

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

V1: Summary of Issues in Budget Execution

Table V1.1: Overview of Vote Expenditures (US\$ Billion)

	Approved Budget	Revised Budget	Released by End Q4	Spent by End Q4	% Budget Released	% Budget Spent	% Releases Spent
Recurrent	Wage	38.811	39.811	39.811	103.0 %	103.0 %	100.0 %
	Non-Wage	29.397	29.397	28.998	99.0 %	98.6 %	100.0 %
Dev.	GoU	48.575	48.575	42.180	86.8 %	86.8 %	100.0 %
	Ext Fin.	0.000	0.000	0.000	0.0 %	0.0 %	0.0 %
GoU Total		116.783	117.783	110.989	95.0 %	95.0 %	100.0 %
Total GoU+Ext Fin (MTEF)		116.783	117.783	110.989	95.0 %	95.0 %	100.0 %
Arrears		0.144	0.144	0.144	100.0 %	100.0 %	100.0 %
Total Budget		116.927	117.927	111.133	95.0 %	95.0 %	100.0 %
A.I.A Total		0.000	0.000	0.000	0.0 %	0.0 %	0.0 %
Grand Total		116.927	117.927	111.133	95.0 %	95.0 %	100.0 %
Total Vote Budget Excluding Arrears		116.783	117.783	110.989	95.0 %	95.0 %	100.0 %

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

<i>Billion Uganda Shillings</i>	Approved Budget	Revised Budget	Released by End Q4	Spent by End Q4	% Budget Released	% Budget Spent	%Releases Spent
Programme:01 Agro-Industrialization	116.927	117.927	111.133	111.133	95.0 %	95.0 %	100.0%
Sub SubProgramme:01 Agricultural Research	116.927	117.927	111.133	111.133	95.0 %	95.0 %	100.0%
Total for the Vote	116.927	117.927	111.133	111.133	95.0 %	95.0 %	100.0 %

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

(ii) Expenditures in excess of the original approved budget		
Sub SubProgramme:01 Agricultural Research -02 Agricultural Production and Productivity		
0.000	Bn Shs	Department : 007 NARO-SECRETARIATE
Reason: 0		
0		
Items		
0.000	Bn Shs	Project : 1619 Retooling of National Agricultural Research Organization
Reason: 0		
Items		

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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: 01040701 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of improved cotton varieties developed	Number	6	0
Budget Output: 000014 Administrative and Support Services			
PIAP Output: 01040701 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of functional public-private partnerships established for technology development and promotion	Number	14	8
Number of improved technologies and innovations adopted	Number	20	10
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: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of market-oriented products generated	Number	4	1
Number of functional public-private partnerships established for technology development and promotion	Number	4	2

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Programme:01 Agro-Industrialization			
SubProgramme:02 Agricultural Production and Productivity			
Sub SubProgramme:01 Agricultural Research			
Department:001 Abi 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			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of market-oriented products generated	Number	1	1
Number of functional public-private partnerships established for technology development and promotion	Number	2	1
Number of improved technologies and innovations adopted	Number	3	2
Number of markets created along product lines	Number	1	0
Number of research products and services for food and nutrition security generated	Number	1	1
Number of research products and services suitable for industry developed	Number	1	1
PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of District Adaptive Research Support Teams (DARSTs) developed	Number	6	0
Number of technologies adopted	Number	8	6
Department:002 Buginyaya Zonal Agriculture Research Institute(ZARDI)			
Budget Output: 010008 Capacity Strengthening			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of functional public-private partnerships established for technology development and promotion	Number	4	3
Number of improved technologies and innovations adopted	Number	4	3

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Programme:01 Agro-Industrialization			
SubProgramme:02 Agricultural Production and Productivity			
Sub SubProgramme:01 Agricultural Research			
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 and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of functional public-private partnerships established for technology development and promotion	Number	2	3
Number of improved technologies and innovations adopted	Number	4	2
Number of research products and services for food and nutrition security generated	Number	2	2
PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of District Adaptive Research Support Teams (DARSTs) developed	Number	2	0
Number of technologies adopted	Number	2	.3
Budget Output: 010011 Technology Promotion			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of research products and services for food and nutrition security generated	Number	2	2
PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of District Adaptive Research Support Teams (DARSTs) developed	Number	2	0
Number of technologies adopted	Number	4	4

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Programme:01 Agro-Industrialization			
SubProgramme:02 Agricultural Production and Productivity			
Sub SubProgramme:01 Agricultural Research			
Department:003 Bulindi Zonal Agriculture Research Institute(ZARDI)			
Budget Output: 010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of market-oriented products generated	Number	1	1
Number of improved technologies and innovations adopted	Number	9	4
Number of research products and services for food and nutrition security generated	Number	5	3
PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of District Adaptive Research Support Teams (DARSTs) developed	Number	2	0
Number of technologies adopted	Number	9	4
Department:004 Kachwekano Zonal Agriculture Research Institute(ZARDI)			
Budget Output: 010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of market-oriented products generated	Number	2	2
Number of improved technologies and innovations adopted	Number	7	4
Number of research products and services suitable for industry developed	Number	1	1
Department:005 Mbarara Zonal Agriculture Research Institute(ZARDI)			
Budget Output: 010008 Capacity Strengthening			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of market-oriented products generated	Number	5	3
Number of improved technologies and innovations adopted	Number	7	4

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Programme:01 Agro-Industrialization			
SubProgramme:02 Agricultural Production and Productivity			
Sub SubProgramme:01 Agricultural Research			
Department:005 Mbarara Zonal Agriculture Research Institute(ZARDI)			
Budget Output: 010008 Capacity Strengthening			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of markets created along product lines	Number	2	1
Number of research products and services for food and nutrition security generated	Number	4	1
Number of research products and services suitable for industry developed	Number	2	2
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			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of market-oriented products generated	Number	6	3
Number of functional public-private partnerships established for technology development and promotion	Number	3	1
Number of improved technologies and innovations adopted	Number	14	3
Number of markets created along product lines	Number	3	1
Number of research products and services for food and nutrition security generated	Number	3	1
Department:007 NARO-SECRETARIATE			
Budget Output: 010008 Capacity Strengthening			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of functional public-private partnerships established for technology development and promotion	Number	14	7
Number of research products and services for food and nutrition security generated	Number	15	9

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Programme:01 Agro-Industrialization			
SubProgramme:02 Agricultural Production and Productivity			
Sub SubProgramme:01 Agricultural Research			
Department:008 National Agricultural Research Laboratories			
Budget Output: 010008 Capacity Strengthening			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of market-oriented products generated	Number	4	3
Number of functional public-private partnerships established for technology development and promotion	Number	4	4
Number of improved technologies and innovations adopted	Number	4	2
Number of research products and services for food and nutrition security generated	Number	6	4
Number of research products and services suitable for industry developed	Number	8	5
Department:009 National Coffee Research Institute			
Budget Output: 010008 Capacity Strengthening			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of market-oriented products generated	Number	6	3
Number of improved technologies and innovations adopted	Number	3	3
Number of market responsive coffee varieties developed	Number	3	3
Number of research products and services for food and nutrition security generated	Number	3	1
Number of research products and services suitable for industry developed	Number	6	3
Department:010 National Crops Resources Research Institute			
Budget Output: 010008 Capacity Strengthening			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of market-oriented products generated	Number	10	9

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Programme:01 Agro-Industrialization			
SubProgramme:02 Agricultural Production and Productivity			
Sub SubProgramme:01 Agricultural Research			
Department:010 National Crops Resources Research Institute			
Budget Output: 010008 Capacity Strengthening			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of functional public-private partnerships established for technology development and promotion	Number	12	7
Number of improved technologies and innovations adopted	Number	19	17
Number of markets created along product lines	Number	3	2
Number of research products and services for food and nutrition security generated	Number	12	12
Number of research products and services suitable for industry developed	Number	5	3
Budget Output: 010011 Technology Promotion			
PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of technologies adopted	Number	5	5
Department:011 National Fisheries 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			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of market-oriented products generated	Number	5	3
Number of functional public-private partnerships established for technology development and promotion	Number	3	3
Number of improved technologies and innovations adopted	Number	3	3
Number of markets created along product lines	Number	2	1
Number of research products and services for food and nutrition security generated	Number	3	3

