee. 11,000 fish fingerlings were produced (10,000 Nile tilapia and 1000 Mirror carp) and delivered to farmers to at the fish fry centre at Mbale and Bulegeni Satellite stations. Pasture demonstration trails for (Lablab purpureus, Centrosema spp, Glycine spp, Pakchong and sugar napier) were established in Tororo district. National performance trials for wheat and barley were established in Kween, Bukwo and on station at Bulegeni, Buginyanya, Rwebitaba, and Kalengyere. Five (05) local seed businesses within farmer groups and cooperatives were supported in Busoga and Bukedea to meet the needs of local farmers dealing in maize and rice.

Performance was on target

# **VOTE:** 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
<b>Expenditures incurred in the Quarter to deliver outputs</b>		UShs Thousand
Item		Spen
211106 Allowances (Incl. Casuals, Temporary, sitting allowa	ances)	2,939.800
221011 Printing, Stationery, Photocopying and Binding		1,579.500
224011 Research Expenses		16,712.85
228002 Maintenance-Transport Equipment		3,853.742
	Total For Budget Output	25,085.89
	Wage Recurrent	0.00
	Non Wage Recurrent	25,085.89
	Arrears	0.000
	AIA	0.00
<b>Budget Output:010011 Technology Promotion</b>		
PIAP Output: 01040705 Demand driven agriculture tech	nnologies developed	
Programme Intervention: 010407 Strengthen agricultura	al research and technology development	
	No planned output for Q4	
PIAP Output: 01040706 Research-extension farmer links	ages developed and strengthened	
Programme Intervention: 010407 Strengthen agricultura	al research and technology development	
Research enabling environment strengthened through four quarterly routine maintenance of facilities, equipment, machinery, and support staff to facilitate promotion and demonstration 4 key technologies for improved productivity	Towards creating a conducive environment for agricultural research, all institute staff were renumerated, 10 equipment and machinery were maintained for operationalisation, 16 fish ponds were maintained, one (01) fish fry center and Five (05) staff housing units were rehabilitated	Performance was on track
	No Planned Output for Q4	
PIAP Output: 0103020112 Agricultural Research platfor	rms established	
Programme Intervention: 010407 Strengthen agricultura	al research and technology development	
Research enabling environment strengthened through one quarterly routine maintenance of facilities, equipment, machinery, and support staff	Towards enhancement of productivity, a research enabling environment was strengthened by maintaining sixteen (16) fish ponds through bush clearing at the fish fry center in Mbale. One (01) fish fry center was rehabilitated. Five (05) staff housing units were maintained and four (04) institute vehicles repaired and serviced. Contract staff were remunerated.	Performance was on target

# VOTE: 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
PIAP Output: 0103020112 Agricultural Research platfo	rms established	
Programme Intervention: 010407 Strengthen agricultur	al research and technology development	
One (01) Agricultural research technology generation and dissemination platform developed for improved generation and dissemination of technologies to enhance production	Towards enhancement of production and productivity, one (01) platform on good agronomic practices for rice production and post-harvest handling was established for farmers around Doho irrigation scheme and Butaleja district supported by JICA- Echo- Pride project. Rice Legume Integration trials were set up at three (03) sites in Kween, Butaleja and Tororo Districts.	Performance was on target
<b>Expenditures incurred in the Quarter to deliver outputs</b>	<b>.</b>	UShs Thousand
Item		Spen
211106 Allowances (Incl. Casuals, Temporary, sitting allow	vances)	7,049.39
221001 Advertising and Public Relations		2,200.000
221008 Information and Communication Technology Supplies.		4,680.000
221011 Printing, Stationery, Photocopying and Binding		1,973.000
223004 Guard and Security services		4,514.114
224011 Research Expenses		18,559.900
227004 Fuel, Lubricants and Oils		5,633.600
228001 Maintenance-Buildings and Structures		11,853.10
228002 Maintenance-Transport Equipment		5,108.91
	Total For Budget Output	61,572.02
	Wage Recurrent	0.00
	Non Wage Recurrent	61,572.02
	Arrears	0.000
	AIA	0.00
	Total For Department	86,657.92
	Wage Recurrent	0.000
	Non Wage Recurrent	86,657.924
	Arrears	0.00
	AIA	0.00
Department:003 Bulindi Zonal Agriculture Research In	stitute(ZARDI)	
Budget Output:010011 Technology Promotion		

### **VOTE:** 142 National Agricultural Research Organization (NARO)

Quarter 4

		Actual Outputs Achieved in	Reasons for Variation in
Outputs Planned in Quarter	Quarter	performance	

#### PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

One Climate smart agricultural technology/practic demonstrated on-station Research enabling environment maintained through 1 quarterly routine maintenance of research facilities, machinery, equipment, utilities and stake holder engagement.

Towards enhancing agricultural production and productivity, three (03) drought-tolerant crop varieties (maize Longe 5, millet NAROMILL 3, and soybean MAKSOY) were demonstrated on two (02) acres onstation. Ten (10) drought-tolerant pasture varieties (Pakchong 1, NARONAP 1, 2, and 3, Brachiaria Molato, Chloris gayana, Lab lab, Mucuna puriens, Panicum Maximum, and Centrocema pubescence) were demonstrated on 05 hectares on-station. To ensure continuous support and smooth operations of research activities, one (01) nursery bed, three (03) office blocks, and a compound were maintained. One tractor and five (05) vehicles were maintained. 20 contracted workers were paid a salary.

Performance was on target

Expenditures incurred in the Quarter to deliver outputs		UShs Thousand
Item		Spent
221001 Advertising and Public Relations		357.053
221008 Information and Communication Technology Supp	lies.	1,232.000
224011 Research Expenses		12,432.000
227004 Fuel, Lubricants and Oils		2,016.000
228001 Maintenance-Buildings and Structures		560.000
228002 Maintenance-Transport Equipment		6,859.417
228003 Maintenance-Machinery & Equipment Other than	228003 Maintenance-Machinery & Equipment Other than Transport Equipment	
	Total For Budget Output	27,796.470
	Wage Recurrent	0.000
	Non Wage Recurrent	27,796.470
	Arrears	0.000
	AIA	0.000
	Total For Department	27,796.470
	Wage Recurrent	0.000
	Non Wage Recurrent	27,796.470
	Arrears	0.000

### VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
	AIA	0.000

#### Department:004 Kachwekano Zonal Agriculture Research Institute(ZARDI)

#### **Budget Output:010011 Technology Promotion**

#### PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

1 protocol for extraction of potato starch developed to support industrialisation efficiency of 1 Control option for management of potato cyst nematodes identified. 30 MT of potato seed produced for farmer use to address the potato seed gap for improved production and productivity.

Expenditures incurred in the Quarter to deliver outputs

Towards development of 1 protocol for extraction of potato starch, four (04) potato varieties were realized with a high dry matter content necessary for extraction of starch. 15,000 late blight resistance potato plants (Kinigi, NAROPOT4, NAROPOT1 and Rutuku) were produced.70,000 minitubers were produced to facilitate quicker and more reliable multiplication of seed potatoes. Eleven acres were planted with both pre-basic and basic seed on the station, and approximately Towards development of Control option for management of potato cyst nematodes potato germplasm was assembled for profiling and characterization. In order to addressing the potato seed gap ,50 tons of potato seed were produced and availed to farmers in different Agro-ecological zones.

There were delays in procurements of reagents used in testing

UShs Thousand

Expenditures incurred in the Quarter to denver outputs		USIIS THOUSANA
Item		Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allowar	nces)	7,488.000
221008 Information and Communication Technology Supplie	s.	7,824.000
221011 Printing, Stationery, Photocopying and Binding		6,000.000
224011 Research Expenses		11,375.600
227001 Travel inland		3,431.000
227004 Fuel, Lubricants and Oils		4,660.414
228002 Maintenance-Transport Equipment		7,603.000
228003 Maintenance-Machinery & Equipment Other than Tra	ansport Equipment	7,470.000
	Total For Budget Output	55,852.014
	Wage Recurrent	0.000
:	Non Wage Recurrent	55,852.014
	Arrears	0.000
•	AIA	0.000

### VOTE: 142 National Agricultural Research Organization (NARO)

**Ouarter 4** 

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
	Total For Department	55,852.014
	Wage Recurrent	0.000
	Non Wage Recurrent	55,852.014
	Arrears	0.000
	AIA	0.000

#### Department: 005 Mbarara Zonal Agriculture Research Institute(ZARDI)

#### **Budget Output:010011 Technology Promotion**

#### PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

17500 coffee seedlings produced and vailed to farmers, 1 regional feed multistake holder innovation Platform, 7 quality Jersey calves, 1 value added fish product developed

Towards enhancing coffee production and productivity, 40,000 coffee seedlings and agronomic practices were produced and promoted to stakeholders through 20 radio talk shows targeting 500 farmers (400 males, 100 females) in districts of Kiruhura, Sheema, Mbarara, Ntungamo; 1 company that manufactures animal feed added to the Innovation platform, to train members of the feed MSIP in Black Soldier fly production as an alternative protein source; 4 in-calf Jersey cows maintained for production of Jersey calves; 2 milk starter culture prototypes (Ghee, Yogurt) successfully packed for assignment of the UNBS and quality mark and ISO standard. One (1) fish sausage prototype developed and disseminated to 40 fish farmers (15 males and 25 females) from districts of Ibanda, Sheema, Mbarara, Rubirizi, Bushenyi, Ntungamo. 3,000 Tilapia esculentus fry produced and 2000 distributed to 4 farmers (all males) in the districts of Ibanda and Mbarara

Performance on target

Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
Item	Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)	5,164.000
221001 Advertising and Public Relations	6,396.000
224011 Research Expenses	18,062.400
227004 Fuel, Lubricants and Oils	2,499.700
228001 Maintenance-Buildings and Structures	2,240.000
228002 Maintenance-Transport Equipment	7,033.110
228003 Maintenance-Machinery & Equipment Other than Transport Equipment	8,807.000

### **VOTE:** 142 National Agricultural Research Organization (NARO)

Quarter 4

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
	Total For Budget Output	50,202.210
	Wage Recurrent	0.000
	Non Wage Recurrent	50,202.210
	Arrears	0.000
	AIA	0.000
	Total For Department	50,202.210
	Wage Recurrent	0.000
	Non Wage Recurrent	50,202.210
	Arrears	0.000
	AIA	0.000

#### Department: 006 Nabuin Zonal Agriculture Research Institute(ZARDI)

**Budget Output:010011 Technology Promotion** 

#### PIAP Output: 01040705 Demand driven agriculture technologies developed

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

Five (5) agricultural research technologies for, livestock, apiary, vegetables, soils, forestry, animal feeds and value addition for increased production and productivity generated and promoted across the zone.

2 livestock technologies (goats and cows) were promoted and 31 improved cross breeds of Kalahari goats delivered to Napak and Nakapiripirit. Towards enhancing productivity in cattle, 50 cows were artificially inseminated with Tyrolese gray semen. One protocol for processing tincture of propolis was developed. 6 demonstrations of Robusta coffee, cactus(Prickly pear), maize(MM3), sorghum(NAROsorg2), Tomato(Rio Grande), Greengram NAROgram2) established on station each on 0.5 acres. 2 acres each of Bracharia mulato 1 and Chloris gayana were established, 5 acres each of Bracharia brizantha and Super napier maintained as a source of germplasm distributed to 200 males and 100 females in Nakapiripirit and Napak. Tree species(Melia volkensii-Uganda12,000,Albizia coriaria- 1,000, Calliandra calothyrsus- 6,000, Eucalyptus clone-250, Citrus sinensis-500, Citus tangeria-150, Termarindus indica -100, Prunus africana-150, Hass avocado50 and Guava500) were established as woodlots and orchards onstation.

Performance was on target

# **VOTE:** 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
PIAP Output: 01040706 Research-extension farmer links	ages developed and strengthened	
Programme Intervention: 010407 Strengthen agricultura	al research and technology development	
One (01) Agricultural research products and services promoted across the zone to improve production, nutrition, food security and support agro based industries	Towards enhancing production and productivity, One (1) protocol for processing tincture of propolis was developed. Apiary products (honey, propolis and venom) were promoted in the zone through on-farm demonstrations, exhibitions and trade shows to improve food security. 41 intern students (20 males and 21 females) from Busitema University, Kumi University and Uganda Martyrs University were trained in production of venom, harvesting using the honey harvesting kit, and post-harvest handling activities.	Performance was on target.
	No planned output for Q4	
<b>Expenditures incurred in the Quarter to deliver outputs</b>		UShs Thousand
Item		Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allowa	ances)	5,600.000
221001 Advertising and Public Relations		1,040.000
221011 Printing, Stationery, Photocopying and Binding		3,070.000
224011 Research Expenses		17,126.704
227004 Fuel, Lubricants and Oils		7,800.000
228001 Maintenance-Buildings and Structures		3,120.000
228002 Maintenance-Transport Equipment		9,230.199
228003 Maintenance-Machinery & Equipment Other than T	ransport Equipment	2,825.000
	Total For Budget Output	49,811.903
	Wage Recurrent	0.000
	Non Wage Recurrent	49,811.903
	Arrears	0.000
	AIA	0.000
	Total For Department	49,811.903
	Wage Recurrent	0.000
	Non Wage Recurrent	49,811.903
	Arrears	0.000
	AIA	0.000

# **VOTE:** 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
Department:007 NARO-SECRETARIATE		
Budget Output:010008 Capacity Strengthening		
PIAP Output: 01040705 Demand driven agriculture tec	hnologies developed	
Programme Intervention: 010407 Strengthen agricultur	al research and technology development	
Research enabling environment maintained through 1 routine maintenance of NARO facilities, machinery, vessels, utilities and security maintained and support to staff.	Towards accelerating the generation and uptake of innovative, context-specific agricultural technologies, all staff were renumerated, facilities including machinery and 10 vessels were maintained.	Performance on target
Expenditures incurred in the Quarter to deliver outputs		UShs Thousand
Item		Spen
211106 Allowances (Incl. Casuals, Temporary, sitting allow	vances)	77,297.578
212103 Incapacity benefits (Employees)		180.000
224011 Research Expenses		344,781.236
228001 Maintenance-Buildings and Structures		10,640.000
	Total For Budget Output	432,898.814
	Wage Recurrent	0.000
	Non Wage Recurrent	432,898.814
	Arrears	0.000
	AIA	0.000
Budget Output:010010 Technology Generation		
PIAP Output: 01040705 Demand driven agriculture tec	hnologies developed	
Programme Intervention: 010407 Strengthen agricultur	al research and technology development	
One research monitoring reports generated to inform management One annual work plan and budget developed One final accounts report generated and submitted One bankable proposals developed to attract research funding	Towards enhancing performance, one (01) research monitoring report was generated. Additionally, the FY 2025/26 annual work plan and budget was developed. One final accounts report for 2024/25 was generated and submitted. One bankable proposal on bio-diversity conservation was developed to attract research funding	Performance on target

### VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
PIAP Output: 01040705 Demand driven agriculture tech	nnologies developed	
Programme Intervention: 010407 Strengthen agricultura	al research and technology development	
Research Compliances under (IACUC, IBC) undertaken for improved quality of research products across 16 Public research Institutes.	Four research committees were supported to achieve the following; One protocol for pharmacovigilance of the NAROVAC® antitick vaccine was reviewed and approved. Two confined field trial protocols—on transgenic cassava for whitefly resistance and cisgenic bananas for BXW control—were approved. A study on adjuvant antitick antigen formulations was also approved. An MTA for 300kg of coffee green beans was processed to boost coffee productivity. The NARO Research Ethics Committee was formed, and UNCST accreditation initiated. The NARO Research Standards Manual was developed.	Performance on target
PIAP Output: 01040706 Research-extension farmer link		
Programme Intervention: 010407 Strengthen agricultura	al research and technology development	
one research monitoring reports generated to inform management one bankable proposals developed to attract research funding	Towards enhancing performance, one (01) research monitoring report was generated. One bankable proposal on bio-diversity conservation was developed to attract research funding	
<b>Expenditures incurred in the Quarter to deliver outputs</b>		UShs Thousan
Item		Sper
211106 Allowances (Incl. Casuals, Temporary, sitting allowa	ances)	138,324.60
221009 Welfare and Entertainment		53,799.00
221011 Printing, Stationery, Photocopying and Binding		5,634.16
221016 Systems Recurrent costs		17 800 00

#### 221016 Systems Recurrent costs 17,800.000 222002 Postage and Courier 1,629.391 223001 Property Management Expenses 28,947.286 223004 Guard and Security services 7,472.000 223005 Electricity 221,747.459 223006 Water 110,538.043 224002 Veterinary supplies and services 356,455.001 478,569.550 224003 Agricultural Supplies and Services 224004 Beddings, Clothing, Footwear and related Services 12,000.000 224011 Research Expenses 1,298,411.590

### **VOTE:** 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
<b>Expenditures incurred in the Quarter to deliver outputs</b>		UShs Thousand
Item		Spent
226001 Insurances		690,608.000
227001 Travel inland		31,162.800
227004 Fuel, Lubricants and Oils		24,553.900
228002 Maintenance-Transport Equipment		3,485.200
228003 Maintenance-Machinery & Equipment Other than T	ransport Equipment	4,200.000
228004 Maintenance-Other Fixed Assets		2,460.000
	Total For Budget Output	3,487,797.988
	Wage Recurrent	0.000
	Non Wage Recurrent	3,487,797.988
	Arrears	0.000
	AIA	0.000
<b>Budget Output:010011 Technology Promotion</b>		
PIAP Output: 01040705 Demand driven agriculture tech	nnologies developed	
Programme Intervention: 010407 Strengthen agricultura	al research and technology development	
4research products promoted across the country. for food, nutrition security, and industry. 5 demonstration kits of improved technologies distributed to 25 high level cultural and religious leaders from 4 regions of the country.	Towards enhancing production and productivity, 4 research products (aflasafe, Agricultural machinery prototypes, nutrient dense varieties, information packages) were promoted to over 2000 stakeholders (1200 male, 800 female) across the country. Additionally, 5 new demonstrations for strategic commodities were established across the country targeting 25 high level cultural and religious leaders from 4 regions of the country.	Performance on target

# VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
PIAP Output: 01040705 Demand driven agriculture technologies developed		
Programme Intervention: 010407 Strengthen agricultu	ral research and technology development	
Aresearch products promoted across the country. for food, nutrition security, and industry. 5 demonstration kits of improved technologies distributed to 75 high level cultural and religious leaders from 4 regions of the country, 500 M of aflatoxin mitigant products produced and delivered, 1 laboratory for aflasafe inoculum production at Nakyesasa equipped, Mycotoxin aflasafe inoculum production laboratory at Nakyesasa recognised towards accreditation, One mycotoxin research and production facility comprehensively insured, One mycotoxin research and production facility equipped with three vehicles, A dedicated power backup acquired, Aflatoxin mitigant commercialization strategy developed, Sustainable production of Two (2) alternative advanced aflatoxin biocontrol management solutions/options generated, One (1) kit for rapid detection of aflatoxin developed. 20 millio anti-tick vaccine doses for cattle availed along the uptake pathway across the country, 1 Anti-Tick Vaccine Facility equipped with three sets of specialized equipment (environmental management control system and commercial vaccine production equipment), A dedicated industrial grade power supply line established for the production of vaccine, Anti-tick Vaccine commercial production facility remodelled to fit regional and international standards for vaccine production for sustainable supply of vaccine across boarders, Anti-tick Vaccine production facility equipped with seven specialize vaccine vehicles to support distribution of 20 million doses of anti-tick vaccine across the country, One Vaccine Information Management system established to generate real-time data for vaccine production, Quality Control and Appropriate vaccination schedule for injectable anti-tick vaccine developed.	on ed ss	

#### **Expenditures incurred in the Quarter to deliver outputs**

UShs Thousand

 Item

# VOTE: 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
Expenditures incurred in the Quarter to deli	ver outputs	UShs Thousand
Item		Spent
221001 Advertising and Public Relations		900,000.001
221003 Staff Training		300,712.082
221011 Printing, Stationery, Photocopying and	Binding	50,000.000
221012 Small Office Equipment		50,000.000
222001 Information and Communication Techn	ology Services.	1,700,000.000
223005 Electricity		200,000.000
224003 Agricultural Supplies and Services		4,500,000.000
224005 Laboratory supplies and services		35,732,392.352
224011 Research Expenses		7,190,863.391
225101 Consultancy Services		1,300,000.000
226001 Insurances		1,000,000.000
227004 Fuel, Lubricants and Oils		300,000.000
228001 Maintenance-Buildings and Structures		13,458,351.301
228002 Maintenance-Transport Equipment		4,104,254.039
228004 Maintenance-Other Fixed Assets		100,000.000
	Total For Budget Output	70,981,910.900
	Wage Recurrent	0.000
	Non Wage Recurrent	70,981,910.900
	Arrears	0.000
	AIA	0.000
	Total For Department	74,902,607.702
	Wage Recurrent	0.000
	Non Wage Recurrent	74,902,607.702
	Arrears	0.000
	AIA	0.000
Department:008 National Agricultural Resea	rch Laboratories	
Budget Output:010010 Technology Generation	on .	

# VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

0.000

0.000

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
PIAP Output: 01040705 Demand driven agriculture tech	nologies developed	
Programme Intervention: 010407 Strengthen agricultura	al research and technology development	
3 prototypes of agri-engineering technologies developed for production and improved food safety and 1 routine maintenances facilities	Towards improving production and productivity, four (04) agro-engineering prototypes (1st prototype of a low horsepower handheld motorized weeder with a newly designed weeding system, 2nd prototype of a motorized low horsepower coffee pulper with improved design of pulping cylinder, 1st prototype commercial bean thresher with interchangeable concaves to cater for different bean seed sizes and a pre-cleaning mechanism and 1st prototype hybrid solar dryer, with solar energy collectors to increase temperature to 600C, good for drying) were developed. Facilities at the institute including labs, demonstrations, machinery and equipment were maintained.	Performance was on target
<b>Expenditures incurred in the Quarter to deliver outputs</b>		UShs Thousand
Item		Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allowa	ances)	3,091.780
224005 Laboratory supplies and services		6,394.000
224011 Research Expenses		24,243.000
227004 Fuel, Lubricants and Oils		6,522.398
228003 Maintenance-Machinery & Equipment Other than T	ransport Equipment	15,279.692
228004 Maintenance-Other Fixed Assets		4,471.860
	Total For Budget Output	60,002.730
	Wage Recurrent	0.000
	Non Wage Recurrent	60,002.730

Arrears

AIA

**Budget Output:010011 Technology promotion** 

# VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

94,912.630

0.000

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
PIAP Output: 01040705 Demand driven agriculture tech	nnologies developed	
Programme Intervention: 010407 Strengthen agricultur	al research and technology development	
Three (03) Improved technologies (Varieties, agro machinery, fertilizer blends and information) promoted for improved production and productivity across the country	Towards improving production and productivity across the country, three (03) Improved technologies (Varieties (04), agro machinery (04), new fertilizer blends for maize, rice, beans, coffee and information) were promoted through 4 exhibitions, and 10 demonstrations reaching a total of 5000 stakeholders (2000 male, 3000 female).	Performance on target
PIAP Output: 01040706 Research-extension farmer link	ages developed and strengthened	
Programme Intervention: 010407 Strengthen agricultur	al research and technology development	
Research enabling environment strengthened through one quarterly routine maintenance of facilities, equipment, machinery, support staff and Three (03) technologies for dissemination multiplied	Towards improving agricultural research, facilities at the institute including labs, demonstrations, machinery and equipment were maintained. Towards enhancing production and productivity, 9500 Kariba weed weevils were released and 750 beetles released on Parthenium weed infestations. Additionally, at least 50 extension and 200 farmers and artisans in Lira, Gulu, Iganga and Rakai were trained in post-harvest storage technologies. one (01) commercial ecofriendly pest management product was generated and promoted.	Performance on target
Expenditures incurred in the Quarter to deliver outputs		UShs Thousand
Item		Spen
221011 Printing, Stationery, Photocopying and Binding		3,041.700
224011 Research Expenses		25,113.200
228002 Maintenance-Transport Equipment		6,755.000
	Total For Budget Output	34,909.900
	Wage Recurrent	0.000
	Non Wage Recurrent	34,909.900
	Arrears	0.000
	AIA	0.000
	Total For Department	94,912.630
	Wage Recurrent	0.000

Non Wage Recurrent

Arrears

# **VOTE:** 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
	AIA	0.000
Department:009 National Coffee Research Institute		
Budget Output:010010 Technology Generation		
PIAP Output: 01040705 Demand driven agriculture te	echnologies developed	
Programme Intervention: 010407 Strengthen agricultu	ural research and technology development	
one coffee and cocoa related technologies development supported for improved production and processing	One value added coffee product (Nutri coffee bread) with caffeine which boosts focus, concentration and mental clarity was developed consisting of antioxidants protecting against cell damage, prevents inflammation and supports gut health. Coffee dietary fiber reduces bloating and constipation. Towards improvement of coffee quality, 3 varieties, (A/3/13, D/11/6 and D/12/12) with high yield and resistant to coffee leaf rust were released and submitted to variety release committee. Towards improvement of cocoa quality, 5 isolates for microbes were profiled for controlled cocoa fermentation for better aroma and flavor.	Performance on target
Expenditures incurred in the Quarter to deliver output	ts	UShs Thousand
Item		Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allo	owances)	3,886.228
223004 Guard and Security services		5,126.228
223005 Electricity		28,000.000
224003 Agricultural Supplies and Services		7,300.000
224011 Research Expenses		10,812.456
227004 Fuel, Lubricants and Oils		12,000.000
228002 Maintenance-Transport Equipment		11,905.000
	Total For Budget Output	79,029.912
	Wage Recurrent	0.000
	Non Wage Recurrent	79,029.912
	Arrears	0.000
	AIA	0.000
Budget Output:010011 Technology Promotion		
PIAP Output: 01040705 Demand driven agriculture te	echnologies developed	
Programme Intervention: 010407 Strengthen agricultu	ural research and technology development	

# **VOTE:** 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
PIAP Output: 01040706 Research-extension farmer links	ages developed and strengthened	
Programme Intervention: 010407 Strengthen agricultura	nl research and technology development	
100,000 clonal coffee cuttings de as livered to various stakeholder for dissemination as foundation seed for private nursery operators and, research enabling environment created through 4 maintenances	Towards improving coffee production, 100,000 coffee seedlings were generated and distributed to 500 farmers within Mukono Zone and 20 private nursery operators. Towards creating a conducive environment for agricultural research, all institute staff were renumerated, 10 equipment and machinery were maintained for operationalisation	Performance on target
	No planned output for Q4	
PIAP Output: 0103020116 Functional public-private par	tnerships established for technology development and pro	motion
Programme Intervention: 010407 Strengthen agricultura	l research and technology development	
Two (02) technology generation and promotional partnership established and strengthened for promotion and research facilities Maintained for improved coffee technologies	Towards enhancing coffee research, one (01) technology generation and one (01) technology promotion partnerships were signed with cultural institutions on the adoption of improved coffee varieties. Towards creating a conducive environment for agricultural research, all institute staff were renumerated, 10 equipment and machinery were maintained for operationalisation	Performance on target
	No Planned Output for Q4	
<b>Expenditures incurred in the Quarter to deliver outputs</b>		UShs Thousand
Item		Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allowa	ances)	2,886.074
212103 Incapacity benefits (Employees)		3,000.000
221001 Advertising and Public Relations		6,000.000
224011 Research Expenses		24,375.842
228001 Maintenance-Buildings and Structures		6,302.200
	Total For Budget Output	42,564.116
	Wage Recurrent	0.000
	Non Wage Recurrent	42,564.116
	Arrears	0.000
	AIA	0.000
	Total For Department	121,594.028
	Wage Recurrent	0.000
	Non Wage Recurrent	121,594.028

#### VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
	Arrears	0.000
	AIA	0.000

#### **Department:010 National Crops Resources Research Institute**

#### **Budget Output:010010 Technology Generation**

#### PIAP Output: 01040705 Demand driven agriculture technologies developed

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

750 seedlings of fruit trees and palm raised and availed to farmers to enhance productivity, 2 technologies promoted across the country, One bio-pesticide for management of false codling moth developed and Two (2) technologies for food nutrition and industrial application generated and promoted across the country

Towards enhancing fruit production and productivity, 2000 fruit tree seedlings (1500 mango: Kakule, Ngowe, and apple: 500 citrus Valencia, Washington Navel, Hamelin) were produced and availed to farmers across the 04 agroecological zones of Uganda. 03 farmer management practices (use of bio-pesticides, botanicals, and judicious insecticides) for management of false codling moth (FCM) in Chilli and pepper were promoted through demonstrations. 01 field and harvesting protocol (standard operating procedures) for FCM management was developed. Efficacy of 05 different bio-pesticides (Cryptophlebia leucotreta Granulovirus, Bacillus thuringiensis, Beauveria bassiana, Metarhizium anisopliae and Azadirachtin were evaluated against FCM. Towards the production of technologies, 48 common bean lines, 16 elite yam genotypes, 5000 F1 genotypes 1300 have evaluated for yield, disease resistance, culinary taste at 05 locations across the country with farmer groups under Uniform Yield Trials (UYT).

Performance was on target

<b>Expenditures incurred in the Quarter to deliver outputs</b>		UShs Thousand
Item		Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allow	rances)	9,520.000
221008 Information and Communication Technology Suppl	lies.	1,884.171
227004 Fuel, Lubricants and Oils		5,320.000
228002 Maintenance-Transport Equipment		6,267.929
	Total For Budget Output	22,992.100
	Wage Recurrent	0.000
	Non Wage Recurrent	22,992.100
	Arrears	0.000

### **VOTE:** 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
	AIA	0.000
Budget Output:010011 Technology Promotion		
PIAP Output: 01040705 Demand driven agriculture tech	nologies developed	
Programme Intervention: 010407 Strengthen agricultura	al research and technology development	
2 technologies promoted through delivery of 22.5 MT of seed maize and beans seeds; 750 seedlings of fruit trees and palm raised to various uptake pathways to enhance productivity.	Towards the enhancement of production and productivity, 14.5MT of maize and 10MT bean breeder seed and foundation seed were produced and availed to farmers from Mukono, Luweero, Buvuma, Kiryandongo, and Bukedea stored. Assorted of bean seed were produced and availed to farmers. 4000 fruit tree seedlings (1500 mango: Kakule, Ngowe, and apple: 500 citrus Valencia, Washington Navel, Hamelin) and 2000 palm were produced and availed to farmers across the four agro-ecological zones of Uganda.	Performance was on target
PIAP Output: 01040706 Research-extension farmer link	ages developed and strengthened	
Programme Intervention: 010407 Strengthen agricultura	al research and technology development	
One (1) farmer technology generation and dissemination platform developed and disseminated for improved uptake of technologies	Towards enhancing uptake of technologies, 03 Multi- stakeholder Platforms for beans (Kyazanga Farmers' Cooperative, SAWA Agricultural Development Company Ltd., and Manyakabi Area Cooperative Ltd.) in Lwengo, Mpigi, and Isingiro districts respectively were developed	Performance was above target due to enhanced farmer willingness.
<b>Expenditures incurred in the Quarter to deliver outputs</b>		UShs Thousand
Item		Spent
221011 Printing, Stationery, Photocopying and Binding		4,590.000
223005 Electricity		10,400.000
224011 Research Expenses		17,677.000
	Total For Budget Output	32,667.000
	Wage Recurrent	0.000
	Non Wage Recurrent	32,667.000
	Arrears	0.000
	AIA	0.000
	Total For Department	55,659.100
	Wage Recurrent	0.000
	Non Wage Recurrent	55,659.100
	Arrears	0.000

### **VOTE:** 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
	AIA	0.000
Department:011 National Fisheries Resources Research l	Institute	
Budget Output:010010 Technology Generation		
PIAP Output: 01040705 Demand driven agriculture tech	nologies developed	
Programme Intervention: 010407 Strengthen agricultura	l research and technology development	
	No Planned Output for the quarter	
PIAP Output: 01040706 Research-extension farmer linka	nges developed and strengthened	
Programme Intervention: 010407 Strengthen agricultura	ll research and technology development	
3,750 Nile tilapia African catfish improved seed strains produced and supplied to 4 hatchery operators and lead fish farmers.1 routine maintenances of research equipment conducted	Towards enhancing production and productivity in aquaculture, 72,193 Nile tilapia seed and 229 African catfish seed were produced and supplied to Twenty eight (28) fish farmers in districts of Masaka, Lwengo and Wakiso. Additionally, 150 African catfish brood stocks were obtained from Lake Albert to boost production of improved fish seed with high quality eggs and sperm. Three (03) nursery ponds were renovated at ARDC, Kajjansi to improve conditions to support optimal growth and survival of fish, address issues concerning water quality, pond structure and biological factors leading to a healthier and more productive nursery environment. One (01) hatchery and fish meal were maintained to facilitate research activities	Performance was on target
One (01) technology generated & disseminated to different value chain actors to enhance productivity	Towards enhancement of production and productivity, fish feed with pigeon pea and black soldier fly ingredients (available non-human fed ingredients) was produced containing increased protein content which improves fish immunity and reduces reliance on fishmeal. Additionally One (01) technology for utilizing periphyton for feeding Nile tilapia was developed to reduce reliance on fishmeal, improve fish performance and maintain a good balance of protein, lipids, and other essential nutrients that support fish growth and health. 10,000 fast growing and high yielding fingerlings of tilapia, catfish and mirror carp were produced through selective breeding and distributed to farmers in 5 districts; Arua, Buikwe, Gulu, Masaka and Lwengo.	

### **VOTE:** 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
PIAP Output: 01040706 Research-extension farmer link	ages developed and strengthened	
Programme Intervention: 010407 Strengthen agricultur	al research and technology development	
One (01) technology generated & disseminated to different value chain actors to enhance productivity	Towards enhancing fish productivity, 10,000 fingerlings of assorted fish seed was produced and delivered to farmers in Wakiso and Mukono districts	Performance on target
<b>Expenditures incurred in the Quarter to deliver outputs</b>		UShs Thousand
Item		Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allow	rances)	4,306.700
221001 Advertising and Public Relations		2,135.500
221008 Information and Communication Technology Suppl	lies.	1,120.000
224003 Agricultural Supplies and Services		8,000.000
224011 Research Expenses		38,376.500
227004 Fuel, Lubricants and Oils		5,092.000
228001 Maintenance-Buildings and Structures		6,775.800
228002 Maintenance-Transport Equipment		4,518.200
228003 Maintenance-Machinery & Equipment Other than 7	Transport Equipment	6,150.000
	Total For Budget Output	76,474.700
	Wage Recurrent	0.000
	Non Wage Recurrent	76,474.700
	Arrears	0.000
	AIA	0.000
	Total For Department	76,474.700
	Wage Recurrent	0.000
	Non Wage Recurrent	76,474.700
	Arrears	0.000
	AIA	0.000
<b>Department:012 National Forestry Resources Research</b>	Institute	
Budget Output:010010 Technology Generation		

# **VOTE:** 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
PIAP Output: 01040705 Demand driven agriculture tech	nologies developed	
Programme Intervention: 010407 Strengthen agricultura	al research and technology development	
2500 fast growing clonal eucalyptus seedlings produced & availed to farmers for enhanced productivity forest trees to meet the National demand	Towards meeting the National forestry's demand, 23,622 clonal eucalyptus seedlings were produced and distributed to 5 small-holder farmer groups in Mukono zone.	Performance on target
PIAP Output: 01040706 Research-extension farmer link	ages developed and strengthened	
Programme Intervention: 010407 Strengthen agricultura	al research and technology development	
2,500seedlings for trees of strategic importance Hass avocado, clonal eucalyptus, and site selection technology disseminated through partnerships with stakeholders and farmers along the value chains	In the effort to increase forestry production, 10,000 high yield, quick maturing, long shelf life, and a rich flavor (high oil content Hass avocado seedlings were generated and disseminated to different stakeholders and 20 farmers in Mukono district. 23,622 clonal eucalyptus seedlings were produced and distributed to 5 small-holder farmer groups. Majority of the people (62%) rely on locally sourced, non-improved seedlings that yield under 20? m³/ha/year, improved clonal eucalyptus plantations consistently deliver 30-45?m³/ha/year which exposes a productivity gap of 10-25?m³/ha/year per hectare.	Performance was on target

Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
Item	Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)	1,120.000
221001 Advertising and Public Relations	848.800
221011 Printing, Stationery, Photocopying and Binding	1,688.500
224011 Research Expenses	10,360.000
227004 Fuel, Lubricants and Oils	2,240.000
228001 Maintenance-Buildings and Structures	1,119.962
228002 Maintenance-Transport Equipment	1,865.500
228003 Maintenance-Machinery & Equipment Other than Transport Equipment	2,312.500
Total For Budget Output	21,555.262
Wage Recurrent	0.000
Non Wage Recurrent	21,555.262
Arrears	0.000
AIA	0.000
Budget Output:010011 Technology Promotion	

### **VOTE:** 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
PIAP Output: 01040705 Demand driven agriculture tech	nologies developed	
Programme Intervention: 010407 Strengthen agricultura	l research and technology development	
One (01) forestry technology of strategic importance (forage trees), availed to uptake pathways for dissemination to farmers and improved productivity	Towards enhancing forestry production and productivity, 3,000 seedlings of Faidherbia albida (apple-ring acacia) trees were raised and distributed to 20 farmers for on-farm planting. Faidherbia albida is valuable resource for improving soil fertility, providing fodder for livestock, and offering protection against erosion. Towards enhancing soil conversion, 3000 seedlings of Calliandra were raised and distributed to 20 farmers and livestock pastoralists to integrate into their farming systems. Calliandra is a fast-growing shrub and nitrogen-fixing shrub suitable for soil conservation practices like soil erosion control and used by farmers as a fodder for livestock as they have a high biomass production. These are characterized by a rapid growth rate, drought tolerance, and a deep tap root system, which accesses deep water reserves, thus contributing to sustainable land management and agroecology.	Performance was on target
PIAP Output: 01040706 Research-extension farmer linka	ages developed and strengthened	
Programme Intervention: 010407 Strengthen agricultura	l research and technology development	
	No planned output for this quarter	
<b>Expenditures incurred in the Quarter to deliver outputs</b>		UShs Thousand
Item		Spent
224011 Research Expenses		6,767.350
	<b>Total For Budget Output</b>	6,767.350
	Wage Recurrent	0.000
	Non Wage Recurrent	6,767.350
	Arrears	0.000
	AIA	0.000
	Total For Department	28,322.612
	Wage Recurrent	0.000
	Non Wage Recurrent	28,322.612
	Arrears	0.000
	AIA	0.000

# VOTE: 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
Department:013 Mukono Zonal Agriculture Research	Institute (ZARDI)	
Budget Output:010011 Technology Promotion		
PIAP Output: 01040705 Demand driven agriculture to	echnologies developed	
Programme Intervention: 010407 Strengthen agricult	ural research and technology development	
Two (02) new technologies promoted and disseminated to 15,000 farmers through two (02) agricultural expocampaigns for increased agricultural production	Towards enhancing agricultural productivity two technologies(coffee varieties and indigenous chicken) were promoted at 3expos(jinja agricultural show, labor day and Luwero) reaching over 20,000participants	performance on target
PIAP Output: 01040706 Research-extension farmer li	nkages developed and strengthened	
Programme Intervention: 010407 Strengthen agricult	ural research and technology development	
	No planned output for this quarter	
Expenditures incurred in the Quarter to deliver outpu	its	UShs Thousand
tem		Spen
222001 Information and Communication Technology Ser	vices.	2,625.000
223004 Guard and Security services		9,305.400
224011 Research Expenses		20,616.000
228001 Maintenance-Buildings and Structures		12,684.000
228002 Maintenance-Transport Equipment		8,216.600
228003 Maintenance-Machinery & Equipment Other than Transport Equipment		1,120.000
228004 Maintenance-Other Fixed Assets		280.000
	Total For Budget Output	54,847.000
	Wage Recurrent	0.000
	Non Wage Recurrent	54,847.000
	Arrears	0.000
	AIA	0.000
	Total For Department	54,847.000
	Wage Recurrent	0.000
	Non Wage Recurrent	54,847.000
	Arrears	0.000
	AIA	0.000
	rch Institute (NaSARRI)	

#### VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Performance was on target

	Actual Outputs Achieved in	Reasons for Variation in
Outputs Planned in Quarter	Quarter	performance

#### PIAP Output: 01040705 Demand driven agriculture technologies developed

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

1 technologies (cotton varieties, Pigeon peas and biopesticides) developed 0.25MT of foundation seed of candidate lines of cotton produced, research enabling environment maintained through 1 maintenance of research facilities.

Towards development of cotton varieties, 2 lines were developed and identified. 0.2T of foundation seed BPA2015A were produced. Under pigeon pea, achievements were set under the objectives below: 1.expedite release of pea lines developed during previous research. Towards this, PVTs of 5 pea entries were set up at 5 sites: NgettaZARDI, Kitgum Satellite Station, AbiZARDI, NaSARRI and NabuinZARDI. 2 lines(ICEAP00540&ICEAP00554) performed better than the checks and were stable in Ngetta, AbiZARDI and NaSARRI. 2.Development, promotion and use of native rhizoid fertilizer. Under this, field trials were set up at NaSARRI and Ngetta and data collected at 5&10 weeks on total nodule count and final grain yield. Average grain yield was significantly different between varieties with higher yield in SEPI 1 than SEPI. 3. For commercialization of peabased feed, fish feed and broiler starter with pigeon pea content enhanced fish growth and led to higher slaughter and hot carcass weight in broilers.

**Expenditures incurred in the Quarter to deliver outputs** UShs Thousand Item Spent 221007 Books, Periodicals & Newspapers 4,000.000 4,000.000 221008 Information and Communication Technology Supplies. 224011 Research Expenses 26,256.881 227004 Fuel, Lubricants and Oils 8,300.000 228001 Maintenance-Buildings and Structures 2,080.000 228002 Maintenance-Transport Equipment 6,542.587 228003 Maintenance-Machinery & Equipment Other than Transport Equipment 3,000.000 **Total For Budget Output** 54,179,468 0.000 Wage Recurrent 54,179,468 Non Wage Recurrent Arrears 0.000 AIA0.000

### VOTE: 142 National Agricultural Research Organization (NARO)

224011 Research Expenses

227004 Fuel, Lubricants and Oils

228002 Maintenance-Transport Equipment

Quarter 4

8,682.000 11,700.000

14,000.000

75,359.000

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
	Total For Department	54,179.468
	Wage Recurrent	0.000
	Non Wage Recurrent	54,179.468
	Arrears	0.000
	AIA	0.000
Department:016 Ngetta ZARDI		
Budget Output:010011 Technology Promotion		
PIAP Output: 01040705 Demand driven agriculture tech	nologies developed	
Programme Intervention: 010407 Strengthen agricultura	al research and technology development	
One (01) acre of improved coffee maintained for farmer demonstration to demonstrate best coffee technologies and practices and dissemination to farmers in NAEZ maintained.	Towards maintenance of improved coffee aimed at demonstrating best coffee technologies and practices, the mother garden of elite Robusta coffee measuring one acre was fully maintained throughout the quarter, with key agronomic practices such as pruning and weed management successfully carried out. To demonstrate and disseminate the best technologies and practices to farmers, the garden served as a learning site, hosting two field visits that attracted over 60 farmers from the Lango sub region. Extension materials were distributed to the participants to enhance knowledge transfer and adoption.	Performance on target
PIAP Output: 01040706 Research-extension farmer link	ages developed and strengthened	
Programme Intervention: 010407 Strengthen agricultura	al research and technology development	
	No planned output for this quarter	
Expenditures incurred in the Quarter to deliver outputs		UShs Thousand
Item		Spent
211107 Boards, Committees and Council Allowances		3,870.000
21011 Printing, Stationery, Photocopying and Binding		8,000.000
222001 Information and Communication Technology Service	ces.	10,850.000
223001 Property Management Expenses		3,055.000
223004 Guard and Security services		15,202.0

**Total For Budget Output** 

# VOTE: 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
	Wage Recurrent	0.000
	Non Wage Recurrent	75,359.000
	Arrears	0.000
	AIA	0.000
	Total For Department	75,359.000
	Wage Recurrent	0.000
	Non Wage Recurrent	75,359.000
	Arrears	0.000
	AIA	0.000
Department:017 Rwebitaba ZARDI		
Budget Output:010011 Technology Promotion		
PIAP Output: 01040705 Demand driven agriculture tec	hnologies developed	
Programme Intervention: 010407 Strengthen agricultur	al research and technology development	
Two (02) new nutrient dense, high yielding, drought tolerant, Pest and disease tolerant crop & pasture varieties promoted with in the zone for improved production and productivity	Towards enhancing crop production and productivity, nutrient dense, high yielding, drought tolerant, pest and disease resistant cassava and sweet potato varieties were promoted across the zone through 2 acre on station demonstrations reaching 406 (302 female and 104 male) farmers. Additional Napier and lablab pasture demonstrations were established on station to enhance livestock production and productivity.	performance on target
	No planned output for this quarter	
Expenditures incurred in the Quarter to deliver outputs		UShs Thousand
Item		Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allow	vances)	3,920.000
221011 Printing, Stationery, Photocopying and Binding		1,667.000
224011 Research Expenses		31,527.450
227004 Fuel, Lubricants and Oils		4,760.400
228002 Maintenance-Transport Equipment		7,242.990
228003 Maintenance-Machinery & Equipment Other than	Transport Equipment	1,829.500
	Total For Budget Output	50,947.340
	Wage Recurrent	0.000

# VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

0.000

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
	Arrears	0.000
	AIA	0.000
	Total For Department	50,947.340
	Wage Recurrent	0.000
	Non Wage Recurrent	50,947.340
	Arrears	0.000
	AIA	0.000
Develoment Projects		
Project:1560 Relocation and Operationalisation of the	National Livestock Resources Research Institute(NALIRR)	I)
Budget Output:000017 Infrastructure Development an	d Management	
PIAP Output: 01040705 Demand driven agriculture te	chnologies developed	
Programme Intervention: 010407 Strengthen agricultu	ral research and technology development	
	No planned output for Q4	
One paddocking system of four (04) units for breeding research with holding capacity 1000 heads of cattle established at Maruzi Apac district.	Towards enhancing livestock production and research, One paddocking system of four (04) units for breeding research with holding capacity 1000 heads of cattle established and maintained at Maruzi in Apac district	Performance on target
<b>Expenditures incurred in the Quarter to deliver output</b>	ts	UShs Thousand
Item		Spent
312121 Non-Residential Buildings - Acquisition		403,799.154
	Total For Budget Output	403,799.154
	GoU Development	403,799.154
	External Financing	0.000
	Arrears	0.000

AIA

**Budget Output:010010 Technology Generation** 

# **VOTE:** 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
Project:1560 Relocation and Operationalisation of the Na	ational Livestock Resources Research Institute(NALIRR	I)
PIAP Output: 01040705 Demand driven agriculture tech	nologies developed	
Programme Intervention: 010407 Strengthen agricultura	l research and technology development	
4 livestock breeding and production related technologies (Queens with superior honey productivity, animal feed formulations, forages, diagnostic kits, improved indigenous chicken developed for improved production and productivity of livestock enterprises in Uganda.	Towards improving livestock production and productivity, four maize forage lines were determined for cattle.  Additionally, development of elite chicken breeds G-5 for both cocks and chicken was initiated. Furthermore, the construction of a queen bee rearing facility at Maruzi was completed, essential for rearing bee colonies.	Performance on target
<b>Expenditures incurred in the Quarter to deliver outputs</b>		UShs Thousand
Item		Spent
221008 Information and Communication Technology Suppli	es.	10,000.000
221011 Printing, Stationery, Photocopying and Binding		4,034.850
223004 Guard and Security services		8,472.851
223005 Electricity		6,916.750
224002 Veterinary supplies and services		14,377.035
224003 Agricultural Supplies and Services		90,038.643
224005 Laboratory supplies and services		18,344.466
224011 Research Expenses		1,285,678.042
227004 Fuel, Lubricants and Oils		35,378.296
228002 Maintenance-Transport Equipment		1,538.000
	Total For Budget Output	1,474,778.933
	GoU Development	1,474,778.933
	External Financing	0.000
	Arrears	0.000
	AIA	0.000
	Total For Project	1,878,578.087
	GoU Development	1,878,578.087
	External Financing	0.000
	Arrears	0.000
	AIA	0.000
<b>Project:1619 Retooling of National Agricultural Research</b>	n Organization	
<b>Budget Output:000003 Facilities and Equipment Manage</b>	ement	

# **VOTE:** 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
Project:1619 Retooling of National Agricultural Research	h Organization	
PIAP Output: 01040705 Demand driven agriculture tech	nologies developed	
Programme Intervention: 010407 Strengthen agricultura	l research and technology development	
One anti-tick Air Purification Line System for General Manufacturing Practice (GMP) installation completed at Nakyesasa for antitick vaccine production and associated furnishing for the vaccine facility installed (100%)	Towards saving the country from an economic loss, One anti-tick Air Purification Line System for General Manufacturing Practice (GMP) was installed for antitick vaccine production and associated furnishing for the vaccine facility installed (100%). The facility is ready for production	Performance on target
	No planned output for Quarter 4	
<b>Expenditures incurred in the Quarter to deliver outputs</b>		UShs Thousand
Item		Spent
224003 Agricultural Supplies and Services		699,577.955
312233 Medical, Laboratory and Research & appliances - A	equisition	1,046,265.001
	<b>Total For Budget Output</b>	1,745,842.956
	GoU Development	1,745,842.956
	External Financing	0.000
	Arrears	0.000
	AIA	0.000
<b>Budget Output:000017 Infrastructure Development and</b>	Management	
PIAP Output: 01040705 Demand driven agriculture tech	nologies developed	
Programme Intervention: 010407 Strengthen agricultura	ll research and technology development	
	No planned output for Quarter 4	
	No planned output for Quarter 4	
	No planned output for Q4	
4 agricultural research facilities completed: Poultry Hatchery and Seed, rehabilitation of Food Bio Sciences Lab at Kawanda, and Cassava centre of excellence at Namulonge, Nutrition Laboratory at Nakyesasa, Fish Hatchery at Ngeta and Wash rooms.	Towards creating a research enabling environment, four (04) agricultural research facilities were completed: Poultry Hatchery and Seed, rehabilitation of Food Bio Sciences Lab at Kawanda, and Cassava centre of excellence at Namulonge, Nutrition Laboratory at Nakyesasa, Fish Hatchery at Ngetta and Wash rooms.	

# **VOTE:** 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
Project:1619 Retooling of National Agricultural Research	h Organization	
<b>Expenditures incurred in the Quarter to deliver outputs</b>		UShs Thousand
Item		Spent
225203 Appraisal and Feasibility Studies for Capital Works		127,500.001
225204 Monitoring and Supervision of capital work		56,040.000
228001 Maintenance-Buildings and Structures		540,000.000
312121 Non-Residential Buildings - Acquisition		113,730.001
313121 Non-Residential Buildings - Improvement		2,239,929.352
313139 Other Structures - Improvement		60,000.000
	Total For Budget Output	3,137,199.354
	GoU Development	3,137,199.354
	External Financing	0.000
	Arrears	0.000
	AIA	0.000
Budget Output:010008 Capacity Strengthening		
PIAP Output: 01040705 Demand driven agriculture tech	nologies developed	
Programme Intervention: 010407 Strengthen agricultura	al research and technology development	
One national gene bank upgraded through remodelling for genetic resources conservation& two facilities furnished for improved technology generation321 hectares of land surveyed & 230.5 hectares protected for improved research security and stability. 4 Public research institutes supported to generate agriculture technologies through counterpart funding of projects.	Towards biodiversity conservation, One national gene bank was upgraded through remodeling for genetic resources conservation. Additionally, 321 hectares of land surveyed & 230.5 hectares protected for improved research security and stability at Mbarara and Kujju. Four (04) PARIs were supported to generate agriculture technologies through counterpart funding of projects.	
<b>Expenditures incurred in the Quarter to deliver outputs</b>		UShs Thousand
Item		Spent
211107 Boards, Committees and Council Allowances		52,087.000
221001 Advertising and Public Relations		9,180.000
221003 Staff Training		50,373.615
221004 Recruitment Expenses		121,406.000
221007 Books, Periodicals & Newspapers		4,080.000
221008 Information and Communication Technology Suppli	ies.	21,284.000
221011 Printing, Stationery, Photocopying and Binding		24,780.000

# **VOTE:** 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
Project:1619 Retooling of National Agricultural Research	ch Organization	
<b>Expenditures incurred in the Quarter to deliver outputs</b>		UShs Thousand
Item		Spent
221016 Systems Recurrent costs		62,404.980
221017 Membership dues and Subscription fees.		9,140.949
222001 Information and Communication Technology Service	ces.	216,610.000
224011 Research Expenses		1,354,293.816
225101 Consultancy Services		75,000.000
226002 Licenses		33,043.983
227001 Travel inland		147,072.949
227004 Fuel, Lubricants and Oils		78,400.000
312221 Light ICT hardware - Acquisition		6,289.999
312235 Furniture and Fittings - Acquisition		247,840.000
313121 Non-Residential Buildings - Improvement		370,896.265
313149 Other Land Improvements - Improvement		310,940.999
	Total For Budget Output	3,195,124.555
	GoU Development	3,195,124.555
	External Financing	0.000
	Arrears	0.000
	AIA	0.000
Budget Output:010009 Research Partnerships		
PIAP Output: 01040705 Demand driven agriculture tech	nnologies developed	
Programme Intervention: 010407 Strengthen agricultur	al research and technology development	
Three agricultural research strategic partnerships for product development and commercialization established, maintained, and strengthened at regional and international level.	Three (03) agricultural research strategic partnerships for product development and commercialization were established, maintained, and strengthened at regional and international level. (1) commercialization for the Fish feed production facility was completed, commercialisation of beans and commercialisation of maize	Performance on target
<b>Expenditures incurred in the Quarter to deliver outputs</b>		UShs Thousand
Item		Spent
262201 Contributions to International Organisations-Capita	1	778,749.202
282107 Contributions to Non-Government institutions		40,000.000