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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 developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of research products and services suitable for industry developed	Number	3	2
Department:012 National Forestry 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			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of market-oriented products generated	Number	3	2
Number of functional public-private partnerships established for technology development and promotion	Number	2	1
Number of improved technologies and innovations adopted	Number	2	2
Number of research products and services for food and nutrition security generated	Number	2	1
Number of research products and services suitable for industry developed	Number	2	1
Department:013 Mukono Zonal Agriculture Research Institute (ZARDI)			
Budget Output: 010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of market-oriented products generated	Number	2	1
Number of functional public-private partnerships established for technology development and promotion	Number	5	4
Number of improved technologies and innovations adopted	Number	2	1
Number of research products and services for food and nutrition security generated	Number	1	1

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Programme:01 Agro-Industrialization			
SubProgramme:02 Agricultural Production and Productivity			
Sub SubProgramme:01 Agricultural Research			
Department:013 Mukono Zonal Agriculture Research Institute (ZARDI)			
Budget Output: 010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of research products and services suitable for industry developed	Number	2	2
Department:014 National Livestock Resources Research Institute (NaLIRRI)			
Budget Output: 010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of market-oriented products generated	Number	1	1
Number of functional public-private partnerships established for technology development and promotion	Number	1	1
Number of improved technologies and innovations adopted	Number	1	1
Number of markets created along product lines	Number	1	1
Number of Niche markets for livestock industrial products created	Number	1	1
Number of research products and services for food and nutrition security generated	Number	1	1
Number of research products and services suitable for industry developed	Number	1	1
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 and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of market-oriented products generated	Number	2	1
Number of functional public-private partnerships established for technology development and promotion	Number	3	2
Number of improved cotton varieties developed	Number	3	0

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Programme:01 Agro-Industrialization			
SubProgramme:02 Agricultural Production and Productivity			
Sub SubProgramme:01 Agricultural Research			
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 and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of improved technologies and innovations adopted	Number	3	3
Number of markets created along product lines	Number	3	1
Number of research products and services for food and nutrition security generated	Number	8	5
Number of research products and services suitable for industry developed	Number	6	3
Budget Output: 010011 Technology Promotion			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of functional public-private partnerships established for technology development and promotion	Number	5	3
Department:016 Ngetta ZARDI			
Budget Output: 010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of market-oriented products generated	Number	5	3
Number of functional public-private partnerships established for technology development and promotion	Number	1	1
Number of improved technologies and innovations adopted	Number	3	2
Number of research products and services for food and nutrition security generated	Number	3	3

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Programme:01 Agro-Industrialization			
SubProgramme:02 Agricultural Production and Productivity			
Sub SubProgramme:01 Agricultural Research			
Department:017 Rwebitaba ZARDI			
Budget Output: 010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of market-oriented products generated	Number	4	2
Number of functional public-private partnerships established for technology development and promotion	Number	18	9
Number of improved technologies and innovations adopted	Number	6	3
Number of markets created along product lines	Number	4	2
Number of research products and services for food and nutrition security generated	Number	4	2
Number of research products and services suitable for industry developed	Number	4	2
Project:1560 Relocation and Operationalisation of the National Livestock Resources Research Institute(NALIRRI)			
Budget Output: 000017 Infrastructure Development and Management			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of research products and services suitable for industry developed	Number	13	10
Budget Output: 010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of research products and services suitable for industry developed	Number	13	10

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Programme:01 Agro-Industrialization			
SubProgramme:02 Agricultural Production and Productivity			
Sub SubProgramme:01 Agricultural Research			
Project:1619 Retooling of National Agricultural Research Organization			
Budget Output: 000003 Facilities and Equipment Management			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of research products and services for food and nutrition security generated	Number	10	7
Budget Output: 010008 Capacity Strengthening			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of market-oriented products generated	Number	6	4
Budget Output: 010009 Research Partnerships			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of functional public-private partnerships established for technology development and promotion	Number	12	10
Budget Output: 010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of research products and services suitable for industry developed	Number	10	2
Budget Output: 010011 Technology Promotion			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
PIAP Output Indicators	Indicator Measure	Planned 2022/23	Actuals By END Q 4
Number of improved technologies and innovations adopted	Number	36	10

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Performance highlights for the Quarter

During the quarter, the accumulated total release of the budget stood at UGX 110.989 against the approved budget of UGX 117.783 which is translated into 95% release and in real terms a total of UGX 6.794 Billion was not released. The release was spent at 100% indicating a good absorption capacity for NARO. The continued non release of the budget hinders delivery of set targets and service delivery.

During quarter four, there were significant achievements that were made; Three (03) soil maps were updated and digitized, The number of new research laboratories constructed stood at two (02), the number of demonstration facilities constructed were two (02), NARO equipped three (03) laboratories of strategic importance, In order to create a critical mass of scientists six (06) (4 Phd, 2 MSc), the agricultural research innovations and IPs commercialized stood at five (05), multi-stakeholders agricultural research innovation platforms established were five (05), while nine (09) climate-smart technologies demonstrations established in all the ZARDIs were established, 51 functional Public-Private Partnerships were established for technology development and promotion, market-oriented products generated were thirty one (31), improved agricultural technologies and innovations developed and adopted stood at ninety seven(97), the research products and services suitable for industry developed were (10), the research products and services for food and nutritional security generated were twenty four (24), the markets created along product lines were ten (10), the gene banks established were five (5), the genetic resources conserved for sustainable utilization stood at one thousand (1000), the bio-fortified technologies developed and promoted were two (02), the quantity of early generation seed produced and supplied to seed producers were 150 (MT) and the scientific publications in peer reviewed journals were (176) .

Variances and Challenges

NARO was instructed to implement the food and feed security intervention from the existing budget with a hope of receiving a supplementary of UGX15bn. The implementation of the food and feed intervention has hindered implementation of the planned and approved work plan and budget under the appropriation instrument hence a risk of not achieving the set targeted outputs. No supplementary budget was received during FY 2022-2023. The challenge was partial implementation of planned activities hindering attainment of the set targets which was occasioned by inadequate release of funds amounting to UGX 6.794 (5.768%). The absence of some enabling laws such as the National Biotechnology and Biosafety law affects the implementation of agricultural research activities.

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V3: Details of Releases and Expenditure

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

<i>Billion Uganda Shillings</i>	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	116.927	117.927	111.133	111.133	95.0 %	95.0 %	100.0 %
Sub SubProgramme:01 Agricultural Research	116.927	117.927	111.133	111.133	95.0 %	95.0 %	100.0 %
000001 Audit and Risk Management	0.121	0.121	0.121	0.121	100.0 %	100.0 %	100.0 %
000003 Facilities and Equipment Management	17.270	17.270	16.604	16.604	96.1 %	96.1 %	100.0 %
000014 Administrative and Support Services	54.546	55.546	55.419	55.419	101.6 %	101.6 %	100.0 %
000017 Infrastructure Development and Management	5.719	5.719	0.916	0.916	16.0 %	16.0 %	100.0 %
010008 Capacity Strengthening	20.433	20.433	20.163	20.163	98.7 %	98.7 %	100.0 %
010009 Research Partnerships	1.800	1.800	1.137	1.137	63.2 %	63.2 %	100.0 %
010010 Technology Generation	11.698	11.698	11.432	11.432	97.7 %	97.7 %	100.0 %
010011 Technology Promotion	5.341	5.341	5.341	5.341	100.0 %	100.0 %	100.0 %
Total for the Vote	116.927	117.927	111.133	111.133	95.0 %	95.0 %	100.0 %