# VOTE: 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
Project:1619 Retooling of National Agricultural Resea	rch Organization	
	Total For Budget Output	818,749.202
	GoU Development	818,749.202
	External Financing	0.000
	Arrears	0.000
	AIA	0.000
Budget Output:010010 Technology Generation		
PIAP Output: 01040705 Demand driven agriculture te	chnologies developed	
Programme Intervention: 010407 Strengthen agricultu	iral research and technology development	
Seven (07) Agricultural research products and services: vaccines (new castle, gumboro, Foot and Mouth Disease), African swine fever and oral anti-tick vaccine), varieties, barley, potatoes developed	Towards enhancing agricultural production and productivity, Seven (07) Agricultural research products and services: vaccines (new castle, gumboro, Foot and Mouth Disease), African swine fever and oral anti-tick vaccine), (03) barley, (04) potatoes (NAROPOT 7,8,9,10) were developed	Performance on target
Two hundred fifty (250) colony forming units of antitick vaccine seed produced. These units are sufficient as a raw material to produce 5 million doses of anti-tick vaccine	Towards a complete anti-tick vaccine production and roll out, Two hundred fifty (250) colony forming units of antitick vaccine seed were produced. These units are sufficient as a raw material to produce 5 million doses of anti-tick vaccine	Performance on target
Expenditures incurred in the Quarter to deliver outpu	ts	UShs Thousana
Item		Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allo	wances)	40,637.000
221001 Advertising and Public Relations		17,620.000
221003 Staff Training		27,427.000
221008 Information and Communication Technology Sup	plies.	37,842.318
221009 Welfare and Entertainment		4,100.000
221011 Printing, Stationery, Photocopying and Binding		69,350.57
221017 Membership dues and Subscription fees.		3,000.000
222001 Information and Communication Technology Serv	vices.	30,660.000
223005 Electricity		28,420.000
224002 Veterinary supplies and services		44,352.20
224003 Agricultural Supplies and Services		621,702.90
224005 Laboratory supplies and services		565,942.99

# **VOTE:** 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
Project:1619 Retooling of National Agricultural Research	h Organization	
<b>Expenditures incurred in the Quarter to deliver outputs</b>		UShs Thousand
Item		Spent
224010 Protective Gear		6,000.000
224011 Research Expenses		1,515,054.203
225101 Consultancy Services		17,958.000
225201 Consultancy Services-Capital		30,999.999
225204 Monitoring and Supervision of capital work		3,520.000
227001 Travel inland		20,664.181
227004 Fuel, Lubricants and Oils		99,416.592
228001 Maintenance-Buildings and Structures		1,461.500
228002 Maintenance-Transport Equipment		39,033.119
228003 Maintenance-Machinery & Equipment Other than T	ransport Equipment	192,903.822
228004 Maintenance-Other Fixed Assets		4,194.000
312221 Light ICT hardware - Acquisition		10,710.000
312233 Medical, Laboratory and Research & appliances - A	cquisition	1,807,866.989
	Total For Budget Output	5,240,837.386
	GoU Development	5,240,837.386
	External Financing	0.000
	Arrears	0.000
	AIA	0.000
<b>Budget Output:010011 Technology Promotion</b>		
PIAP Output: 01040705 Demand driven agriculture tech	nologies developed	
Programme Intervention: 010407 Strengthen agricultura	al research and technology development	
Two (02) agricultural research technologies of animal feeds rations and varieties, delivered to uptake pathways for increased production and productivity of key enterprises	Towards improving livestock farming, Two (02) agricultural research technologies of animal feeds rations and varieties including development of a high yielding maize forage variety, and were delivered to uptake pathways	Performance on target

# VOTE: 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
Project:1619 Retooling of National Agricultural Research	h Organization	
PIAP Output: 01040705 Demand driven agriculture tech	nologies developed	
Programme Intervention: 010407 Strengthen agricultura	al research and technology development	
Three (03) agricultural research technologies of aflatoxins management (aflasafe), fertilizer blends for the key priority commodities, protocols and rations delivered to uptake pathways for increased production and productivity to uptake pathways for increased production along value chains	Towards enhancing food security, the production line for aflsafe production was installed at the facility ready for massive production of aflasafe. Additionally, new fertilizer formulations for three commodities (maize, beand, coffee) were obtained to enhance efficiency in agricultural production and 250 farmers in Mityana district trained on the same	Performance on target
<b>Expenditures incurred in the Quarter to deliver outputs</b>		UShs Thousand
Item		Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allowa	ances)	10,150.000
221001 Advertising and Public Relations		51,520.000
221008 Information and Communication Technology Suppl	ies.	13,999.999
221011 Printing, Stationery, Photocopying and Binding		12,325.074
222001 Information and Communication Technology Service	ees.	18,051.000
224011 Research Expenses		306,555.900
227001 Travel inland		19,200.000
227004 Fuel, Lubricants and Oils		30,960.550
	Total For Budget Output	462,762.523
	GoU Development	462,762.523
	External Financing	0.000
	Arrears	0.000
	AIA	0.000
	Total For Project	14,600,515.976
	GoU Development	14,600,515.976
	External Financing	0.000
	Arrears	0.000
	AIA	0.000
Programme:17 Regional Balanced Development		
SubProgramme:01 Production and productivity		
Sub SubProgramme:01 Agricultural Research		

# **VOTE:** 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
Departments		
Department:002 Buginyaya Zonal Agriculture Research	Institute(ZARDI)	
Budget Output:010010 Technology Generation		
PIAP Output: 1702020506 Youth and Women cooperation	ves supported	
Programme Intervention: 170209 Organize farmers into	o cooperatives at district level	
Two (02) local seed business group identified for support with early generation seed of nutrient dense varieties and varieties with industrial properties. Five hundred (500) farmers clustered to local seed businesses purported for quality seed production for employment creation.	Towards enhancing production and productivity, 2 local seed businesses in Buginyanya zone were supported with 500kg of early generation seed for beans and maize. Additionally, One (1) ton NARObean 1 foundation seed produced and distributed to Busoga kingdom. 564 farmers from 2 local seed businesses were trained areas of seed production.	Performance on target
<b>Expenditures incurred in the Quarter to deliver outputs</b>		UShs Thousand
Item		Spent
224011 Research Expenses		6,936.000
	Total For Budget Output	6,936.000
	Wage Recurrent	0.000
	Non Wage Recurrent	6,936.000
	Arrears	0.000
	AIA	0.000
Budget Output:010011 Technology Promotion		
PIAP Output: 1702020506 Youth and Women cooperation	ves supported	
Programme Intervention: 170209 Organize farmers into	o cooperatives at district level	
	No output planned for this Quarter 4	
<b>Expenditures incurred in the Quarter to deliver outputs</b>		UShs Thousand
Item		Spent
224011 Research Expenses		11,250.000
	Total For Budget Output	11,250.000
	Wage Recurrent	0.000
	Non Wage Recurrent	11,250.000
	Arrears	0.000
	AIA	0.000
	Total For Department	18,186.000

# **VOTE:** 142 National Agricultural Research Organization (NARO)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
	Wage Recurrent	0.000
	Non Wage Recurrent	18,186.000
	Arrears	0.000
	AIA	0.000
Develoment Projects		
N/A		
	GRAND TOTAL	107,467,528.081
	Wage Recurrent	11,097,064.273
	Non Wage Recurrent	79,891,369.745
	GoU Development	16,479,094.063
	External Financing	0.000
	Arrears	0.000
	AIA	0.000

#### VOTE: 142 National Agricultural Research Organization (NARO)

**Quarter 4** 

130,000.000

0.000

0.000

#### Quarter 4: Cumulative Outputs and Expenditure by End of Quarter

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter
Programme:01 Agro-Industrialization	
SubProgramme:01 Institutional Strengthening and Coordination	
Sub SubProgramme:01 Agricultural Research	
Departments	
Department:007 NARO-SECRETARIATE	
Budget Output:000001 Audit and Risk Management	
PIAP Output: 01910101 Audit and Risk Management coordinated	
Programme Intervention: 019101 Strengthen government institutions	for effective and efficient service delivery.
24 Audit reports including asset, value for money,compliance,risk human resource and systems prepared	Towards enhancing accountability, six (06) audit reports including value for money, compliance, human resource and asset were prepared and submitted to relevant authorities
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	UShs Thousand
Item	Spent
221003 Staff Training	20,600.000
224011 Research Expenses	54,700.000
227001 Travel inland	54,700.000
Total For Bu	dget Output 130,000.000
Wage Recurre	ent 0.000

Non Wage Recurrent

Arrears

AIA

#### **Budget Output:000013 HIV/AIDS Mainstreaming**

#### PIAP Output: 01040701 Demand driven agriculture technologies developed

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

Appropriate Agricultural products market segments in commodity value chains for the youth participation for gainful employment identified to reduce youth unemployment that exposes them to activities which leading to HIV/AIDs infections.

Towards boosting youth employment and incomes, five market segments in maize, coffee, and pigeon pea processing engaged 1,100 youth and 716 women across 11 districts. In addition, 18 youth groups were trained in five districts, six groups supported in sorghum production in Soroti and Arapai, and seven trained in yam management in Adjumani and Karenga. Another 283 youth received training in vegetable production and market extension, while 25 youth and women leaders were linked to cooperative financial services.

# **VOTE:** 142 National Agricultural Research Organization (NARO)

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter
PIAP Output: 10412026 Leadership and Management coordinated	
Programme Intervention: 010601 Strengthen coordination of public quality food and food security	institutions in design and implementation of policies including access to
Appropriate market segments in commodity value chains for the youth participation for gainful employment identified.	NA
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	UShs Thousa
Item	Spe
224011 Research Expenses	27,000.0
Total For F	Budget Output 27,000.0
Wage Recu	rrent 0.0
Non Wage	Recurrent 27,000.0
Arrears	0.0
AIA	0.0
Budget Output:000014 Administrative and Support Services	
PIAP Output: 10412026 Leadership and Management coordinated	
Programme Intervention: 010601 Strengthen coordination of public quality food and food security	institutions in design and implementation of policies including access to
One annual workplan and budget for the FY2025/2026 developed and appropriated 816 staff renumerated for improved service delivery Four final accounts developed and approved Four quarterly monitoring and evaluation reports compiled to support management	Towards creating a research enabling environment, 816 staff were renumerated. Additionally, one (01) Quarter four monitoring and evaluation report was compiled to support management. One (01) final annual work plan and budget for FY 2025/26 was developed to provide guidance on implementation of NARO mandate

#### VOTE: 142 National Agricultural Research Organization (NARO)

**Ouarter 4** 

#### **Annual Planned Outputs**

#### **Cumulative Outputs Achieved by End of Quarter**

PIAP Output: 10412026 Leadership and Management coordinated

Programme Intervention: 010601 Strengthen coordination of public institutions in design and implementation of policies including access to quality food and food security

Three research laboratories (Food Bio Sciences Animal Nutrition and animal health), recognised towards accreditation for improved service delivery

**Budget Output:000089 Climate Change Mitigation** 

4 Agricultural Research Compliance Committees- (IACUC, IBC and ABS) supported to guide research

Four Agricultural Research Compliance Committees- Institutional Animal Care and use Committee (IACUC), Institutional Biosafety committee (IBC), and Access Benefit and Sharing Committee (ABS) were supported to guide research. One protocol for pharmacovigilance of the NAROVAC® antitick vaccine was reviewed and approved. Two confined field trial protocols on transgenic cassava for whitefly resistance and cisgenic bananas for BXW control were approved.

A study on adjuvant antitick antigen formulations was also approved. An MTA for 300kg of coffee green beans was processed to boost coffee productivity. The NARO Research Ethics Committee was formed, and

UNCST accreditation initiated. The NARO Research Standards Manual

Cumulative Expenditures made by the End of the Quarter to UShs Thousand **Deliver Cumulative Outputs** Item Spent 211102 Contract Staff Salaries 43,462,109.273 211104 Employee Gratuity 10,865,527.320 212101 Social Security Contributions 4,364,211.000 224011 Research Expenses 66,999.680 **Total For Budget Output** 58,758,847.273 Wage Recurrent 43,462,109.273 Non Wage Recurrent 15,296,738.000 Arrears 0.000AIA0.000

was developed.

#### VOTE: 142 National Agricultural Research Organization (NARO)

**Ouarter 4** 

Spent

50,000.000

#### **Annual Planned Outputs**

Item

#### **Cumulative Outputs Achieved by End of Quarter**

#### PIAP Output: 01040701 Demand driven agriculture technologies developed

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

Emerging climate change issues (anti-microbial resistance, drought tolerance, tolerance and resistance to pests and diseases; parasitoids and AI) integrated into research interventions across 16 Public Research institutes in 57 research streams.

Towards strengthening climate change mitigation and adaptation in agriculture, NARO deployed five Remote Telemetry Units (RTUs) across key Agro-Ecological Zones for real-time weather data access, and developed two tools—the Seasonal Characteristics Tool (SCT) and CRiSTAL—to provide localized, actionable climate advisories that support timely agronomic decisions, enhance resilience, and sustain farmer productivity and livelihoods. Additionally, 52 climate smart agricultural technologies (practice demonstrations on farm and field were conducted in eight (08) PARIs

#### PIAP Output: 10412026 Leadership and Management coordinated

#### Programme Intervention: 010601 Strengthen coordination of public institutions in design and implementation of policies including access to quality food and food security

Emerging climate change issues integrated into research interventions across 16 Public Research institutions.

NA

<b>Cumulative Expenditures made by the End of the Quarter to</b>	UShs Thousand
Deliver Cumulative Outputs	

224011 Research Expenses	50,000.000

**Total For Budget Output** 

Wage Recurrent	0.000
Non Wage Recurrent	50,000.000
Arrears	0.000
AIA	0.000

#### **Budget Output:000090 Climate Change Adaptation**

#### PIAP Output: 10412026 Leadership and Management coordinated

#### Programme Intervention: 010601 Strengthen coordination of public institutions in design and implementation of policies including access to quality food and food security

One state-of-art ago-meteorological research facility established through equipping and maintaining ago-meteorological laboratory at NARL-Kawanda in partnership with development partners to support generation of climate adaptation data for farm use.

NARO continued to operationalize the state of art agro-meteorological research facility equipped with functional solar radiation, temperature, humidity, wind among other variables at National agricultural research laboratories Kawanda. These are instrumental in timely rainfall data, temperature and relative humidity critical for scientists and farmers for climate mitigation and adaptation data to inform planting, seasons, harvesting, disease surveillance among others

# **VOTE:** 142 National Agricultural Research Organization (NARO)

<b>Annual Planned Outputs</b>	ual Planned Outputs Achieved by End of Quarter		
Cumulative Expenditures made by the Deliver Cumulative Outputs	End of the Quarter to		UShs Thousand
Item			Spent
224011 Research Expenses			50,000.000
	Total For B	udget Output	50,000.000
	Wage Recui	rent	0.000
	Non Wage I	Recurrent	50,000.000
	Arrears		0.000
	AIA		0.000
	Total For D	epartment	59,015,847.273
	Wage Recui	rent	43,462,109.273
	Non Wage I	Recurrent	15,553,738.000
	Arrears		0.000
	AIA		0.000
Development Projects			
N/A			
SubProgramme:02 Agricultural Produ	ction and Productivity		
Sub SubProgramme:01 Agricultural R	esearch		
Departments			
Department:001 Abi Zonal Agriculture	e Research Institute(ZARDI)		
Budget Output:010010 Technology Ge	neration		
PIAP Output: 01040705 Demand drive	n agriculture technologies dev	eloped	
Programme Intervention: 010407 Street	ngthen agricultural research a	nd technology development	
Four (04) Market oriented products of Cassava and fish developed for improved production and market access developed.		Towards enhancing production and market access, three (03) fish products (fish oil, powder, nangnang) were promoted across the zone through trainings in the districts of Koboko and Arua. Additionally, the use of black soldier fry was promoted for use in feeding for fish	

### VOTE: 142 National Agricultural Research Organization (NARO)

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter	
PIAP Output: 01040706 Research-extension farmer linkages developed	l and strengthened	
Programme Intervention: 010407 Strengthen agricultural research and technology development		
3 Multistakeholder Innovation Platforms strengthened, 1 publication for farming communities produced 1 nutritive fish value added product promoted for niche markets, 18 new demonstrations of apiary established in 9 districts. 4 routine maintenances	Towards enhancing production and productivity in apiary, four (04) existing apiaries in 2 districts were maintained. Towards enhancing a research enabling environment, all institute staff were renumerated, machinery, equipment mother gardens for strategic commodities were maintained	
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	UShs Thousand	
Item	Spent	
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)		
224011 Research Expenses	15,250.000	
Total For Budget Output		
Wage Recurrent		
Non Wage Recurrent		
Arrears	0.000	
AIA		
Budget Output:010011 Technology Promotion		
PIAP Output: 01040705 Demand driven agriculture technologies devel	oped	
Programme Intervention: 010407 Strengthen agricultural research and technology development		
Research enabling environment strengthened through four quarterly routine maintenance of facilities, equipment, machinery and support staff	NA	
PIAP Output: 01040706 Research-extension farmer linkages developed	and strengthened	
Programme Intervention: 010407 Strengthen agricultural research and technology development		
Six (06) Improved technologies and innovations adopted for improved production and productivity within the zone and research facilities maintained.	Towards improving sorghum production and productivity, two (02)Sorghum varieties (NAROsorg2, Seso3) were promoted and adopted by farmers within the zone.	
Research enabling environment strengthened through four quarterly routine maintenance of facilities, equipment, machinery and support staff	NA	
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	UShs Thousand	
Item	Spent	
221001 Advertising and Public Relations	3,500.000	
221008 Information and Communication Technology Supplies.	4,500.000	

## VOTE: 142 National Agricultural Research Organization (NARO)

Annual Planned Outputs	Cumulative Outputs Achieved by	End of Quarter
Cumulative Expenditures made by the End of the Deliver Cumulative Outputs	Quarter to	UShs Thousand
Item		Spent
221011 Printing, Stationery, Photocopying and Binds	ing	4,500.000
223004 Guard and Security services		5,000.000
224011 Research Expenses		45,750.000
227004 Fuel, Lubricants and Oils		6,000.000
228002 Maintenance-Transport Equipment		5,500.000
	Total For Budget Output	74,750.000
	Wage Recurrent	0.000
	Non Wage Recurrent	74,750.000
	Arrears	0.000
	AIA	0.000
	Total For Department	100,000.000
	Wage Recurrent	0.000
	Non Wage Recurrent	100,000.000
	Arrears	0.000
	AIA	0.000
Department:002 Buginyaya Zonal Agriculture Re	search Institute(ZARDI)	
Budget Output:010010 Technology Generation		

### VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

#### **Annual Planned Outputs**

#### **Cumulative Outputs Achieved by End of Quarter**

PIAP Output: 01040705 Demand driven agriculture technologies developed

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

Two Community seed banks, two community tree nurseries, five district tree nurseries established, five diversity fairs conducted to support smallholder men and women farmers in the diversification of their crop and fruit tree production. Towards promoting food security and climate resistance, Two (02) community seed banks (cassava NAROCASS1, ground nuts and improved pasture species) were maintained for seed production in Amuria and Buyende districts. Two (02) community tree nurseries were established in Buyende and Kamuli districts with 68,000 assorted tree seedlings availed to farmers. Towards enhancing agro forestry production of fruit and woodlot tree seedlings, districts of Amuria, Kaberamaido, Katakwi, Buyende and Kamuli were supported in the establishment of a tree nursery to provide seedlings and support sustainable practices. A seed diversity fair to facilitate exchange of diverse seeds, knowledge, and practices among farmers was held in the Buyende, Kamuli, and Amuria districts comprising of 690 farmers (415 males and 275 females). 469 farmers (264 men and 205 women) received training in improved pasture and dry season management, seed bank and tree nursery management practices and pest management.

#### PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

17 technologies developed, 210,000 assorted seedlings; 20 MT of seed; 10,000 fingerlings produced & availed to farmers, 20 local seed businesses for 6 commodities supported & 15 adaptive trials & demos established.

Towards enhancing production and productivity, two (02) non-QPM maize hybrids, CEL8 and CEL9, were developed and submitted to National variety release committee. National performance trials for wheat and barley were established in Kween, Bukwo and on station at Bulegeni, Buginyanya, Rwebitaba, and Kalengyere. 1.5 tons of improved maize seed (Longe 5D), 1.3 tons of beans (NAROBean1), and 1,500 KR coffee seedlings were produced and distributed to the Busoga Kingdom, directly benefiting 118 farmers in Busoga sub-region. 11,000 fish fingerlings (10,000 Nile tilapia and 1,000 Mirror carp) were produced and availed to farmers at the fish fry centre Mbale and Bulegeni Satellite stations. Pasture demonstration trials of (Lablab purpureus, Centrosema spp, Glycine spp, Pakchong and sugar napier) were established in Tororo district Five (05) local seed businesses within cooperatives were supported in Busoga and Bukedea to meet the needs of local farmers dealing in maize and rice.

### VOTE: 142 National Agricultural Research Organization (NARO)

**Ouarter 4** 

#### **Annual Planned Outputs**

#### **Cumulative Outputs Achieved by End of Quarter**

PIAP Output: 0103020112 Agricultural Research platforms established

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

17 technologies promoted, 210,000 assorted seedlings; 20 MT of seed; 10,000 fingerlings produced & availed to farmers, 20 local seed businesses for 6 commodities supported & 15 adaptive trials & demos established.

routine maintenance of facilities, equipment, machinery, and support staff

Towards enhancing agricultural production and productivity, Two (02) non-QPM maize hybrids (CEL 8 and CEL 9) were developed and submitted to National variety release committee. 11,000 fish fingerlings were produced (10,000 Nile tilapia and 1000 Mirror carp) and delivered to farmers to at the fish fry centre at Mbale and Bulegeni Satellite stations. Pasture demonstration trails for (Lablab purpureus, Centrosema spp, Glycine spp, Pakchong and sugar napier) were established in Tororo district. National performance trials for wheat and barley were established in Kween, Bukwo and on station at Bulegeni, Buginyanya, Rwebitaba, and Kalengyere. Five (05) local seed businesses within farmer groups and cooperatives were supported in Busoga and Bukedea to meet the needs of local farmers dealing in maize and rice.

Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs		UShs Thousand
Item		Spent
211106 Allowances (Incl. Casuals, Temporary, sitti	ng allowances)	9,499.973
221011 Printing, Stationery, Photocopying and Bin	ding	3,000.000
224011 Research Expenses		40,400.000
228002 Maintenance-Transport Equipment		12,000.000
	Total For Budget Output	64,899.973
	Wage Recurrent	0.000
	Non Wage Recurrent	64,899.973
	Arrears	0.000
	AIA	0.000
Budget Output:010011 Technology Promotion		
PIAP Output: 01040705 Demand driven agricul	ture technologies developed	
Programme Intervention: 010407 Strengthen ag	ricultural research and technology development	
Research enabling environment strengthened throu	gh four quarterly NA	

## **VOTE:** 142 National Agricultural Research Organization (NARO)

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter	
PIAP Output: 01040706 Research-extension farmer linkages developed	l and strengthened	
Programme Intervention: 010407 Strengthen agricultural research and	d technology development	
Research enabling environment strengthened through four quarterly routine maintenance of facilities, equipment, machinery, and support staff to facilitate promotion and demonstration of 16 key technologies for improved production and productivity	Towards creating a conducive environment for agricultural research, all institute staff were renumerated, 10 equipment and machinery were maintained for operationalisation, 16 fish ponds were maintained, one (01) fish fry center and Five (05) staff housing units were rehabilitated	
Research enabling environment strengthened through four quarterly routine maintenance of facilities, equipment, machinery, and support staff	NA	
PIAP Output: 0103020112 Agricultural Research platforms established	1	
Programme Intervention: 010407 Strengthen agricultural research and	d technology development	
Research enabling environment strengthened through four quarterly routine maintenance of facilities, equipment, machinery, and support staff	Towards enhancement of productivity, a research enabling environment was strengthened by maintaining sixteen (16) fish ponds through bush clearing at the fish fry center in Mbale. One (01) fish fry center was rehabilitated. Five (05) staff housing units were maintained and four (04) institute vehicles repaired and serviced. Contract staff were remunerated.	
Four Agricultural research technology generation and dissemination platforms developed for improved generation and dissemination of technologies to enhance production	Towards enhancement of production and productivity, one (01) platform on good agronomic practices for rice production and post-harvest handling was established for farmers around Doho irrigation scheme and Butaleja district supported by JICA- Echo- Pride project. Rice Legume Integration trials were set up at three (03) sites in Kween, Butaleja and Tororo Districts.	
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	UShs Thousand	
Item	Spent	
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)	24,499.992	
221001 Advertising and Public Relations	4,000.000	
221008 Information and Communication Technology Supplies.	9,500.000	
221011 Printing, Stationery, Photocopying and Binding	7,000.001	
223004 Guard and Security services	14,999.999	
224011 Research Expenses	64,979.907	
227004 Fuel, Lubricants and Oils	20,120.000	
228001 Maintenance-Buildings and Structures	26,000.000	
228002 Maintenance-Transport Equipment	14,000.000	
Total For Bu	dget Output 185,099.899	
Wage Recurre	ent 0.000	

### VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter	
	Non Wage Recurrent	185,099.899
	Arrears	0.000
	AIA	0.000
	Total For Department	249,999.872
	Wage Recurrent	0.000
	Non Wage Recurrent	249,999.872
	Arrears	0.000
	AIA	0.000

#### Department: 003 Bulindi Zonal Agriculture Research Institute(ZARDI)

**Budget Output:010011 Technology Promotion** 

#### PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

Six (6) Climate smart agricultural technologies/practices demonstrated onstation

Research enabling environment maintained through 4 quarterly routine maintenance of research facilities, machinery, equipment, utilities and stake holder engagement.

Towards enhancing agricultural production and productivity, three (03) drought-tolerant crop varieties (maize Longe 5, millet NAROMILL 3, and soybean MAKSOY) were demonstrated on two (02) acres on-station. Ten (10) drought-tolerant pasture varieties (Pakchong 1, NARONAP 1, 2, and 3, Brachiaria Molato, Chloris gayana, Lab lab, Mucuna puriens, Panicum Maximum, and Centrocema pubescence) were demonstrated on 05 hectares on-station. To ensure continuous support and smooth operations of research activities, one (01) nursery bed, three (03) office blocks, and a compound were maintained. One tractor and five (05) vehicles were maintained. 20 contracted workers were paid a salary.

Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	UShs Thousand
Item	Spent
221001 Advertising and Public Relations	1,437.053
221008 Information and Communication Technology Supplies.	4,400.000
224011 Research Expenses	44,400.000
227004 Fuel, Lubricants and Oils	7,200.000
228001 Maintenance-Buildings and Structures	2,000.000
228002 Maintenance-Transport Equipment	24,859.417
228003 Maintenance-Machinery & Equipment Other than Transport	15,381.614
Total For Budget Output	99,678.084
Wage Recurrent	0.000

### VOTE: 142 National Agricultural Research Organization (NARO)

**Ouarter 4** 

<b>Annual Planned Outputs</b>	Cumulative Outputs Achieved by End of Quarter	
	Non Wage Recurrent	99,678.084
	Arrears	0.000
	AIA	0.000
	Total For Department	99,678.084
	Wage Recurrent	0.000
	Non Wage Recurrent	99,678.084
	Arrears	0.000
	AIA	0.000

#### Department:004 Kachwekano Zonal Agriculture Research Institute(ZARDI)

**Budget Output:010011 Technology Promotion** 

PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

1 protocol for extraction of potato starch developed to support industrialisation, efficiency of 3 Control options for management of potato cyst nematodes identified.

120 MT of potato seed produced for farmer use to address the seed gap.

Towards development of 1 protocol for extraction of potato starch, four (04) potato varieties were realized with a high dry matter content necessary for extraction of starch. 15,000 late blight resistance potato plants (Kinigi, NAROPOT4, NAROPOT1 and Rutuku) were produced.70,000 minitubers were produced to facilitate quicker and more reliable multiplication of seed potatoes. Eleven acres were planted with both pre-basic and basic seed on the station, and approximately Towards development of Control option for management of potato cyst nematodes potato germplasm was assembled for profiling and characterization. In order to addressing the potato seed gap ,50 tons of potato seed were produced and availed to farmers in different Agro-ecological zones.

Deliver Cumulative Outputs	UShs Thousand
Item	Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)	14,400.000
221008 Information and Communication Technology Supplies.	8,000.000
221011 Printing, Stationery, Photocopying and Binding	6,000.000
224011 Research Expenses	35,583.000
227001 Travel inland	9,900.000
227004 Fuel, Lubricants and Oils	8,517.000
228002 Maintenance-Transport Equipment	9,600.000
228003 Maintenance-Machinery & Equipment Other than Transport	8,000.000
Total For Budget Output	100,000.000

### **VOTE:** 142 National Agricultural Research Organization (NARO)

Quarter 4

<b>Annual Planned Outputs</b>	Cumulative Outputs Achieved by End of Quarter	
	Wage Recurrent	0.000
	Non Wage Recurrent	100,000.000
	Arrears	0.000
	AIA	0.000
	Total For Department	100,000.000
	Wage Recurrent	0.000
	Non Wage Recurrent	100,000.000
	Arrears	0.000
	AIA	0.000

Department:005 Mbarara Zonal Agriculture Research Institute(ZARDI)

**Budget Output:010011 Technology Promotion** 

PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

70,000 coffee seedlings produced and vailed to farmers, 1 regional feed multistake holder innovation Platform, 30 quality Jersey calves and 2 value added milk and fish products developed, 4000 Tilapia esculentus fry produced.

Towards enhancing coffee production and productivity, 40,000 coffee seedlings and agronomic practices were produced and promoted to stakeholders through 20 radio talk shows targeting 500 farmers (400 males , 100 females) in districts of Kiruhura, Sheema, Mbarara, Ntungamo; 1 company that manufactures animal feed added to the Innovation platform, to train members of the feed MSIP in Black Soldier fly production as an alternative protein source; 4 in-calf Jersey cows maintained for production of Jersey calves; 2 milk starter culture prototypes (Ghee, Yogurt) successfully packed for assignment of the UNBS and quality mark and ISO standard. One (1) fish sausage prototype developed and disseminated to 40 fish farmers (15 males and 25 females) from districts of Ibanda, Sheema, Mbarara, Rubirizi, Bushenyi, Ntungamo. 3,000 Tilapia esculentus fry produced and 2000 distributed to 4 farmers (all males) in the districts of Ibanda and Mbarara

# Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs

UShs Thousand

Item	Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)	11,200.000
221001 Advertising and Public Relations	7,750.000
224011 Research Expenses	50,950.000
227004 Fuel, Lubricants and Oils	4,100.000
228001 Maintenance-Buildings and Structures	8,000.000

### VOTE: 142 National Agricultural Research Organization (NARO)

**Ouarter 4** 

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	UShs Thousand
Item	Spent
228002 Maintenance-Transport Equipment	8,000.000
228003 Maintenance-Machinery & Equipment Other than Transport	10,000.000
Total For	Budget Output 100,000.000
Wage Red	urrent 0.000
Non Wag	Recurrent 100,000.000
Arrears	0.000
AIA	0.000
Total For	Department 100,000.000
Wage Rec	urrent 0.000
Non Wag	Recurrent 100,000.000
Arrears	0.000
AIA	0.000
Department: 006 Nabuin Zonal Agriculture Research Institute(ZA)	(DI)

#### Department: 006 Nabuin Zonal Agriculture Research Institute (ZARDI

**Budget Output:010011 Technology Promotion** 

PIAP Output: 01040705 Demand driven agriculture technologies developed

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

Twenty (20) agricultural research technologies for, livestock, apiary, vegetables, soils, forestry, animal feeds and value addition for increased production and productivity generated and promoted across the zone.

2 livestock technologies (goats and cows) were promoted and 31 improved cross breeds of Kalahari goats delivered to Napak and Nakapiripirit. Towards enhancing productivity in cattle, 50 cows were artificially inseminated with Tyrolese gray semen. One protocol for processing tincture of propolis was developed. 6 demonstrations of Robusta coffee, cactus(Prickly pear), maize(MM3), sorghum(NAROsorg2), Tomato(Rio Grande), Greengram NAROgram2) established on station each on 0.5 acres. 2 acres each of Bracharia mulato 1 and Chloris gayana were established, 5 acres each of Bracharia brizantha and Super napier maintained as a source of germplasm distributed to 200 males and 100 females in Nakapiripirit and Napak. Tree species(Melia volkensii-Uganda12,000,Albizia coriaria- 1,000,Calliandra calothyrsus-6,000,Eucalyptus clone-250,Citrus sinensis- 500,Citus tangeria-150,Termarindus indica -100, Prunus africana-150, Hass avocado50 and Guava500) were established as woodlots and orchards onstation.

# VOTE: 142 National Agricultural Research Organization (NARO)

Annual Planned Outputs		Cumulative Outputs Achieved by End of Quarter
PIAP Output: 01040706 Research-extension farmer linka	ges developed	and strengthened
Programme Intervention: 010407 Strengthen agricultural	l research and	technology development
6 Agricultural research products and services promoted acros improve production, nutrition, food security and support agre industries		Towards enhancing production and productivity, One (1) protocol for processing tincture of propolis was developed. Apiary products (honey, propolis and venom) were promoted in the zone through on-farm demonstrations, exhibitions and trade shows to improve food security. 41 intern students (20 males and 21 females) from Busitema University, Kumi University and Uganda Martyrs University were trained in production of venom, harvesting using the honey harvesting kit, and post-harvest handling activities.
Twenty (20) agricultural research technologies for, livestock, vegetables, soils, forestry, animal feeds and value addition fo production and productivity generated and promoted across to	r increased	NA
Cumulative Expenditures made by the End of the Quarte Deliver Cumulative Outputs	er to	UShs Thousand
Item		Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allowar	nces)	12,000.000
221001 Advertising and Public Relations		2,000.000
221011 Printing, Stationery, Photocopying and Binding		4,000.000
224011 Research Expenses		40,000.000
227004 Fuel, Lubricants and Oils		15,000.000
228001 Maintenance-Buildings and Structures		6,000.000
228002 Maintenance-Transport Equipment		15,000.000
228003 Maintenance-Machinery & Equipment Other than Tr	ansport	6,000.000
	Total For Bud	dget Output 100,000.000
	Wage Recurre	nt 0.000
	Non Wage Re	current 100,000.000
	Arrears	0.000
	AIA	0.000
	Total For Dep	Dartment 100,000.000
	Wage Recurre	nt 0.000
	Non Wage Re	current 100,000.000
	Arrears	0.000
	AIA	0.000

### VOTE: 142 National Agricultural Research Organization (NARO)

One NARO strategic plan & NDPIVdeveloped

Quarter 4

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter
Department:007 NARO-SECRETARIATE	
Budget Output:010008 Capacity Strengthening	
PIAP Output: 01040705 Demand driven agriculture technologies deve	loped
Programme Intervention: 010407 Strengthen agricultural research an	d technology development
Research enabling environment maintained through four routine maintenance of NARO facilities, machinery, vessels, utilities and security maintained and support to staff.	Towards accelerating the generation and uptake of innovative, context-specific agricultural technologies, all staff were renumerated, facilities including machinery and 10 vessels were maintained.
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	UShs Thousand
Item	Spend
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)	256,609.350
212102 Medical expenses (Employees)	821,120.000
212103 Incapacity benefits (Employees)	72,250.000
224011 Research Expenses	674,154.289
228001 Maintenance-Buildings and Structures	10,640.000
Total For Bu	1,834,773.639
Wage Recurr	ent 0.000
Non Wage Ro	ecurrent 1,834,773.639
Arrears	0.000
AIA	0.000
Budget Output:010010 Technology Generation	
PIAP Output: 01040705 Demand driven agriculture technologies deve	loped
Programme Intervention: 010407 Strengthen agricultural research an	d technology development
Four research monitoring reports generated to inform management One annual work plan and budget 2025-2026 final accounts report generated and submitted Four bankable proposals developed to attract research funding,	Towards enhancing performance, one (01) research monitoring report was generated. Additionally, the FY 2025/26 annual work plan and budget was developed. One final accounts report for 2024/25 was generated and submitted. One bankable proposal on bio-diversity conservation was

developed to attract research funding

### VOTE: 142 National Agricultural Research Organization (NARO)

**Quarter 4** 

#### **Annual Planned Outputs**

#### **Cumulative Outputs Achieved by End of Quarter**

#### PIAP Output: 01040705 Demand driven agriculture technologies developed

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

Three (03) research laboratories (Food Bio Sciences, Animal Nutrition and animal health) recognised towards accreditation. 4 Research Compliances under (IACUC, IBC undertaken.