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Table V3.2: GoU Expenditure by Item 2022/23 GoU Expenditure by Item

<i>Billion Uganda Shillings</i>	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	38.811	39.811	39.811	39.811	102.6 %	102.6 %	100.0 %
211104 Employee Gratuity	9.703	9.703	9.703	9.703	100.0 %	100.0 %	100.0 %
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)	1.978	1.978	1.836	1.836	92.8 %	92.8 %	100.0 %
211107 Boards, Committees and Council Allowances	0.762	0.762	0.762	0.762	100.0 %	100.0 %	100.0 %
212101 Social Security Contributions	3.881	3.881	3.881	3.881	100.0 %	100.0 %	100.0 %
212102 Medical expenses (Employees)	0.850	0.850	0.850	0.850	100.0 %	100.0 %	100.0 %
212103 Incapacity benefits (Employees)	0.635	0.635	0.630	0.630	99.2 %	99.2 %	100.0 %
221001 Advertising and Public Relations	0.411	0.411	0.411	0.411	100.0 %	100.0 %	100.0 %
221003 Staff Training	1.009	1.009	1.002	1.002	99.3 %	99.3 %	100.0 %
221004 Recruitment Expenses	0.060	0.060	0.060	0.060	100.0 %	100.0 %	100.0 %
221007 Books, Periodicals & Newspapers	0.048	0.048	0.048	0.048	100.0 %	100.0 %	100.0 %
221008 Information and Communication Technology Supplies.	0.357	0.357	0.327	0.327	91.6 %	91.6 %	100.0 %
221009 Welfare and Entertainment	0.407	0.407	0.407	0.407	100.0 %	100.0 %	100.0 %
221011 Printing, Stationery, Photocopying and Binding	0.539	0.539	0.529	0.529	98.1 %	98.1 %	100.0 %
221012 Small Office Equipment	0.050	0.050	0.050	0.050	100.0 %	100.0 %	100.0 %
221016 Systems Recurrent costs	0.030	0.030	0.030	0.030	100.0 %	100.0 %	100.0 %
221017 Membership dues and Subscription fees.	0.066	0.066	0.066	0.066	100.0 %	100.0 %	100.0 %
222001 Information and Communication Technology Services.	0.415	0.415	0.375	0.375	90.3 %	90.3 %	100.0 %
222002 Postage and Courier	0.040	0.040	0.040	0.040	100.0 %	100.0 %	100.0 %
223001 Property Management Expenses	0.142	0.142	0.142	0.142	100.0 %	100.0 %	100.0 %
223002 Property Rates	0.034	0.034	0.034	0.034	100.0 %	100.0 %	100.0 %
223004 Guard and Security services	0.299	0.299	0.295	0.295	98.7 %	98.7 %	100.0 %
223005 Electricity	0.277	0.277	0.262	0.262	94.6 %	94.6 %	100.0 %
223006 Water	0.090	0.090	0.090	0.090	100.0 %	100.0 %	100.0 %
224001 Medical Supplies and Services	0.040	0.040	0.040	0.040	100.0 %	100.0 %	100.0 %
224002 Veterinary supplies and services	0.162	0.162	0.162	0.162	100.0 %	100.0 %	100.0 %
224003 Agricultural Supplies and Services	3.532	3.532	3.532	3.532	100.0 %	100.0 %	100.0 %

VOTE: 142 National Agricultural Research Organization (NARO)

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<i>Billion Uganda Shillings</i>	Approved Budget	Revised Budget	Released by End Q4	Spent by End Q4	% GoU Budget Released	% GoU Budget Spent	% GoU Releases Spent
224004 Beddings, Clothing, Footwear and related Services	0.081	0.081	0.076	0.076	93.8 %	93.8 %	100.0 %
224005 Laboratory supplies and services	1.763	1.763	1.726	1.726	97.9 %	97.9 %	100.0 %
224010 Protective Gear	0.018	0.018	0.018	0.018	100.0 %	100.0 %	100.0 %
224011 Research Expenses	14.827	14.827	14.705	14.705	99.2 %	99.2 %	100.0 %
225101 Consultancy Services	0.509	0.509	0.509	0.509	100.0 %	100.0 %	100.0 %
225201 Consultancy Services-Capital	0.120	0.120	0.000	0.000	0.0 %	0.0 %	0.0 %
225202 Environment Impact Assessment for Capital Works	0.100	0.100	0.100	0.100	100.0 %	100.0 %	100.0 %
225204 Monitoring and Supervision of capital work	0.466	0.466	0.466	0.466	100.0 %	100.0 %	100.0 %
226001 Insurances	0.077	0.077	0.077	0.077	100.0 %	100.0 %	100.0 %
226002 Licenses	0.098	0.098	0.098	0.098	100.0 %	100.0 %	100.0 %
227001 Travel inland	0.747	0.747	0.747	0.747	100.0 %	100.0 %	100.0 %
227003 Carriage, Haulage, Freight and transport hire	0.019	0.019	0.015	0.015	78.9 %	78.9 %	100.0 %
227004 Fuel, Lubricants and Oils	1.244	1.244	1.240	1.240	99.7 %	99.7 %	100.0 %
228001 Maintenance-Buildings and Structures	6.319	6.319	6.194	6.194	98.0 %	98.0 %	100.0 %
228002 Maintenance-Transport Equipment	0.581	0.581	0.534	0.534	91.9 %	91.9 %	100.0 %
228003 Maintenance-Machinery & Equipment Other than Transport Equipment	0.374	0.374	0.311	0.311	83.2 %	83.2 %	100.0 %
228004 Maintenance-Other Fixed Assets	0.125	0.125	0.125	0.125	100.0 %	100.0 %	100.0 %
262201 Contributions to International Organisations-Capital	1.785	1.785	1.132	1.132	63.4 %	63.4 %	100.0 %
273102 Incapacity, death benefits and funeral expenses	0.017	0.017	0.015	0.015	88.1 %	88.1 %	100.0 %
282201 Contributions to Non-Government Institutions	0.015	0.015	0.005	0.005	33.3 %	33.3 %	100.0 %
312121 Non-Residential Buildings - Acquisition	4.712	4.712	0.878	0.878	18.6 %	18.6 %	100.0 %
312139 Other Structures - Acquisition	0.862	0.862	0.018	0.018	2.1 %	2.1 %	100.0 %
312212 Light Vehicles - Acquisition	5.981	5.981	5.981	5.981	100.0 %	100.0 %	100.0 %
312221 Light ICT hardware - Acquisition	0.150	0.150	0.150	0.150	100.0 %	100.0 %	100.0 %
312222 Heavy ICT hardware - Acquisition	0.164	0.164	0.164	0.164	100.0 %	100.0 %	100.0 %
312229 Other ICT Equipment - Acquisition	0.400	0.400	0.400	0.400	100.0 %	100.0 %	100.0 %
312232 Electrical machinery - Acquisition	0.025	0.025	0.020	0.020	80.0 %	80.0 %	100.0 %

VOTE: 142 National Agricultural Research Organization (NARO)

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<i>Billion Uganda Shillings</i>	Approved Budget	Revised Budget	Released by End Q4	Spent by End Q4	% GoU Budget Released	% GoU Budget Spent	% GoU Releases Spent
312233 Medical, Laboratory and Research & appliances - Acquisition	10.555	10.555	9.889	9.889	93.7 %	93.7 %	100.0 %
312235 Furniture and Fittings - Acquisition	0.020	0.020	0.020	0.020	100.0 %	100.0 %	100.0 %
352882 Utility Arrears Budgeting	0.144	0.144	0.144	0.144	100.0 %	100.0 %	100.0 %
Total for the Vote	116.927	117.927	111.133	111.133	95.0 %	95.0 %	100.0 %

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Quarter 4

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

<i>Billion Uganda Shillings</i>	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	116.927	117.927	111.133	111.133	95.04 %	95.04 %	100.00 %
Sub SubProgramme:01 Agricultural Research	116.927	117.927	111.133	111.133	95.04 %	95.04 %	100.0 %
Departments							
001 Abi Zonal Agriculture Research Institute(ZARDI)	0.117	0.117	0.117	0.117	100.0 %	100.0 %	100.0 %
002 Buginyaya Zonal Agriculture Research Institute(ZARDI)	0.272	0.272	0.272	0.272	100.0 %	100.0 %	100.0 %
003 Bulindi Zonal Agriculture Research Institute(ZARDI)	0.139	0.139	0.139	0.139	100.0 %	100.0 %	100.0 %
004 Kachwekano Zonal Agriculture Research Institute(ZARDI)	0.214	0.214	0.214	0.214	100.0 %	100.0 %	100.0 %
005 Mbarara Zonal Agriculture Research Institute(ZARDI)	0.117	0.117	0.117	0.117	100.0 %	100.0 %	100.0 %
006 Nabuin Zonal Agriculture Research Institute(ZARDI)	0.117	0.117	0.117	0.117	100.0 %	100.0 %	100.0 %
007 NARO-SECRETARIATE	64.993	65.993	65.597	65.597	100.9 %	100.9 %	100.0 %
008 National Agricultural Research Laboratories	0.300	0.300	0.300	0.300	100.0 %	100.0 %	100.0 %
009 National Coffee Research Institute	0.197	0.197	0.197	0.197	100.0 %	100.0 %	100.0 %
010 National Crops Resources Research Institute	0.247	0.247	0.247	0.247	100.0 %	100.0 %	100.0 %
011 National Fisheries Resources Research Institute	0.197	0.197	0.197	0.197	100.0 %	100.0 %	100.0 %
012 National Forestry Resources Research Institute	0.125	0.125	0.125	0.125	100.0 %	100.0 %	100.0 %
013 Mukono Zonal Agriculture Research Institute (ZARDI)	0.264	0.264	0.264	0.264	100.0 %	100.0 %	100.0 %
014 National Livestock Resources Research Institute (NaLIRRI)	0.622	0.622	0.622	0.622	100.0 %	100.0 %	100.0 %
015 National Semi Arid Resources Research Institute (NaSARRI)	0.122	0.122	0.122	0.122	100.0 %	100.0 %	100.0 %
016 Ngetta ZARDI	0.117	0.117	0.117	0.117	100.0 %	100.0 %	100.0 %
017 Rwebitaba ZARDI	0.192	0.192	0.190	0.190	98.9 %	98.9 %	100.0 %
Development Projects							
1560 Relocation and Operationalisation of the National Livestock Resources Research Institute(NALIRRI)	7.719	7.719	2.652	2.652	34.4 %	34.4 %	100.0 %

VOTE: 142 National Agricultural Research Organization (NARO)

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<i>Billion Uganda Shillings</i>	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	116.927	117.927	111.133	111.133	95.04 %	95.04 %	100.00 %
1619 Retooling of National Agricultural Research Organization	40.856	40.856	39.528	39.528	96.7 %	96.7 %	100.0 %
Total for the Vote	116.927	117.927	111.133	111.133	95.0 %	95.0 %	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 and Coordination			
Sub SubProgramme:01 Agricultural Research			
Departments			
Department:007 NARO-SECRETARIATE			
Budget Output:000001 Audit and Risk Management			
PIAP Output: 01040701 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
2 audit reports for risk, value for money, systems, assets management, human resource , off budget and competitive Grants scheme reports generated to support management improvement of Agricultural research.	Two (02) audit reports for risk, value for money, systems, assets management, human resource , off budget and competitive Grants scheme reports generated to support management improvement of Agricultural research.		NA
Expenditures incurred in the Quarter to deliver outputs			UShs Thousand
Item			Spent
221003 Staff Training			21,611.343
224011 Research Expenses			10,328.975
Total For Budget Output			31,940.318
Wage Recurrent			0.000
Non Wage Recurrent			31,940.318
Arrears			0.000
AIA			0.000
Budget Output:000014 Administrative and Support Services			
PIAP Output: 01040701 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
NA	NA		NA

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Quarter 4

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

Annual subscription for insurance of research vessels, machinery and equipment maintained. 1Public-Private Partnership established for technology development and transfer ,1 research support infrastructure establishment supported 8 Governing council sessions supported 4 research supervisory support missions conducted	(a)Three NARO Governing council sessions supported. (b) There were efforts to support for infrastructure establishment. (i) some contract were awarded, however contract not signed due to insufficient funds. (ii) Some contracts were Signed. Contractors on board. Status of implementation currently at various percentages. (iii) Others are at the defects liability period ended. Contract closed and payment effected.	There were efforts to support for infrastructure establishment. Contract awarded, however contract not signed due to insufficient funds.
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Expenditures incurred in the Quarter to deliver outputs US\$ Thousand

Item	Spent
211102 Contract Staff Salaries	9,957,777.318
211104 Employee Gratuity	2,425,694.330
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)	147,185.631
212101 Social Security Contributions	970,277.801
212102 Medical expenses (Employees)	190,988.000
212103 Incapacity benefits (Employees)	437,962.288
221009 Welfare and Entertainment	19,105.999
Total For Budget Output	14,148,991.367
Wage Recurrent	9,957,777.318
Non Wage Recurrent	4,191,214.049
Arrears	0.000
<i>AIA</i>	0.000
Total For Department	14,180,931.685
Wage Recurrent	9,957,777.318
Non Wage Recurrent	4,223,154.367
Arrears	0.000
<i>AIA</i>	0.000

Development Projects

N/A

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Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
SubProgramme:02 Agricultural Production and Productivity		
Sub SubProgramme:01 Agricultural Research		
Departments		
Department:001 Abi Zonal Agriculture Research Institute(ZARDI)		
Budget Output:010010 Technology Generation		
PIAP Output: 01040705 Demand driven agriculture technologies developed		
Programme Intervention: 010407 Strengthen agricultural research and technology development		
1 highly nutritious composite products one cereal gene bank established One food and one feed product developed		
4 Research-extension farmer linkages developed and strengthened, 6 newly released root crop varieties introduced to uptake pathways in the west Nile region, 14,000 seedlings of (2500) Mango, five thousand (1,250) Citrus, Ten thousand (2500) Avocado		
1 highly nutritious composite products one cereal gene bank established One food and one feed product developed		The was no performance as a result of non-availability of funds.
PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened		
Programme Intervention: 010407 Strengthen agricultural research and technology development		
NA	NA	There was no performance as a result of inadequate release of funds during quarter 4
Expenditures incurred in the Quarter to deliver outputs		US\$ Thousand
Item		Spent
	Total For Budget Output	0.000
	Wage Recurrent	0.000
	Non Wage Recurrent	0.000
	Arrears	0.000
	AIA	0.000
Budget Output:010011 Technology Promotion		

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 agricultural research and technology development		
NA		Non release of funds for this study
PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened		
Programme Intervention: 010407 Strengthen agricultural research and technology development		
One functional public private partnerships and platforms established for promotion of Fish and Cassava products and services Market information generated on 1 selected commodity West Nile region		Limited funds to initiate work for the cassava platform.
11,250 high quality seedlings of citrus, avocado, mango, apples and coffee One soil and water conservation practice promoted 1 climate resilient and farmer preferred dry land legume variety 3 newly released root crop variety promoted		There was no performance due to inadequate release of funds.
Expenditures incurred in the Quarter to deliver outputs		US\$ Thousand
Item		Spent
	Total For Budget Output	0.000
	Wage Recurrent	0.000
	Non Wage Recurrent	0.000
	Arrears	0.000
	AIA	0.000
	Total For Department	0.000
	Wage Recurrent	0.000
	Non Wage Recurrent	0.000
	Arrears	0.000
	AIA	0.000
Department:002 Buginyaya Zonal Agriculture Research Institute(ZARDI)		
Budget Output:010008 Capacity Strengthening		