Four research committees were supported to achieve the following;One protocol for pharmacovigilance of the NAROVAC® antitick vaccine was reviewed and approved. Two confined field trial protocols—on transgenic cassava for whitefly resistance and cisgenic bananas for BXW control—were approved. A study on adjuvant antitick antigen formulations was also approved. An MTA for 300kg of coffee green beans was processed to boost coffee productivity. The NARO Research Ethics Committee was formed, and UNCST accreditation initiated. The NARO Research Standards Manual was developed.

#### PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

Four research monitoring reports generated to inform management One annual work plan and budget developed One final accounts report generated and submitted Four bankable proposals developed to attract research funding Towards enhancing performance, one (01) research monitoring report was generated. One bankable proposal on bio-diversity conservation was developed to attract research funding

## Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs

UShs Thousand

Item	Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)	471,029.400
221009 Welfare and Entertainment	142,539.000
221011 Printing, Stationery, Photocopying and Binding	9,999.999
221016 Systems Recurrent costs	20,000.000
222001 Information and Communication Technology Services.	104,000.000
222002 Postage and Courier	2,000.000
223001 Property Management Expenses	76,000.004
223004 Guard and Security services	24,800.000
223005 Electricity	554,000.000
223006 Water	262,436.000
224002 Veterinary supplies and services	388,980.001
224003 Agricultural Supplies and Services	649,672.500
224004 Beddings, Clothing, Footwear and related Services	12,000.000
224011 Research Expenses	2,489,452.405
226001 Insurances	690,608.000

# VOTE: 142 National Agricultural Research Organization (NARO)

nual Planned Outputs Achieved by End of Quarter	
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	UShs Thousand
Item	Spen
227001 Travel inland	32,462.800
227004 Fuel, Lubricants and Oils	38,920.000
228002 Maintenance-Transport Equipment	11,616.399
228003 Maintenance-Machinery & Equipment Other than Transport	4,800.000
228004 Maintenance-Other Fixed Assets	8,200.000
Total For Bu	dget Output 5,993,516.508
Wage Recurre	ent 0.000
Non Wage Re	5,993,516.508
Arrears	0.000
AIA	0.000
Budget Output:010011 Technology Promotion	
PIAP Output: 01040705 Demand driven agriculture technologies devel	loped
Programme Intervention: 010407 Strengthen agricultural research and	•
16 research products (aflasafe, Agricultural machinery prototypes, nutrient dense varieties, information packages promoted). 20 demonstration kits of improved technologies distributed to 75 high level cultural and religious leaders from 4 regions	(aflasafe, Agricultural machinery prototypes, nutrient dense varieties, information packages) were promoted to over 2000 stakeholders (1200 male, 800 female) across the country. Additionally, 5 new demonstrations for strategic commodities were established across the country targeting 25 high level cultural and religious leaders from 4 regions of the country.
NA	NA
NA	NA
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	UShs Thousand
Item	Spen
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)	214,296.550
221001 Advertising and Public Relations	900,000.00
221003 Staff Training	300,712.08
221011 Printing, Stationery, Photocopying and Binding	50,000.000
221012 Small Office Equipment	50,000.000
221012 Small Office Equipment 222001 Information and Communication Technology Services.	50,000.000 1,700,000.000

## **VOTE:** 142 National Agricultural Research Organization (NARO)

Annual Planned Outputs Achieve		End of Quarter
Cumulative Expenditures made by the End of the Deliver Cumulative Outputs	e Quarter to	UShs Thousand
Item		Spent
224003 Agricultural Supplies and Services		4,500,000.000
224005 Laboratory supplies and services		35,732,392.352
224011 Research Expenses		7,899,357.501
225101 Consultancy Services		1,300,000.000
226001 Insurances		1,000,000.000
227004 Fuel, Lubricants and Oils		300,000.000
228001 Maintenance-Buildings and Structures		13,458,351.301
228002 Maintenance-Transport Equipment		4,108,153.001
228004 Maintenance-Other Fixed Assets		100,000.000
	Total For Budget Output	71,813,262.788
	Wage Recurrent	0.000
	Non Wage Recurrent	71,813,262.788
	Arrears	0.000
	AIA	0.000
	Total For Department	79,641,552.935
	Wage Recurrent	0.000
	Non Wage Recurrent	79,641,552.935
	Arrears	0.000
	AIA	0.000
Department:008 National Agricultural Research	Laboratories	
Budget Output:010010 Technology Generation		

### VOTE: 142 National Agricultural Research Organization (NARO)

**Ouarter 4** 

#### **Annual Planned Outputs**

Item

#### **Cumulative Outputs Achieved by End of Quarter**

PIAP Output: 01040705 Demand driven agriculture technologies developed

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

6 Soil maps of Mbarara, Kabale, Fort portal, Masindi, jinja and Aloi upgraded at a scale of 1:50,000.

12 prototypes of agri-engineering technologies developed for production and improved food safety and 4 routine maintenances facilities.

Towards improving production and productivity, four (04) agroengineering prototypes (1st prototype of a low horsepower handheld motorized weeder with a newly designed weeding system, 2nd prototype of a motorized low horsepower coffee pulper with improved design of pulping cylinder, 1st prototype commercial bean thresher with interchangeable concaves to cater for different bean seed sizes and a precleaning mechanism and 1st prototype hybrid solar dryer, with solar energy collectors to increase temperature to 600C, good for drying) were developed. Facilities at the institute including labs, demonstrations, machinery and equipment were maintained.

# Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs

UShs Thousand

Spent

144		~ptt
211106 Allowances (Incl. Casuals, Temporary, sitting allowan	aces)	11,000.000
224005 Laboratory supplies and services		16,000.000
224011 Research Expenses		69,300.000
227004 Fuel, Lubricants and Oils		17,800.000
228003 Maintenance-Machinery & Equipment Other than Tra	insport	34,000.000
228004 Maintenance-Other Fixed Assets		12,000.000
	Total For Budget Output	160,100.000
,	W D	0.000

 Wage Recurrent
 0.000

 Non Wage Recurrent
 160,100.000

 Arrears
 0.000

 AIA
 0.000

#### **Budget Output:010011 Technology promotion**

#### PIAP Output: 01040705 Demand driven agriculture technologies developed

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

12 Improved technologies (Varieties, agro machinery, fertilizer blends and information) promoted for improved production and productivity across the country

Towards improving production and productivity across the country, three (03) Improved technologies (Varieties (04), agro machinery (04), new fertilizer blends for maize, rice, beans, coffee and information) were promoted through 4 exhibitions, and 10 demonstrations reaching a total of 5000 stakeholders (2000 male, 3000 female).

### VOTE: 142 National Agricultural Research Organization (NARO)

**Ouarter 4** 

#### **Annual Planned Outputs**

#### **Cumulative Outputs Achieved by End of Quarter**

#### PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

12 technologies for dissemination multiplied Research enabling environment strengthened through four quarterly routine maintenance of facilities, equipment, machinery and support staff Towards improving agricultural research, facilities at the institute including labs, demonstrations, machinery and equipment were maintained. Towards enhancing production and productivity, 9500 Kariba weed weevils were released and 750 beetles released on Parthenium weed infestations. Additionally, at least 50 extension and 200 farmers and artisans in Lira, Gulu, Iganga and Rakai were trained in post-harvest storage technologies. one (01) commercial ecofriendly pest management product was generated and promoted.

Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs		UShs Thousand
Item		Spent
221011 Printing, Stationery, Photocopying and Binding		4,600.000
224011 Research Expenses		69,300.000
228002 Maintenance-Transport Equipment		16,000.000
	Total For Budget Output	89,900.000
	Wage Recurrent	0.000
	Non Wage Recurrent	89,900.000
	Arrears	0.000
	AIA	0.000
	Total For Department	250,000.000
	Wage Recurrent	0.000
	Non Wage Recurrent	250,000.000
	Arrears	0.000
	AIA	0.000
<b>Department:009 National Coffee Research Institute</b>		
<b>Budget Output:010010 Technology Generation</b>		

### VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

#### **Annual Planned Outputs**

#### **Cumulative Outputs Achieved by End of Quarter**

PIAP Output: 01040705 Demand driven agriculture technologies developed

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

Six 6 coffee and cocoa related technologies development supported for improved production and processing

One value added coffee product( Nutri coffee bread)with caffeine which boosts focus, concentration and mental clarity was developed consisting of antioxidants protecting against cell damage, prevents inflammation and supports gut health. Coffee dietary fiber reduces bloating and constipation. Towards improvement of coffee quality, 3 varieties,( A/3/13, D/11/6 and D/12/12 )with high yield and resistant to coffee leaf rust were released and submitted to variety release committee. Towards improvement of cocoa quality, 5 isolates for microbes were profiled for controlled cocoa fermentation for better aroma and flavor.

Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs		UShs Thousand
Item		Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)		8,000.000
223004 Guard and Security services		8,000.000
223005 Electricity		28,000.000
224003 Agricultural Supplies and Services		9,000.000
224011 Research Expenses		19,000.000
227004 Fuel, Lubricants and Oils		16,000.000
228002 Maintenance-Transport Equipment		12,000.000
Total For	Budget Output	100,000.000
Wage Rec	current	0.000
Non Wage	e Recurrent	100,000.000
Arrears		0.000
AIA	AIA	
Budget Output:010011 Technology Promotion		
PIAP Output: 01040705 Demand driven agriculture technologies de	eveloped	
Programme Intervention: 010407 Strengthen agricultural research	and technology development	
400,000 clonal coffee cuttings produced and delivered to private nurser operators and small holder farmers for enhanced production, research enabling environment created through 4 maintenances	y NA	

## VOTE: 142 National Agricultural Research Organization (NARO)

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter
PIAP Output: 01040706 Research-extension farmer linkages developed	d and strengthened
Programme Intervention: 010407 Strengthen agricultural research and	d technology development
400,000 clonal coffee cuttings de as livered to various stakeholder for dissemination as foundation seed for private nursery operators and, research enabling environment created through 4 maintenances	Towards improving coffee production, 100,000 coffee seedlings were generated and distributed to 500 farmers within Mukono Zone and 20 private nursery operators. Towards creating a conducive environment for agricultural research, 4 screen houses, 10 equipment and machinery were maintained for operationalisation
400,000 clonal coffee cuttings produced and delivered to private nursery operators and small holder farmers for enhanced production, research enabling environment created through 4 maintenances	NA
PIAP Output: 0103020116 Functional public-private partnerships esta	blished for technology development and promotion
Programme Intervention: 010407 Strengthen agricultural research and	d technology development
Eight (08) technology generation and promotional partnership established and strengthened for promotion and research facilities Maintained for improved coffee technologies	Towards enhancing coffee research, one (01) technology generation and one (01) technology promotion partnerships were signed with cultural institutions on the adoption of improved coffee varieties. Towards creating a conducive environment for agricultural research, all institute staff were renumerated, 10 equipment and machinery were maintained for operationalisation
400,000 clonal coffee cuttings produced and delivered to private nursery operators and small holder farmers for enhanced production, research enabling environment created through 4 maintenances	NA
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	UShs Thousand
Item	Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)	8,000.000
212103 Incapacity benefits (Employees)	3,000.000
221001 Advertising and Public Relations	6,000.000
224011 Research Expenses	48,000.000
228001 Maintenance-Buildings and Structures	10,000.000
Total For Bu	dget Output 75,000.000
Wage Recurre	ent 0.000
Non Wage Re	recurrent 75,000.000
Arrears	0.000
AIA	0.000
Total For De	partment 175,000.000

### VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

<b>Annual Planned Outputs</b>	Cumulative Outputs Achieved by End of Quarter	
	Wage Recurrent	0.000
	Non Wage Recurrent	175,000.000
	Arrears	0.000
	AIA	0.000

**Department:010 National Crops Resources Research Institute** 

**Budget Output:010010 Technology Generation** 

PIAP Output: 01040705 Demand driven agriculture technologies developed

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

90MT of maize and beans seed produced, 3,000 seedlings of fruit trees and palm raised and availed to farmers to enhance productivity.

One bio-pesticide for management of false codling moth developed.

8 technologies generated for uptake across the country

Towards enhancing fruit production and productivity, 2000 fruit tree seedlings (1500 mango: Kakule, Ngowe, and apple: 500 citrus Valencia, Washington Navel, Hamelin) were produced and availed to farmers across the 04 agro-ecological zones of Uganda. 03 farmer management practices (use of bio-pesticides, botanicals, and judicious insecticides) for management of false codling moth (FCM) in Chilli and pepper were promoted through demonstrations. 01 field and harvesting protocol (standard operating procedures) for FCM management was developed. Efficacy of 05 different bio-pesticides (Cryptophlebia leucotreta Granulovirus, Bacillus thuringiensis, Beauveria bassiana, Metarhizium anisopliae and Azadirachtin were evaluated against FCM. Towards the production of technologies, 48 common bean lines, 16 elite yam genotypes, 5000 F1 genotypes 1300 have evaluated for yield, disease resistance, culinary taste at 05 locations across the country with farmer groups under Uniform Yield Trials (UYT).

Cumulative Expenditures made by the End of Deliver Cumulative Outputs	of the Quarter to	UShs Thousand
Item		Spent
211106 Allowances (Incl. Casuals, Temporary,	sitting allowances)	34,000.000
221008 Information and Communication Techn	ology Supplies.	5,999.971
227004 Fuel, Lubricants and Oils		19,000.000
228002 Maintenance-Transport Equipment		16,000.000
	Total For Budget Output	74,999.971
	Wage Recurrent	0.000
	Non Wage Recurrent	74,999.971
	Arrears	0.000
	AIA	0.000

### VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

#### **Annual Planned Outputs**

#### **Cumulative Outputs Achieved by End of Quarter**

#### **Budget Output:010011 Technology Promotion**

#### PIAP Output: 01040705 Demand driven agriculture technologies developed

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

8 technologies promoted through delivery of 90MT of seed maize and beans seeds; 3,000 seedlings of fruit trees and palm raised to various uptake pathways to enhance productivity.

Towards the enhancement of production and productivity, 14.5MT of maize and 10MT bean breeder seed and foundation seed were produced and availed to farmers from Mukono, Luweero, Buvuma, Kiryandongo, and Bukedea stored. Assorted of bean seed were produced and availed to farmers. 4000 fruit tree seedlings (1500 mango: Kakule, Ngowe, and apple: 500 citrus Valencia, Washington Navel, Hamelin) and 2000 palm were produced and availed to farmers across the four agro-ecological zones of Uganda.

#### PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

Four farmer technology generation and dissemination platforms developed and disseminated for improved uptake of technologies

Towards enhancing uptake of technologies, 03 Multi-stakeholder Platforms for beans (Kyazanga Farmers' Cooperative, SAWA Agricultural Development Company Ltd., and Manyakabi Area Cooperative Ltd.) in Lwengo, Mpigi, and Isingiro districts respectively were developed

Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs		UShs Thousand
Item		Spent
221011 Printing, Stationery, Photocopying and Binding		16,000.000
223005 Electricity		20,000.000
224011 Research Expenses		63,753.000
	Total For Budget Output	99,753.000
	Wage Recurrent	0.000
	Non Wage Recurrent	99,753.000
	Arrears	0.000
	AIA	0.000
	Total For Department	174,752.971
	Wage Recurrent	0.000
	Non Wage Recurrent	174,752.971
	Arrears	0.000
	AIA	0.000

#### **Department:011 National Fisheries Resources Research Institute**

## VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter
Budget Output:010010 Technology Generation	
PIAP Output: 01040705 Demand driven agriculture technologies devel	oped
Programme Intervention: 010407 Strengthen agricultural research and	l technology development
10 technologies & practices; generated & disseminated. 15000 Nile tilapia African catfish improved seed strains produced and supplied to 17 hatchery operators and lead fish farmers.4 routine maintenances of research equipment conducted	NA
PIAP Output: 01040706 Research-extension farmer linkages developed	and strengthened
Programme Intervention: 010407 Strengthen agricultural research and	l technology development
15000 Nile tilapia, African catfish improved seed strains produced and supplied to 17 hatchery operators and lead fish farmers.4 routine maintenances of research equipment conducted	Towards enhancing production and productivity in aquaculture, 72,193 Nile tilapia seed and 229 African catfish seed were produced and supplied to Twenty eight (28) fish farmers in districts of Masaka, Lwengo and Wakiso. Additionally, 150 African catfish brood stocks were obtained from Lake Albert to boost production of improved fish seed with high quality eggs and sperm. Three (03) nursery ponds were renovated at ARDC, Kajjansi to improve conditions to support optimal growth and survival of fish, address issues concerning water quality, pond structure and biological factors leading to a healthier and more productive nursery environment. One (01) hatchery and fish meal were maintained to facilitate research activities
10 technologies & practices; generated & disseminated. 15000 Nile tilapia African catfish improved seed strains produced and supplied to 17 hatchery operators and lead fish farmers.4 routine maintenances of research equipment conducted	Towards enhancement of production and productivity, fish feed with pigeon pea and black soldier fly ingredients (available non-human fed ingredients) was produced containing increased protein content which improves fish immunity and reduces reliance on fishmeal. Additionally One (01) technology for utilizing periphyton for feeding Nile tilapia was developed to reduce reliance on fishmeal, improve fish performance and maintain a good balance of protein, lipids, and other essential nutrients that support fish growth and health. 10,000 fast growing and high yielding fingerlings of tilapia, catfish and mirror carp were produced through selective breeding and distributed to farmers in 5 districts; Arua, Buikwe, Gulu, Masaka and Lwengo.
10 technologies & practices; generated & disseminated. 15000 Nile tilapia	Towards enhancing fish productivity, 10,000 fingerlings of assorted fish

10 technologies & practices; generated & disseminated. 15000 Nile tilapia African catfish improved seed strains produced and supplied to 17 hatchery operators and lead fish farmers.4 routine maintenances of research equipment conducted

Towards enhancing fish productivity, 10,000 fingerlings of assorted fish seed was produced and delivered to farmers in Wakiso and Mukono districts

## **VOTE:** 142 National Agricultural Research Organization (NARO)

Annual Planned Outputs	Cumulative Outputs Achieved by En	d of Quarter
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs		UShs Thousand
Item		Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)		11,350.000
221001 Advertising and Public Relations		4,080.000
221008 Information and Communication Technology Supplies.		1,500.000
224003 Agricultural Supplies and Services		8,000.000
224011 Research Expenses		111,900.000
227004 Fuel, Lubricants and Oils		12,470.000
228001 Maintenance-Buildings and Structures		11,100.000
228002 Maintenance-Transport Equipment		6,300.000
228003 Maintenance-Machinery & Equipment Other than Transport		8,300.000
Total For	· Budget Output	175,000.000
Wage Rec	current	0.000
Non Wage	e Recurrent	175,000.000
Arrears		0.000
AIA		0.000
Total For	Department	175,000.000
Wage Rec	current	0.000
Non Wago	e Recurrent	175,000.000
Arrears		0.000
AIA		0.000
Department:012 National Forestry Resources Research Institute		
Budget Output:010010 Technology Generation		
PIAP Output: 01040705 Demand driven agriculture technologies d	eveloped	
Programme Intervention: 010407 Strengthen agricultural research	and technology development	
1 small scale paper mill for research established. 3 paper prototypes generated from 3 types of forest based raw materials. 10,000 clonal eucalyptus seedlings produced & availed to farmers; 1 information pap developed on forest based raw material	Towards meeting the National forestry's seedlings were produced and distributed Mukono zone.	• • •

### VOTE: 142 National Agricultural Research Organization (NARO)

**Ouarter 4** 

#### **Annual Planned Outputs**

#### **Cumulative Outputs Achieved by End of Quarter**

PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

10,000 seedlings for trees of strategic importance Hass avocado, clonal eucalyptus, and site selection technology disseminated through partnerships with stakeholders and farmers along the value chains.