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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 agricultural research and technology development			
1 partnership promoted for technology generation 1 research products commercialized 1 research platform established	One information package for technology was developed and One partnership for technology generation between Buginyanya and SYOVA Ltb, a seed company was developed. Buginyanya ZARDI is hosting their seed and vegetable demonstration.		There was under performance occasioned by inadequate release of funds.
Expenditures incurred in the Quarter to deliver outputs			US\$ Thousand
Item			Spent
222001 Information and Communication Technology Services.			5,609.000
Total For Budget Output			5,609.000
Wage Recurrent			0.000
Non Wage Recurrent			5,609.000
Arrears			0.000
AIA			0.000
Budget Output:010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
NA		Non was no release of funds	
PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
1 Industrial products for yield improvement and commercialization developed for industry		Non performance due to limited release of funds	
1 package for sustainable disease management in Arabica coffee and potato developed		There was under performance due to limited release of funds.	
1 pests resistant varieties 2 disease management packages for strategic crops Generate 5 tons of potato seed 5 adaptive trials, demos 1Industrial products for yield improvement 1 scientific paper published		Non performance due to limited release of funds	
NA		Non release of funds.	
Expenditures incurred in the Quarter to deliver outputs			US\$ Thousand
Item			Spent

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	0.000
	Wage Recurrent	0.000
	Non Wage Recurrent	0.000
	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		
2 improved technologies and innovations promoted and adopted 2research products and services for food and nutrition security promoted	Developed promotional informational packages and materials for two (02) improved technologies (maize and beans) and innovations. Promoted and adopted two research products and services for food and nutrition security using radio and participation in exhibitions.	Limited release of funds.
NA	Developed promotional and informational materials for two (02) improved technologies (maize and beans) and innovations. Promoted and adopted two research products and services for food and nutrition security using radio and participation in exhibitions.	Non performance due to limited release of funds
NA	Two scientific papers published to promote and disseminate technologies and innovations for improved nutrition, food security and household incomes	NA
PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened		
Programme Intervention: 010407 Strengthen agricultural research and technology development		
3 adaptive trials, demos and one field day carried out to increase access and utilization of improved technologies	3 adaptive trials, demos maintained and harvested to increase access and utilization of improved technologies.	There was a spillover from the previous quarters. In addition to participation of development partners such seed companies and CBOs.
PIAP Output: 0103020112 Agricultural Research platforms established		
Programme Intervention: 010407 Strengthen agricultural research and technology development		
1 scientific papers published to promote and disseminate technologies and innovations for improved nutrition, food security and household incomes	1 scientific paper published to promote and disseminate technologies and innovations for improved nutrition, food security and household incomes..	NA

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
Expenditures incurred in the Quarter to deliver outputs		US\$ Thousand
Item		Spent
222001 Information and Communication Technology Services.		3,740.000
	Total For Budget Output	3,740.000
	Wage Recurrent	0.000
	Non Wage Recurrent	3,740.000
	Arrears	0.000
	AIA	0.000
	Total For Department	9,349.000
	Wage Recurrent	0.000
	Non Wage Recurrent	9,349.000
	Arrears	0.000
	AIA	0.000
Department:003 Bulindi Zonal Agriculture Research Institute(ZARDI)		
Budget Output:010010 Technology Generation		
PIAP Output: 01040705 Demand driven agriculture technologies developed		
Programme Intervention: 010407 Strengthen agricultural research and technology development		
1 MSIPs (Soybean and Rice) Initiated to promote technologies 1 crop, 1 livestock and 1 post-harvest handling technologies & practices promoted 1 Climate smart agricultural technologies demonstrated		Non release of funds
NA		Non release of funds
PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened		
Programme Intervention: 010407 Strengthen agricultural research and technology development		
Quality seed for 1 improved priority crop Varieties multiplied and disseminated Information of 1 bee floral resources 1 technology adaptation report on 1 crop technologies developed		Non release of funds
NA		Non release of funds
Expenditures incurred in the Quarter to deliver outputs		US\$ Thousand
Item		Spent
	Total For Budget Output	0.000
	Wage Recurrent	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
	Non Wage Recurrent	0.000
	Arrears	0.000
	AIA	0.000
	Total For Department	0.000
	Wage Recurrent	0.000
	Non Wage Recurrent	0.000
	Arrears	0.000
	AIA	0.000
Department:004 Kachwekano Zonal Agriculture Research Institute(ZARDI)		
Budget Output:010010 Technology Generation		
PIAP Output: 01040705 Demand driven agriculture technologies developed		
Programme Intervention: 010407 Strengthen agricultural research and technology development		
NA	Developedz, disseminated and promotional materials for five demand driven agriculture technologies developed to be promoted (seed potato of four improved varieties and improved kigezi goat).	The inadequate release of resources hindered attainment of the set targets
PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened		
Programme Intervention: 010407 Strengthen agricultural research and technology development		
3 technologies promoted 1 technologies for food and nutrition security generated	In effort to promote 3 technologies for food and nutritional security, data for adaption trials was collected and analyzed.	There was a spillover from the previous quarters. In addition to participation of development partners such seed companies and CBOs.
2 demand driven agriculture technologies developed and promoted	Data collected and analysed on the Three (03) demand driven agriculture technologies namely, Narorice 3, KAF39 and Namche5 which were developed and promoted in Kanungu.	
2 demand driven agriculture technologies developed and promoted	Data collected and analysed on the Three (03) demand driven agriculture technologies namely, Narorice 3, KAF39 and Namche5 which were developed and promoted in Kanungu.	
NA	Data collected and analysed on the Three (03) demand driven agriculture technologies namely, Narorice 3, KAF39 and Namche5 which were developed and promoted in Kanungu.	

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
Expenditures incurred in the Quarter to deliver outputs		UShs Thousand
Item		Spent
222001 Information and Communication Technology Services.		200.000
	Total For Budget Output	200.000
	Wage Recurrent	0.000
	Non Wage Recurrent	200.000
	Arrears	0.000
	AIA	0.000
	Total For Department	200.000
	Wage Recurrent	0.000
	Non Wage Recurrent	200.000
	Arrears	0.000
	AIA	0.000
Department:005 Mbarara Zonal Agriculture Research Institute(ZARDI)		
Budget Output:010008 Capacity Strengthening		
PIAP Output: 01040705 Demand driven agriculture technologies developed		
Programme Intervention: 010407 Strengthen agricultural research and technology development		
2 technologies for food, nutrition and industry promoted in 2 districts of the Zone 1 technologies generated for market and Industry 3Research facilities maintained to support research		
Expenditures incurred in the Quarter to deliver outputs		UShs Thousand
Item		Spent
	Total For Budget Output	0.000
	Wage Recurrent	0.000
	Non Wage Recurrent	0.000
	Arrears	0.000
	AIA	0.000
	Total For Department	0.000
	Wage Recurrent	0.000
	Non Wage Recurrent	0.000
	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: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		
1 adaptable seed varieties produced and availed to farmers, 1 technology of new cereal and 1 pulse varieties adapted to NEAZ farmers		Non release of funds
NA		Non release of funds
PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened		
Programme Intervention: 010407 Strengthen agricultural research and technology development		
1 technology for food, Nutrition, income & industry promoted in the zone Efficacy of 1 biological control strategies on FAW & desert locusts determined & Efficacy of 1biological control strategies on FAW and desert locusts determined.		No funds released this quarter.
1 adaptable seed varieties produced and availed to farmers, 1 technology of new cereal and 1 pulse varieties adapted to NEAZ farmers	NA	NA
Expenditures incurred in the Quarter to deliver outputs		
		UShs Thousand
Item		Spent
	Total For Budget Output	0.000
	Wage Recurrent	0.000
	Non Wage Recurrent	0.000
	Arrears	0.000
	AIA	0.000
	Total For Department	0.000
	Wage Recurrent	0.000
	Non Wage Recurrent	0.000
	Arrears	0.000
	AIA	0.000
Department:007 NARO-SECRETARIATE		
Budget Output:010008 Capacity Strengthening		