IIn the effort to increase forestry production, 10,000 high yield, quick maturing, long shelf life, and a rich flavor (high oil content Hass avocado seedlings were generated and disseminated to different stakeholders and 20 farmers in Mukono district. 23,622 clonal eucalyptus seedlings were produced and distributed to 5 small-holder farmer groups. Majority of the people (62%) rely on locally sourced, non-improved seedlings that yield under 20?m³/ha/year, improved clonal eucalyptus plantations consistently deliver 30-45?m³/ha/year which exposes a productivity gap of 10-25? m³/ha/year per hectare.

<b>Cumulative Expenditures made by the End of the Quart Deliver Cumulative Outputs</b>	ter to	UShs Thousand
Item		Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allow	ances)	4,000.000
221001 Advertising and Public Relations		3,000.000
221011 Printing, Stationery, Photocopying and Binding		6,000.000
224011 Research Expenses		37,000.000
227004 Fuel, Lubricants and Oils		8,000.000
228001 Maintenance-Buildings and Structures		3,999.962
228002 Maintenance-Transport Equipment		6,000.000
228003 Maintenance-Machinery & Equipment Other than T	Fransport	8,000.000
	Total For Budget Output	75,999.962
	Wage Recurrent	0.000
	Non Wage Recurrent	75,999.962
	Arrears	0.000
	AIA	0.000

**Budget Output:010011 Technology Promotion** 

### VOTE: 142 National Agricultural Research Organization (NARO)

**Ouarter 4** 

#### **Annual Planned Outputs**

#### **Cumulative Outputs Achieved by End of Quarter**

#### PIAP Output: 01040705 Demand driven agriculture technologies developed

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

Four 4 forestry technologies of strategic importance (site selection technology, clonal eucalyptus, Hass avocado and forage trees) Multiplied and adaptation determined for dissemination to farmers

Towards enhancing forestry production and productivity, 3,000 seedlings of Faidherbia albida (apple-ring acacia) trees were raised and distributed to 20 farmers for on-farm planting. Faidherbia albida is valuable resource for improving soil fertility, providing fodder for livestock, and offering protection against erosion. Towards enhancing soil conversion, 3000 seedlings of Calliandra were raised and distributed to 20 farmers and livestock pastoralists to integrate into their farming systems. Calliandra is a fast-growing shrub and nitrogen-fixing shrub suitable for soil conservation practices like soil erosion control and used by farmers as a fodder for livestock as they have a high biomass production. These are characterized by a rapid growth rate, drought tolerance, and a deep tap root system, which accesses deep water reserves, thus contributing to sustainable land management and agroecology.

#### PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

Research enabling environment strengthened through four quarterly routine maintenance of facilities, equipment, machinery, and support staff NA

Cumulative Expenditures made by the En Deliver Cumulative Outputs	d of the Quarter to	UShs Thousand
Item		Spent
224011 Research Expenses		24,000.000
	Total For Budget Output	24,000.000
	Wage Recurrent	0.000
	Non Wage Recurrent	24,000.000
	Arrears	0.000
	AIA	0.000
	Total For Department	99,999.962
	Wage Recurrent	0.000
	Non Wage Recurrent	99,999.962
	Arrears	0.000
	AIA	0.000

#### Department:013 Mukono Zonal Agriculture Research Institute (ZARDI)

#### **Budget Output:010011 Technology Promotion**

## **VOTE:** 142 National Agricultural Research Organization (NARO)

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter
PIAP Output: 01040705 Demand driven agriculture technologies dev	reloped
Programme Intervention: 010407 Strengthen agricultural research a	nd technology development
Eight (08) new technologies promoted and disseminated to 450,000 farmers through 8 agricultural expo campaigns for increased agricultural production	Towards enhancing agricultural productivity two technologies(coffee varieties and indigenous chicken) were promoted at 3expos(jinja agricultural show, labor day and Luwero) reaching over 20,000participants
PIAP Output: 01040706 Research-extension farmer linkages develop	ed and strengthened
Programme Intervention: 010407 Strengthen agricultural research a	nd technology development
16 technologies promoted through demonstrations for possible commercialization 165,000 assorted seedlings; 40.5MTs of maize & pasture seed; 20,000 local chicken,120,000 fish fingerings and 688 piglets produced and availe to farmers.	NA ed
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	UShs Thousand
Item	Spent
222001 Information and Communication Technology Services.	6,700.000
223004 Guard and Security services	32,600.000
224011 Research Expenses	73,680.000
228001 Maintenance-Buildings and Structures	45,300.000
228002 Maintenance-Transport Equipment	11,351.600
228003 Maintenance-Machinery & Equipment Other than Transport	4,000.000
228004 Maintenance-Other Fixed Assets	1,000.000
Total For E	Budget Output 174,631.600
Wage Recu	rrent 0.000
Non Wage I	Recurrent 174,631.600
Arrears	0.000
AIA	0.000
Total For D	Department 174,631.600
Wage Recur	rrent 0.000
Non Wage I	Recurrent 174,631.600
Arrears	0.000
AIA	0.000
Department:015 National Semi Arid Resources Research Institute (N	aSARRI)
<b>Budget Output:010010 Technology Generation</b>	

### VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

#### **Annual Planned Outputs**

#### **Cumulative Outputs Achieved by End of Quarter**

PIAP Output: 01040705 Demand driven agriculture technologies developed

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

6 technologies (cotton varieties, Pigeon peas and bio-pesticides) developed 1MT of foundation seed of candidate lines of cotton produced, research enabling environment maintained through 4 maintenances of research facilities.

Towards development of cotton varieties, 2 lines were developed and identified. 0.2T of foundation seed BPA2015A were produced. Under pigeon pea, achievements were set under the objectives below: 1.expedite release of pea lines developed during previous research. Towards this, PVTs of 5 pea entries were set up at 5 sites: NgettaZARDI, Kitgum Satellite Station, AbiZARDI, NaSARRI and NabuinZARDI. 2 lines(ICEAP00540&ICEAP00554) performed better than the checks and were stable in Ngetta, AbiZARDI and NaSARRI. 2.Development, promotion and use of native rhizoid fertilizer. Under this, field trials were set up at NaSARRI and Ngetta and data collected at 5&10 weeks on total nodule count and final grain yield. Average grain yield was significantly different between varieties with higher yield in SEPI 1 than SEPI. 3.For commercialization of pea-based feed, fish feed and broiler starter with pigeon pea content enhanced fish growth and led to higher slaughter and hot carcass weight in broilers.

Cumulative Expenditures made by the End of th Deliver Cumulative Outputs	e Quarter to	UShs Thousand
Item		Spent
221007 Books, Periodicals & Newspapers		4,000.000
221008 Information and Communication Technolog	gy Supplies.	4,000.000
224011 Research Expenses		66,199.681
227004 Fuel, Lubricants and Oils		9,800.000
228001 Maintenance-Buildings and Structures		4,000.000
228002 Maintenance-Transport Equipment		7,557.587
228003 Maintenance-Machinery & Equipment Other	er than Transport	3,000.000
	Total For Budget Output	98,557.268
	Wage Recurrent	0.000
	Non Wage Recurrent	98,557.268
	Arrears	0.000
	AIA	0.000
	Total For Department	98,557.268
	Wage Recurrent	0.000
	Non Wage Recurrent	98,557.268

### **VOTE:** 142 National Agricultural Research Organization (NARO)

**Ouarter 4** 

UShs Thousand

100,000.000

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter	
	Arrears	0.000
	AIA	0.000

#### Department:016 Ngetta ZARDI

#### **Budget Output:010011 Technology Promotion**

#### PIAP Output: 01040705 Demand driven agriculture technologies developed

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

Three (03) forage varieties of bracharia mulato and 1 acre of Nappier to demonstrate livestock feeding established on station for dissemination to farmers in NAEZ and 1 acre of improved coffee maintained for farmer demonstration

Towards maintenance of improved coffee aimed at demonstrating best coffee technologies and practices, the mother garden of elite Robusta coffee measuring one acre was fully maintained throughout the quarter, with key agronomic practices such as pruning and weed management successfully carried out. To demonstrate and disseminate the best technologies and practices to farmers, the garden served as a learning site, hosting two field visits that attracted over 60 farmers from the Lango sub region. Extension materials were distributed to the participants to enhance knowledge transfer and adoption.

#### PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

16.6 tons & 300 bags of early generation seed and 10,000 Tilapia fingerlings produced. 4 cost effective and sustainable management technologies identified , 6 demonstrations established, 5 publications published, 1 technology for maize yield developed.

Cumulative Expenditures made by the End of the Quarter to

NA

Deliver Cumulative Outputs	Cons Inousum
Item	Spent
211107 Boards, Committees and Council Allowances	7,000.000
221011 Printing, Stationery, Photocopying and Binding	8,000.000
222001 Information and Communication Technology Services.	11,000.000
223001 Property Management Expenses	5,000.000
223004 Guard and Security services	18,000.000
224011 Research Expenses	24,000.000
227004 Fuel, Lubricants and Oils	13,000.000
228002 Maintenance-Transport Equipment	14,000.000
Total For Budget Output	100,000.000
Wage Recurrent	0.000

Non Wage Recurrent

## **VOTE:** 142 National Agricultural Research Organization (NARO)

Annual Planned Outputs		<b>Cumulative Outputs Achieved by End of</b>	f Quarter
	Arrears		0.00
	AIA		0.00
	Total For Dep	partment	100,000.00
	Wage Recurre	nt	0.00
	Non Wage Re	current	100,000.00
	Arrears		0.00
	AIA		0.00
Department:017 Rwebitaba ZARDI			
Budget Output:010011 Technology Promotion	1		
PIAP Output: 01040705 Demand driven agric	culture technologies devel	oped	
Programme Intervention: 010407 Strengthen	agricultural research and	technology development	
8 Improved technologies and innovation for proc Industry generation supported and delivered alor			resistant cassava and sweet cone through 2 acre on station and 104 male) farmers. Instrations were established on
Adaptability of 8 new crop & pasture varieties d demonstrations for technologies established. 250 priority crops; 600 bags of cassava & sweet pota fingerlings produced & availed to farmers for ef	OMT of clean seed for 5 ato; 100,000 fish	NA	
Cumulative Expenditures made by the End of Deliver Cumulative Outputs	f the Quarter to		UShs Thousand
Item			Spen
211106 Allowances (Incl. Casuals, Temporary, s	itting allowances)		14,000.000
221011 Printing, Stationery, Photocopying and I	Binding		4,000.000
224011 Research Expenses			112,000.000
227004 Fuel, Lubricants and Oils			16,999.99
228002 Maintenance-Transport Equipment			21,599.99
228003 Maintenance-Machinery & Equipment G	Other than Transport		6,400.00
	Total For Buc	lget Output	174,999.98
	Wage Recurre	nt	0.00
	Non Wage Re	current	174,999.98
	Arrears		0.00

### **VOTE:** 142 National Agricultural Research Organization (NARO)

**Budget Output:010010 Technology Generation** 

Annual Planned Outputs			f Quarter
	AIA		0.000
	Total For De	epartment	174,999.980
	Wage Recurr	ent	0.000
	Non Wage R	ecurrent	174,999.980
	Arrears		0.000
	AIA		0.000
Development Projects			
Project:1560 Relocation and Operationali	sation of the National Livest	ock Resources Research Institute(NALIRI	RI)
Budget Output:000017 Infrastructure Dev	elopment and Management		
PIAP Output: 01040705 Demand driven a	griculture technologies deve	loped	_
Programme Intervention: 010407 Strength	nen agricultural research an	d technology development	
Two ongoing research support facilities com heifer breeding facility at Nakyesasa with ca Goat rearing facility with capacity to hold 30 breeding for improved productivity	pacity to hold 300 heifers,	NA	
3 research support facilities completed; quee holding capacity of 100 colonies and paddoc units for breeding research with holding capa and access roads established at Maruzi	king system of eight (08)	Towards enhancing livestock production as system of four (04) units for breeding resea heads of cattle established and maintained	arch with holding capacity 1000
Cumulative Expenditures made by the En Deliver Cumulative Outputs	d of the Quarter to		UShs Thousand
Item			Spent
312121 Non-Residential Buildings - Acquisi	tion		2,465,730.000
Total For Budget Output		ıdget Output	2,465,730.000
	GoU Development		2,465,730.000
	External Fina	ancing	0.000
	Arrears		0.000
	AIA		0.000

### VOTE: 142 National Agricultural Research Organization (NARO)

**Ouarter 4** 

#### **Annual Planned Outputs**

#### **Cumulative Outputs Achieved by End of Quarter**

Project:1560 Relocation and Operationalisation of the National Livestock Resources Research Institute(NALIRRI)

PIAP Output: 01040705 Demand driven agriculture technologies developed

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

16 livestock breeding and production technologies (Vaccines, forages, diagnostic kits, improved indigenous chicken, queens with superior honey productivity, animal feed formulations) developed for improved production and productivity of livestock

Towards improving livestock production and productivity, four maize forage lines were determined for cattle. Additionally, development of elite chicken breeds G-5 for both cocks and chicken was initiated. Furthermore, the construction of a queen bee rearing facility at Maruzi was completed, essential for rearing bee colonies.

Cumulative Expenditures made by the End of Deliver Cumulative Outputs	of the Quarter to	UShs Thousand
Item		Spent
221008 Information and Communication Techn	ology Supplies.	20,000.000
221011 Printing, Stationery, Photocopying and	Binding	8,000.000
223004 Guard and Security services		20,000.000
223005 Electricity		27,667.000
224002 Veterinary supplies and services		20,000.000
224003 Agricultural Supplies and Services		213,026.998
224005 Laboratory supplies and services		40,010.967
224011 Research Expenses		2,045,165.002
227004 Fuel, Lubricants and Oils		132,160.000
228002 Maintenance-Transport Equipment		4,000.000
	Total For Budget Output	2,530,029.967
	GoU Development	2,530,029.967
	External Financing	0.000
	Arrears	0.000
	AIA	0.000
_	Total For Project	4,995,759.967
	GoU Development	4,995,759.967
	External Financing	0.000
	Arrears	0.000
	AIA	0.000
Project:1619 Retooling of National Agricultu	ral Research Organization	

## **VOTE:** 142 National Agricultural Research Organization (NARO)

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter	
Project:1619 Retooling of National Agricultural Research Organization	1	
PIAP Output: 01040705 Demand driven agriculture technologies devel	oped	
Programme Intervention: 010407 Strengthen agricultural research and	l technology development	
One fish floating feed research facility equipping completed at Kajansi, and One (01) Air Purification Line GM System installation completed at Nakyesasa for antitick vaccine with related furniture and for agriengineering facility installed	Towards saving the country from an economic loss, One anti-tick Air Purification Line System for General Manufacturing Practice (GMP) was installed for antitick vaccine production and associated furnishing for the vaccine facility installed (100%). The facility is ready for production	
Two research facilities equipped: anti-tick vaccine seed facility completed at Nakyesasa to support production of colony forming units for anti-tick vaccine production  Ngeta Poultry research facility equipped with modern incubators to support breeding	NA	
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	UShs Thousand	
Item	Spent	
224003 Agricultural Supplies and Services	1,216,999.999	
312233 Medical, Laboratory and Research & appliances - Acquisition	1,359,000.001	
352882 Utility Arrears Budgeting	86,736.504	
Total For Buc	dget Output 2,662,736.504	
GoU Develop	ment 2,576,000.000	
External Finar	ncing 0.000	
Arrears	86,736.504	
AIA	0.000	
Budget Output:000017 Infrastructure Development and Management		
PIAP Output: 01040705 Demand driven agriculture technologies devel	oped	
Programme Intervention: 010407 Strengthen agricultural research and	technology development	
4 agricultural research support infrastructure completed: Aflatoxin research facility and Bull Stud and Wall fence for anti-tick vaccine production facility at Nakyesasa; and drainage system for NARO-secretariate at Entebbe.	NA	
4 agricultural research support infrastructure completed: remodelling Floating Fish feed building at Kajansi, Offices at Nakyesasa, water reservoir at Kigumba -Masindi, renovation of Abi research management facility at Arua,	NA	

### VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter	
Project:1619 Retooling of National Agricultural Research Organizat	ion	
PIAP Output: 01040705 Demand driven agriculture technologies dev	veloped	
Programme Intervention: 010407 Strengthen agricultural research a	nd technology development	
4 agricultural research facilities completed: Biosecurity Gate - antitick vaccine to meet regulatory standards for antitick vaccine production, Perimeter wall, Incinerator for vaccine production facility, Rabbit Hutche & diversion access road maintenance	NA NA	
4 agricultural research facilities completed: Poultry Hatchery and Seed, rehabilitation of Food Bio Sciences Lab at Kawanda, and Cassava centre of excellence at Namulonge, Nutrition Laborator Nakyesasa, Fish Hatchery at Ngeta and Washrooms.	Towards creating a research enabling environment, four (04 )agricultural research facilities were completed: Poultry Hatchery and Seed, rehabilitation of Food Bio Sciences Lab at Kawanda, and Cassava centre of excellence at Namulonge, Nutrition Laboratory at Nakyesasa, Fish Hatchery at Ngetta and Wash rooms.	
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	UShs Thousand	
Item	Spent	
225203 Appraisal and Feasibility Studies for Capital Works	250,000.001	
225204 Monitoring and Supervision of capital work	200,000.000	
228001 Maintenance-Buildings and Structures	540,000.000	
228001 Maintenance-Buildings and Structures 312121 Non-Residential Buildings - Acquisition		
•	223,000.000	
312121 Non-Residential Buildings - Acquisition	540,000.000 223,000.000 5,587,000.000 60,000.000	
312121 Non-Residential Buildings - Acquisition 313121 Non-Residential Buildings - Improvement 313139 Other Structures - Improvement	223,000.000 5,587,000.000 60,000.000	
312121 Non-Residential Buildings - Acquisition 313121 Non-Residential Buildings - Improvement 313139 Other Structures - Improvement	223,000.000 5,587,000.000 60,000.000 <b>Budget Output 6,860,000.001</b>	
312121 Non-Residential Buildings - Acquisition 313121 Non-Residential Buildings - Improvement 313139 Other Structures - Improvement  Total For I	223,000.000 5,587,000.000 60,000.000  8udget Output 6,860,000.001	
312121 Non-Residential Buildings - Acquisition 313121 Non-Residential Buildings - Improvement 313139 Other Structures - Improvement  Total For I GoU Devel	223,000.000 5,587,000.000 60,000.000  8udget Output 6,860,000.001 opment 6,860,000.001 nancing 0.000	
312121 Non-Residential Buildings - Acquisition 313121 Non-Residential Buildings - Improvement 313139 Other Structures - Improvement  Total For I GoU Devel External Fire	223,000.000 5,587,000.000 60,000.000  8udget Output 6,860,000.001	

#### Programme Intervention: 010407 Strengthen agricultural research and technology development

One national gene bank upgraded for conservation& two facilities furnished for improved technology generation,1,284 hectares of land surveyed & protect 922 hectares.16 Research institutes supported to build capacity to generate tech

Towards biodiversity conservation, One national gene bank was upgraded through remodeling for genetic resources conservation. Additionally, 321 hectares of land surveyed & 230.5 hectares protected for improved research security and stability at Mbarara and Kujju. Four (04) PARIs were supported to generate agriculture technologies through counterpart funding of projects.