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 agricultural research and technology development		
1 Impact report on groundnut and sunflower technologies on the livelihoods and economy of Uganda generated. 1 market study report developed to inform research and farmer enterprise section. 1 NARO work plans FY 2023/2024 & M&E report developed	Initiated one impact study on groundnut and sunflower technologies and worked towards finalization (40% complete) of the impact study for sorghum and rice on the livelihoods and economy of Uganda. One market study on the performance of NARO released technologies was conducted. The study revealed that report are the most preferred varieties bazooka and long-H by both farmers and input dealers. And favorably compete with other imported maize varieties. Finalized the NARO work plans FY 2023/2024.	There was under performance occasioned by non-release of the budget by 5% of the approved annual budget.
NA	NA	NA
Expenditures incurred in the Quarter to deliver outputs		UShs Thousand
Item	Spent	
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)	43,836.998	
211107 Boards, Committees and Council Allowances	14,413.025	
221007 Books, Periodicals & Newspapers	3,192.665	
221008 Information and Communication Technology Supplies.	2,608.500	
221009 Welfare and Entertainment	7,685.250	
221011 Printing, Stationery, Photocopying and Binding	36,313.433	
221012 Small Office Equipment	3,808.622	
222001 Information and Communication Technology Services.	11,927.750	
222002 Postage and Courier	2,520.134	
223001 Property Management Expenses	14,071.206	
223004 Guard and Security services	10,370.610	
223005 Electricity	13,173.467	
223006 Water	6,219.153	
224002 Veterinary supplies and services	9,420.500	
224003 Agricultural Supplies and Services	124,295.728	
224004 Beddings, Clothing, Footwear and related Services	15,235.271	

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
Expenditures incurred in the Quarter to deliver outputs		US\$hs Thousand
Item		Spent
224011 Research Expenses		1,025,986.248
226001 Insurances		23,539.208
227001 Travel inland		18,951.394
227004 Fuel, Lubricants and Oils		903.250
228001 Maintenance-Buildings and Structures		4,579,981.980
228002 Maintenance-Transport Equipment		12,268.806
228003 Maintenance-Machinery & Equipment Other than Transport Equipment		18,002.769
228004 Maintenance-Other Fixed Assets		10,705.648
	Total For Budget Output	6,009,431.615
	Wage Recurrent	0.000
	Non Wage Recurrent	6,009,431.615
	Arrears	0.000
	AIA	0.000
	Total For Department	6,009,431.615
	Wage Recurrent	0.000
	Non Wage Recurrent	6,009,431.615
	Arrears	0.000
	AIA	0.000
Department:008 National Agricultural Research Laboratories		
Budget Output:010008 Capacity Strengthening		
PIAP Output: 01040705 Demand driven agriculture technologies developed		
Programme Intervention: 010407 Strengthen agricultural research and technology development		
1 animal drawn weeding implement, 1 power tiller weeding implement, 1 low horsepower weeding implement, 1 Aqua Crop guidelines for maize developed 1 Agriculture Research Innovations and IPs commercialized 1research products and services for food and nutrition security	Developed technologies and information packages digitized for commercialization. These are: 1 animal drawn weeding implement, 1 power tiller weeding implement, 1 low horsepower weeding implement, 1 Aqua Crop guidelines for maize 5 Agriculture Research Innovations and IPs commercialized, 4 research products and services for food and nutrition.	There was inadequate release of resources which led to under performance.

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Outputs Planned in Quarter		Actual Outputs Achieved in Quarter	Reasons for Variation in performance
Expenditures incurred in the Quarter to deliver outputs			US\$ Thousand
Item			Spent
222001 Information and Communication Technology Services.			1,625.000
	Total For Budget Output		1,625.000
	Wage Recurrent		0.000
	Non Wage Recurrent		1,625.000
	Arrears		0.000
	AIA		0.000
	Total For Department		1,625.000
	Wage Recurrent		0.000
	Non Wage Recurrent		1,625.000
	Arrears		0.000
	AIA		0.000
Department:009 National Coffee Research Institute			
Budget Output:010008 Capacity Strengthening			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
NA			Non performance due to non release of funds
PIAP Output: 0103020116 Functional public-private partnerships established for technology development and promotion			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
1 alternative pathway for utilization of cocoa waste developed Best-bet coffee system for optimum water use efficiency in Robusta coffee & soil moisture conservation practice for optimum soil moisture stress management developed 1 Coffee byproducts refi			Non release of funds during the quarter affected performance.

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: 0103020116 Functional public-private partnerships established for technology development and promotion		
Programme Intervention: 010407 Strengthen agricultural research and technology development		
NA	<p>Coffee based Lotions and creams from Q2 all passed UNBS microbiology tests. Only the lotions fully passed chemistry criteria.</p> <ul style="list-style-type: none">• No soluble coffee prototype developed. Work still on-going.• 1 coffee byproduct profiled for phytochemical attributes. <p>Conducted quality analysis of coffee-yoghurt samples with UNBS. All prototypes were less by 0.1 units from the recommended pH. Established experiments to optimise fermentation time for coffee-infused yoghurt. Dietary information for 2 yoghurt prototypes documented following UNBS standard guidelines for whole yoghurt (milk fat content and milk solids non-fat). Both prototypes were in acceptable ranges for these parameters and were free of aflatoxins. Work still on-going.</p> <p>For best-bait coffee systems, research protocols and activity plans for 3 trials/demonstration on soil fertility management/moisture conservation laid out; pest/disease management and cropping systems (banana/agro-forestry) using Kituza Robusta (KR) coffee varieties on-s</p>	NA
Expenditures incurred in the Quarter to deliver outputs		UShs Thousand
Item		Spent
	Total For Budget Output	0.000
	Wage Recurrent	0.000
	Non Wage Recurrent	0.000
	Arrears	0.000
	AIA	0.000
	Total For Department	0.000
	Wage Recurrent	0.000
	Non Wage Recurrent	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
	Arrears	0.000
	AIA	0.000

Department:010 National Crops Resources Research Institute

Budget Output:010008 Capacity Strengthening

PIAP Output: 01040705 Demand driven agriculture technologies developed

Programme Intervention: 010407 Strengthen agricultural research and technology development

4 market-oriented products generated 5 research products and services suitable for industry developed	Four (04) Information data sets on market-oriented products and 5 research products and services suitable for industry were developed.	The cumulative achievement were due to funding from other development partners.
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Expenditures incurred in the Quarter to deliver outputsUShs Thousand

Item	Spent
222001 Information and Communication Technology Services.	750.000
Total For Budget Output	750.000
Wage Recurrent	0.000
Non Wage Recurrent	750.000
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

NA	Information and promotional packages for five (05) research products for food, nutrition and industry were developed and promoted along uptake pathways	There was under performance due to non-release of funds.
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PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened

Programme Intervention: 010407 Strengthen agricultural research and technology development

5 Agriculture Research I products for food, nutrition and industry promoted along uptake pathways.	Information and promotional packages for five (05) research products for food, nutrition and industry were developed and promoted along uptake pathways.	There was support from development partners which enabled good performance despite of inadequate releases.
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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		
3 Agriculture Research Innovations and IPs commercialized 3 public-private partnerships established for technology development and promotion 2Agricultural research platforms established 5 improved technologies and innovations adapted	3 Agriculture Research Innovations and IPs commercialized, 3 public-private partnerships were established for technology development and promotion 2, Agricultural research platforms established 5 improved technologies and innovations adapted.	
NA		Non performance due to non release of funds
Expenditures incurred in the Quarter to deliver outputs		UShs Thousand
Item		Spent
	Total For Budget Output	0.000
	Wage Recurrent	0.000
	Non Wage Recurrent	0.000
	Arrears	0.000
	AIA	0.000
	Total For Department	750.000
	Wage Recurrent	0.000
	Non Wage Recurrent	750.000
	Arrears	0.000
	AIA	0.000
Department:011 National Fisheries Resources Research Institute		
Budget Output:010008 Capacity Strengthening		
PIAP Output: 01040705 Demand driven agriculture technologies developed		
Programme Intervention: 010407 Strengthen agricultural research and technology development		
1 freshwater biodiversity portal for Uganda developed Capacity of stakeholders strengthened 1 fish laboratories &1 aquarium facilities maintained 1 cage research facility maintained 1 vessels and 2 research vehicles maintained	One freshwater biodiversity portal for Uganda was developed, maintained and promoted.	There was over performance arising from support of development partners of freshwater biodiversity portal for Uganda
Expenditures incurred in the Quarter to deliver outputs		UShs Thousand
Item		Spent
222001 Information and Communication Technology Services.		3,340.925