# VOTE: 142 National Agricultural Research Organization (NARO)

Annual Planned Outputs	Cumulative Outputs Achieved by F	End of Quarter
Project:1619 Retooling of National Agricultural Research Organiza	ion	
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs		UShs Thousand
Item		Spent
211107 Boards, Committees and Council Allowances		128,000.000
221001 Advertising and Public Relations		18,000.000
221003 Staff Training		100,000.000
221004 Recruitment Expenses		220,000.000
221007 Books, Periodicals & Newspapers		8,000.000
221008 Information and Communication Technology Supplies.		30,000.000
221011 Printing, Stationery, Photocopying and Binding		64,000.001
221016 Systems Recurrent costs		75,000.000
221017 Membership dues and Subscription fees.		30,000.000
222001 Information and Communication Technology Services.		388,000.000
224011 Research Expenses		3,647,969.000
225101 Consultancy Services		75,000.000
226002 Licenses		50,000.000
227001 Travel inland		361,000.000
227004 Fuel, Lubricants and Oils		280,000.000
312221 Light ICT hardware - Acquisition		13,999.999
312235 Furniture and Fittings - Acquisition		528,000.001
313121 Non-Residential Buildings - Improvement		500,000.000
313149 Other Land Improvements - Improvement		310,940.999
Total For	Budget Output	6,827,910.000
GoU Deve	lopment	6,827,910.000
External F	nancing	0.000
Arrears		0.000
AIA		0.000
Budget Output:010009 Research Partnerships		

### **VOTE:** 142 National Agricultural Research Organization (NARO)

211106 Allowances (Incl. Casuals, Temporary, sitting allowances)

Quarter 4

98,673.000

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter
Project:1619 Retooling of National Agricultural Research Organizatio	n
PIAP Output: 01040705 Demand driven agriculture technologies deve	loped
Programme Intervention: 010407 Strengthen agricultural research and	d technology development
Ten agricultural research strategic partnerships for product development and commercialization established ,maintained and strengthened at regional and international level.	Three (03) agricultural research strategic partnerships for product development and commercialization were established, maintained, and strengthened at regional and international level. (1) commercialization for the Fish feed production facility was completed, commercialisation of beans and commercialisation of maize
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	UShs Thousand
Item	Spent
262201 Contributions to International Organisations-Capital	1,449,999.984
282107 Contributions to Non-Government institutions	50,000.000
Total For Bu	dget Output 1,499,999.984
GoU Develop	nment 1,499,999.984
External Fina	ncing 0.000
Arrears	0.000
AIA	0.000
Budget Output:010010 Technology Generation	
PIAP Output: 01040705 Demand driven agriculture technologies deve	loped
Programme Intervention: 010407 Strengthen agricultural research and	d technology development
24 Agricultural research products and services: vaccines (new castle, gumboro, FMD, African swine fever and oral anti-tick vaccine), varieties, barley, potatoes, coffee, rice, (chicken, Fish strains, protocols, Agromachinery prototypes generated	Towards enhancing agricultural production and productivity, Seven (07) Agricultural research products and services: vaccines (new castle, gumboro, Foot and Mouth Disease), African swine fever and oral anti-tick vaccine), (03) barley, (04) potatoes (NAROPOT 7,8,9,10) were developed
Two research products: Animal feed rations and soil maps for market, food, and industry developed 1000 colony forming units of antitick vaccine seed produced. These units are sufficient as a raw material to produce 20 million doses of anti-tick vaccine  Towards a complete anti-tick vaccine production and roll out fifty (250) colony forming units of antitick vaccine seed were units are sufficient as a raw material to produce 5 million anti-tick vaccine	
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	UShs Thousand
Item	Spent
	<u> </u>

### **VOTE:** 142 National Agricultural Research Organization (NARO)

Annual Planned Outputs	Cumulative Outputs Achieved by	End of Quarter
Project:1619 Retooling of National Agricultural Research Organiza	ntion	
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs		UShs Thousand
Item		Spent
221001 Advertising and Public Relations		34,400.000
221003 Staff Training		34,561.000
221008 Information and Communication Technology Supplies.		68,769.000
221009 Welfare and Entertainment		8,000.000
221011 Printing, Stationery, Photocopying and Binding		87,351.001
221017 Membership dues and Subscription fees.		3,000.000
222001 Information and Communication Technology Services.		46,719.000
223005 Electricity		101,500.000
224002 Veterinary supplies and services		54,262.001
224003 Agricultural Supplies and Services		956,486.001
224005 Laboratory supplies and services		776,838.000
224010 Protective Gear		6,000.000
224011 Research Expenses		5,291,861.750
225101 Consultancy Services		20,176.000
225201 Consultancy Services-Capital		30,999.999
225204 Monitoring and Supervision of capital work		9,100.000
227001 Travel inland		42,700.000
227004 Fuel, Lubricants and Oils		355,846.000
228001 Maintenance-Buildings and Structures		5,100.000
228002 Maintenance-Transport Equipment		96,926.001
228003 Maintenance-Machinery & Equipment Other than Transport Ed	quipment	238,828.245
228004 Maintenance-Other Fixed Assets		12,334.000
312221 Light ICT hardware - Acquisition		21,000.000
312233 Medical, Laboratory and Research & appliances - Acquisition		2,610,999.999
Total For	Budget Output	11,012,430.997
GoU Dev	elopment	11,012,430.997
External l	Financing	0.000
Arrears		0.000
AIA		0.000

### **VOTE:** 142 National Agricultural Research Organization (NARO)

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter
Project:1619 Retooling of National Agricultural Research Organization	n
Budget Output:010011 Technology Promotion	
PIAP Output: 01040705 Demand driven agriculture technologies devel	loped
Programme Intervention: 010407 Strengthen agricultural research and	d technology development
9 agricultural research technologies (anti-tick-Vaccine, biofortified crop varieties, improved fish strains, Agro machinery prototypes for production, harvesting and processing of agricultural products, protocols and animal feeds rations) delivered	Towards improving livestock farming, Two (02) agricultural research technologies of animal feeds rations and varieties including development of a high yielding maize forage variety, and were delivered to uptake pathways
9 technologies for Post harvest handling - aflatoxins management (aflasafe), fertilizer blends for the key priority commodities, protocols and rations delivered to uptake pathways for increased production and productivity	Towards enhancing food security, the production line for aflsafe production was installed at the facility ready for massive production of aflasafe. Additionally, new fertilizer formulations for three commodities (maize, beand, coffee) were obtained to enhance efficiency in agricultural production and 250 farmers in Mityana district trained on the same
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	UShs Thousana
Item	Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)	26,000.000
221001 Advertising and Public Relations	184,000.000
221008 Information and Communication Technology Supplies.	13,999.999
221011 Printing, Stationery, Photocopying and Binding	29,940.000
222001 Information and Communication Technology Services.	50,000.000
224011 Research Expenses	766,000.000
227001 Travel inland	30,000.000
227004 Fuel, Lubricants and Oils	50,000.000
Total For Bu	dget Output 1,149,939.999
GoU Develop	ment 1,149,939.999
External Fina	ncing 0.000
Arrears	0.000
AIA	0.000
Total For Pro	oject 30,013,017.485
GoU Develop	oment 29,926,280.981
External Final	neing 0.000
Arrears	86,736.504
AIA	0.000

## **VOTE:** 142 National Agricultural Research Organization (NARO)

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter
Programme:17 Regional Balanced Development	
SubProgramme:01 Production and productivity	
Sub SubProgramme:01 Agricultural Research	
Departments	
Department:002 Buginyaya Zonal Agriculture Research Institute(ZAI	RDI)
Budget Output:010010 Technology Generation	
PIAP Output: 1702020506 Youth and Women cooperatives supported	
Programme Intervention: 170209 Organize farmers into cooperatives	at district level
Five local seed business groups identified for support with early generation seed of nutrient dense varieties and varieties with industrial properties.  Two thousand farmers clustered to local seed businesses purported for quality seed production.	Towards enhancing production and productivity, 2 local seed businesses in Buginyanya zone were supported with 500kg of early generation seed for beans and maize. Additionally, One (1) ton NARObean 1 foundation seed produced and distributed to Busoga kingdom. 564 farmers from 2 local seed businesses were trained areas of seed production.
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	UShs Thousand
Item	Spen
224011 Research Expenses	50,000.000
Total For Bu	idget Output 50,000.000
Wage Recurr	ent 0.000
Non Wage Ro	ecurrent 50,000.000
Arrears	0.000
AIA	0.000
Budget Output:010011 Technology Promotion	
PIAP Output: 1702020506 Youth and Women cooperatives supported	
Programme Intervention: 170209 Organize farmers into cooperatives	at district level
Three adaptive trials and demonstrations established in Buginyanya AEZ	NA
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	UShs Thousand
Item	Spen
224011 Research Expenses	49,000.000
Total For Bu	1dget Output 49,000.000
Wage Recurr	ent 0.000
Non Wage Ro	ecurrent 49,000.000
Arrears	0.000

## **VOTE:** 142 National Agricultural Research Organization (NARO)

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter	
	AIA	0.000
	Total For Department	99,000.000
	Wage Recurrent	0.000
	Non Wage Recurrent	99,000.000
	Arrears	0.000
	AIA	0.000
Development Projects		
N/A		·
	GRAND TOTAL	175,937,797.397
	Wage Recurrent	43,462,109.273
	Non Wage Recurrent	97,466,910.672
	GoU Development	34,922,040.948
	External Financing	0.000
	Arrears	86,736.504
	AIA	0.000

## VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

#### V4: NTR Collections, Off Budget Expenditure and Vote Cross Cutting Issues

**Table 4.1: NTR Collections (Billions)** 

Revenue Code	Revenue Name	Planned Collection FY2024/25	Actuals By End Q4
111102	Rental Income Tax-Payable By Individuals	1.207	0.000
142151	Rent & rates – produced assets-From Government Units	0.150	0.324
141121	Interest from private entities-From Residents other than General Government	0.135	0.001
142159	Sale of bid documents-From Government Units	0.157	0.000
142160	Sale of Agricultural products and services-From Government Units	5.300	0.388
142217	Market /Gate Charges	0.298	0.108
144149	Miscellaneous receipts/income	0.084	0.002
	Total	7.331	0.823

## VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Table 4.2: Off-Budget Expenditure By Department and Project

Billion Uganda Shillings	2024/25 Approved Budget	Actuals By End Q4
Programme: 01 Agro-Industrialization	56,224,000.000	5,535,257.681
SubProgramme: 02 Agricultural Production and Productivity	56,224,000.000	5,535,257.681
Sub-SubProgramme: 01 Agricultural Research	56,224,000.000	5,535,257.681
Department Budget Estimates		
Department: 001 Abi Zonal Agriculture Research Institute(ZARDI)	524,000.000	4,636.144
Department: 002 Buginyaya Zonal Agriculture Research Institute(ZARDI)	404,000.000	0.000
Department: 007 NARO-SECRETARIATE	1,000,000.000	0.000
Department: 008 National Agricultural Research Laboratories	27,259,000.000	3,281,619.996
Department: 009 National Coffee Research Institute	3,961,000.000	790,383.309
Department: 010 National Crops Resources Research Institute	13,230,000.000	1,458,618.232
Department: 011 National Fisheries Resources Research Institute	2,636,000.000	0.000
Department: 012 National Forestry Resources Research Institute	719,000.000	0.000
Department: 013 Mukono Zonal Agriculture Research Institute (ZARDI)	313,000.000	0.000
Department: 014 National Livestock Resources Research Institute (NaLIRRI)	627,000.000	0.000
Department: 015 National Semi Arid Resources Research Institute (NaSARRI)	5,184,000.000	0.000
Department: 017 Rwebitaba ZARDI	367,000.000	0.000
Project budget Estimates		

Total for Vote 56,224,000.000 5,535,257.681

# VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

**Table 4.3: Vote Crosscutting Issues** 

#### i) Gender and Equity

Objective:	Integrate gender in Agricultural research streams to develop products which are friendly across all gender classes.
Issue of Concern:	Limited participation of women and youth and elderly in agriculture
Planned Interventions:	Integrate gender in Agricultural research streams to develop products which are gender friendly.
Budget Allocation (Billion):	0.300
Performance Indicators:	Number of gender friendly research products generated
Actual Expenditure By End Q4	0.3
Performance as of End of Q4	NARO developed 12 gender friendly technologies (8 crop, 4 agro-machinery)
Reasons for Variations	Resources were available to execute

#### ii) HIV/AIDS

Objective:	Identify appropriate market segments in commodity value chains for youth participation and gainful employment to minimize unemployment causative HIV/AIDS new infection among the youth.
Issue of Concern:	High levels of re-emerging new infection among the youth due to unemployment.
Planned Interventions:	Identify appropriate market segments in commodity value chains for youth participation for gainful employment.
Budget Allocation (Billion):	0.049
Performance Indicators:	Number of market segments in commodity value chains for youth participation.
Actual Expenditure By End Q4	0.049
Performance as of End of Q4	NARO supported twenty (20) market segments where the young people and women have been actively involved at eight (08) PARIs. These market segments and platforms included maize, coffee and pigeon pea processing and marketing enterprises specifically to address the needs of youth and increase their benefits and incomes from agricultural production. From this intervention, 1100 youth and 716 women farmers in Kyenjojo, Kyegegwa, Kibaale, Masindi, Kagadi, Soroti and Serere, Karenga, Katakwi, Moroto and Abim districts respectively were engaged. Additional, 18 youth groups were identified and trained in Sembabule, Nakaseke, Masindi, Kitgum and Apac respectively. Furthermore, six (06) groups were engaged in sorghum production in Soroti and Arapai as well as 7 youth group were trained in yam management in Adjumani and Karenga. Two hundred and eighty-three (283) youth were reached and trained in vegetable commodity growing and market extensions services. Additionally, 25 youth and women leaders were reached and linked cooperative services for financial support at National Crops Resources Research Institute in Namulonge through digital platforms. The youth and women leaders came from jinja, Kamuli, Kayunga and Wakiso districts. This initiative enables access to credit, savings, and other financial services that support agribusiness development and sustainable livelihoods among the youth and women hence reducing the risk of engaging in high-risk behaviours associated with HIV/AIDS transmission among others.
Reasons for Variations	Performance was on target

#### iii) Environment

## **VOTE:** 142 National Agricultural Research Organization (NARO)

Quarter 4

Objective:	Generate technologies for climate change mitigation and adaptation
Issue of Concern:	High level of emerging and re-emerging pests and diseases which reduce total factor productivity.  Low levels of adoption for climate change effects resilient technologies among communities across Uganda.
Planned Interventions:	Support research in environmentally and pandemic phenomena responsive products.  NARO will establish state-of-art agro-meteorological research facility that will be fully equipped with solar radiation, temperature, humidity.
<b>Budget Allocation (Billion):</b>	1.638
Performance Indicators:	Number of climate Change resilient products generated
Actual Expenditure By End Q4	1.638
Performance as of End of Q4	During the year, NARO produced and distributed 80,755 tree seedlings, 19,384 tea seedlings, 38,100 Hass seedlings, 96,838 assorted fish fingerlings, 5493.8kg assorted fish feed, 2,047 chicken, 1,950kg of maize foundation seed, 2100kgs of bean foundation seed, 204,025 coffee seedlings, 194,331kg of assorted basic seed through various technology uptake pathways and 52 climate smart agricultural technologies (practice commodity-specific demonstrations on farm and field across different agro-ecological zones) were established. During technology development, NARO undertakes multilocational trials to ensure adaptability to different agro-ecological conditions. To further support research that is environmentally responsive with timely and reliable meteorological in information, NARO in partnership with Meteorological Department Services (MWE) and Makerere University supported the operationalization of the state of art agro-meteorological research facility at NaRL, Kawanda through installation of five (05) Remote Telemetry Units (RTUs). This facility is equipped with functional solar radiation, temperature, humidity, wind among other variables that support generation real-time data generation critical for application by scientists and farmers for climate mitigation, adaptation and decision making in agricultural commodity value-chains.
Reasons for Variations	Performance was on target due to availability of resources

#### iv) Covid