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	3,340.925
	Wage Recurrent	0.000
	Non Wage Recurrent	3,340.925
	Arrears	0.000
	<i>AlA</i>	0.000

Budget Output:010010 Technology Generation

PIAP Output: 01040705 Demand driven agriculture technologies developed

Programme Intervention: 010407 Strengthen agricultural research and technology development

1 freshwater biodiversity portal for Uganda developed Capacity of stakeholders strengthened 1 fish laboratories &1 aquarium facilities maintained 1 cage research facility maintained 1 vessels and 2 research vehicles maintained	One freshwater biodiversity portal for uganda was developed, maintained and promoted. (i) Incorporated fish species distribution maps for 297 fish species and corresponding shapefiles into the portal. The distribution maps were built using the framework of the International Union for Conservation of Nature (IUCN) for mapping the distribution of freshwater species. Therefore, the maps and shapefiles show the origin (Native, Introduced, and Origin Uncertain) and presence (Extant, Possibly Extant, Possibly Extinct, and Presence Uncertain) of the species (ii) Incorporated into the portal, species summary pages for 16 newly described species (H. concilians, H. erutus, H. planus, H. latifrons, H. rex, H. simba, H. glaucus, H. aquila, H. kimondo, H. falcatus, H. curvidens, H. pardus, H. quasimodo, H. gracilifur, H. molossus, H. relictidens) in Lakes Edward, George and Kazinga channel. One policy brief developed.	NA
12,500 fish seed (6,250 Labeo and 6,250 Barbus) for the aquaculture industry (hatcheries and lead farmers)	NA	NA

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

Programme Intervention: 010407 Strengthen agricultural research and technology development

NA		Non performance due to non-release of funds.
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Expenditures incurred in the Quarter to deliver outputs		US\$ Thousand
Item		Spent
Total For Budget Output		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
	Wage Recurrent	0.000
	Non Wage Recurrent	0.000
	Arrears	0.000
	AIA	0.000
	Total For Department	3,340.925
	Wage Recurrent	0.000
	Non Wage Recurrent	3,340.925
	Arrears	0.000
	AIA	0.000

Department:012 National Forestry Resources Research Institute

Budget Output:010008 Capacity Strengthening

PIAP Output: 01040705 Demand driven agriculture technologies developed

Programme Intervention: 010407 Strengthen agricultural research and technology development

1 best performing clonal avocado rootstocks determined 1 trial in avocado growing zones established 1 Avocado storage and post-harvest equipment developed Avocado oils and seed powder from 10 varieties profiled	1 best performing clonal avocado rootstocks determined 1 trial in avocado growing zones established Avocado oils and seed powder from 10 varieties profiled.	-
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Expenditures incurred in the Quarter to deliver outputs *US\$ Thousand*

Item	Spent
222001 Information and Communication Technology Services.	600.000
Total For Budget Output	600.000
Wage Recurrent	0.000
Non Wage Recurrent	600.000
Arrears	0.000
AIA	0.000

Budget Output:010010 Technology Generation

PIAP Output: 01040705 Demand driven agriculture technologies developed

Programme Intervention: 010407 Strengthen agricultural research and technology development

4 Shea ethno-varieties conserved in 2 Breeding Seed Orchards and used as a source of germplasm and breeding One cottage industry for Annona developed Value Chain of Annona profiled	Information digitized on the conserved four (4) Shea ethno-varieties of shea-butter tree breeding seed orchards in Ngetta and Serere Shea-butter tree breeding seed orchards maintained.	Non performance due to limited release of funds
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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		
27500 Hass Avocado seedlings produced and extended to famers.	Information packages on Hass avocado and 35,000 seedlings of various plantation species; and trees for other use values produced.	There was under performance due to non-release of 5% of the approved annual budget.
NA	35,000 seedlings of various plantation species and trees for other use values produced under nursery conditions. 250 hass avocado samples collected for growing of rootstocks.	There was under performance due to non-release of 5% of the approved annual budget.
Expenditures incurred in the Quarter to deliver outputs		US\$ Thousand
Item		Spent
222001 Information and Communication Technology Services.		2,164.958
	Total For Budget Output	2,164.958
	Wage Recurrent	0.000
	Non Wage Recurrent	2,164.958
	Arrears	0.000
	AIA	0.000
	Total For Department	2,764.958
	Wage Recurrent	0.000
	Non Wage Recurrent	2,764.958
	Arrears	0.000
	AIA	0.000
Department:013 Mukono Zonal Agriculture Research Institute (ZARDI)		
Budget Output:010010 Technology Generation		

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 agricultural research and technology development		
2 Value added products of tomato and pineapple developed and promoted	Research on Two (02) value added products of tomato and pineapple were initiated. In addition, two (02) value addition studies on Nakati powder as a fortifier in cassava and wheat flour for making confectionaries and Product development for healthy, nutritious, and tasty beverages was initiated using powder from different spices and blends of avocado seed powder. Cosmetics value addition research from avocado was initiated and prototypes of oil, soap and jellys were developed. Nakati flavored confectionery protocols were developed using different quantities of nakati powder to increase its consumption. One (01) apple pectic extraction protol was developed. The intention was to develop a cheap natural juice thickener with good digestibility rate. Value addition on Okra was initiated. This involved developing a protocol for preparing okra seed powder which was aimed at improving its consumption due to the enormous health benefits. This Product is directed for healthy and nutrition	There was over performance arising from support of development partners and competitive grant scheme of NARO.
Expenditures incurred in the Quarter to deliver outputs		UShs Thousand
Item		Spent
222001 Information and Communication Technology Services.		1,158.000
	Total For Budget Output	1,158.000
	Wage Recurrent	0.000
	Non Wage Recurrent	1,158.000
	Arrears	0.000
	AIA	0.000
Budget Output:010011 Technology Promotion		

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 agricultural research and technology development		
NA	Information and video materials developed for technology demonstration for urban farming at Mukono Ntaawo. And technology demonstration. established through availing 12,500 coffee and 25,000 cocoa seedlings produced . Information and video materials developed for multiplication of improved planting materials. And availed to uptake pathways for improved household food, nutritional security and incomes.	NA
PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened		
Programme Intervention: 010407 Strengthen agricultural research and technology development		
1 technology demonstration established 12,500 coffee and 25,000 cocoa seedlings produced	Information packages for farmers were developed through collection of information from 1 technology demonstration established and 12,500 coffee and 25,000 cocoa seedlings produced.	There was additional support from development partners such as NGOs and the private sector which enabled the performance.
NA	NA	NA
Expenditures incurred in the Quarter to deliver outputs		
US\$ Thousand		
Item	Spent	
222001 Information and Communication Technology Services.	2,648.500	
	Total For Budget Output	2,648.500
	Wage Recurrent	0.000
	Non Wage Recurrent	2,648.500
	Arrears	0.000
	AIA	0.000
	Total For Department	3,806.500
	Wage Recurrent	0.000
	Non Wage Recurrent	3,806.500
	Arrears	0.000
	AIA	0.000
Department:014 National Livestock Resources Research Institute (NaLIRRI)		
Budget Output:010010 Technology Generation		

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
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PIAP Output: 01040705 Demand driven agriculture technologies developed

Programme Intervention: 010407 Strengthen agricultural research and technology development

50 MT of conserved feed resources, 50 Inbred line with different genetic back ground assembled, 50 Samples for genotyping collected & processed, 1 candidate variety developed		There was no performance as there were no resources released during the quarter.
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Expenditures incurred in the Quarter to deliver outputs	US\$hs Thousand
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Item	Spent
Total For Budget Output	0.000
Wage Recurrent	0.000
Non Wage Recurrent	0.000
Arrears	0.000
AIA	0.000
Total For Department	0.000
Wage Recurrent	0.000
Non Wage Recurrent	0.000
Arrears	0.000
AIA	0.000

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 and technology development

Diversity of 1 crop variety germplasm determined, 1 cotton lines resilient to climatic change with high yield potential identified to support the textile industry and related cotton value chains,		There was no performance as there were no resources released during the quarter.
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Expenditures incurred in the Quarter to deliver outputs	US\$hs Thousand
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Item	Spent
Total For Budget Output	0.000
Wage Recurrent	0.000
Non Wage Recurrent	0.000
Arrears	0.000
AIA	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
Budget Output:010011 Technology Promotion			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
Generation Seed (EGS) produced to promote uptake of 4 technologies. through private sector. Technologies for food, nutrition and Industry promoted in 1 Districtg located 1 Argo ecological zones		Information on Five (05) technologies of sunflower, sorghum, groundnuts and finger millet for food, nutrition and Industry was disseminated and promoted among the private sector in the agro ecological zones	
Expenditures incurred in the Quarter to deliver outputs			UShs Thousand
Item			Spent
222001 Information and Communication Technology Services.			500.000
Total For Budget Output			500.000
Wage Recurrent			0.000
Non Wage Recurrent			500.000
Arrears			0.000
AIA			0.000
Total For Department			500.000
Wage Recurrent			0.000
Non Wage Recurrent			500.000
Arrears			0.000
AIA			0.000
Department:016 Ngetta ZARDI			
Budget Output:010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
1 New multiple stress tolerant, high yielding and nutrient dense crop varieties of beans, groundnuts, soybean varieties in different sub ecologies in NAEZ established one most effective propagation protocol for three medicinal plants developed 3 acre			Non performance due to limited release of funds
NA	NA	NA	

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			
NA			Non performance due to limited release of funds
NA			Non performance due to limited release of funds
Expenditures incurred in the Quarter to deliver outputs			UShs Thousand
Item			Spent
	Total For Budget Output		0.000
	Wage Recurrent		0.000
	Non Wage Recurrent		0.000
	Arrears		0.000
	AIA		0.000
	Total For Department		0.000
	Wage Recurrent		0.000
	Non Wage Recurrent		0.000
	Arrears		0.000
	AIA		0.000
Department:017 Rwebitaba ZARDI			
Budget Output:010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
NA	Information data set on 5 tea clones characterized for biochemical attributes was assembled and 10,000 clonal plantlets of selected tea clones assembled for multiplication using modern breeding tools. ,2500 open pollinated hybrid tea seeds collected..		There was under performance arising from inadequate release of funds.

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			
10,000 clonal plantlets of selected tea clones multiplied. 5 tea clones characterized for biochemical attributes ,2500 open pollinated hybrid tea seeds collected		Information data set on 10,000 clonal plantlets of selected tea clones was assembled to aid multiplication. Genomic prediction models for 2 quality parameters of tea training population (300 tea accessions) developed.	limited fund hindered/limited attainment of the full set target.
Expenditures incurred in the Quarter to deliver outputs			US\$ Thousand
Item			Spent
222001 Information and Communication Technology Services.			2,311.956
Total For Budget Output			2,311.956
Wage Recurrent			0.000
Non Wage Recurrent			2,311.956
Arrears			0.000
AIA			0.000
Total For Department			2,311.956
Wage Recurrent			0.000
Non Wage Recurrent			2,311.956
Arrears			0.000
AIA			0.000
Development Projects			
Project:1560 Relocation and Operationalisation of the National Livestock Resources Research Institute(NALIRRI)			
Budget Output:000017 Infrastructure Development and Management			

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Outputs Planned in Quarter		Actual Outputs Achieved in Quarter	Reasons for Variation in performance
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			
1 Livestock research handling infrastructure & 1 production masterplan for ten square miles developed. 1 kilometer of barbed wire fence constructed.	4 Livestock research handling infrastructure: 1) Substructure of queen rearing facility and Goat research facility constructed, 2) Construction of Calf/heifer barn at Nakyesasa completed, 3) Super-structure of residential staff quarters constructed. 4) Research bull-stud at Nakyesasa at 80% completion.	Limited and inadequate release of funds led to underperformance.	
1 Livestock research handling infrastructure & 1 production masterplan for ten square miles developed. 1 kilometer of barbed wire fence constructed.	NA	NA	
Expenditures incurred in the Quarter to deliver outputs			US\$ Thousand
Item			Spent
312121 Non-Residential Buildings - Acquisition			472,181.762
312139 Other Structures - Acquisition			18,000.000
312232 Electrical machinery - Acquisition			20,000.001
Total For Budget Output			510,181.763
GoU Development			510,181.763
External Financing			0.000
Arrears			0.000
AIA			0.000
Budget Output:010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
10 Forage inbred lines with excellent silage production attributes, and stress tolerance identified.	10 Forage inbred lines with excellent silage production attributes, and stress tolerance identified.	There was underperformance which was occasioned by inadequate release of funds.	

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
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		
NA	10 Forage inbred lines with excellent silage production attributes, and stress tolerance were identified. These will form a critical mass of forages for breeding farmer preferred cultivars for silage production.	
PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened		
Programme Intervention: 010407 Strengthen agricultural research and technology development		
1 demo site each on beef, dairy cattle; Goat and pigs established 1 on-farm prediction tool/Model for determination of Pasture productivity developed 1 Community Constraint Diagnostic Study Conducted	Three (03) demo sites on strategic commodities of beef, goat (Maruzi in Apac district) and dairy cattle (Nakyesasa in Wakiso district) were established. One (01) on-farm prediction tool/Model for determination of Pasture (bracharia and chloris	There was under performance which was occasioned by inadequate release of funds.
NA	NA	NA
Expenditures incurred in the Quarter to deliver outputs		UShs Thousand
Item		Spent
227004 Fuel, Lubricants and Oils		31,801.150
	Total For Budget Output	31,801.150
	GoU Development	31,801.150
	External Financing	0.000
	Arrears	0.000
	AIA	0.000
	Total For Project	541,982.913
	GoU Development	541,982.913
	External Financing	0.000
	Arrears	0.000
	AIA	0.000
Project:1619 Retooling of National Agricultural Research Organization		
Budget Output:000003 Facilities and Equipment Management		

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
Project:1619 Retooling of National Agricultural Research Organization		
PIAP Output: 01040705 Demand driven agriculture technologies developed		
Programme Intervention: 010407 Strengthen agricultural research and technology development		
4 research laboratories equipped and supplied with consumables to support research. Seven research laboratories maintained Five research laboratories Audited and upgraded towards accreditation	4 research laboratories equipped and supplied with consumables to support research. Seven research laboratories maintained, Supplied with assorted Laboratory for laboratories in the PARIs. Balance on laboratory equipment for the vaccine facility (NALIRRI). Supply of Assorted Laboratory Equipment for Aflasafe Research and Production and supply of a High-Tech Bioreactor (NALIRRI). Installation of Electricity for the Fish Floating Feed Equipment. Five research laboratories Audited and upgraded towards accreditation and the necessary documentation and recommendations are in place.	These was an overflow from quarter 3 which carried forward the performance to end quarter 4.
a) Four Agricultural research laboratories of strategic importance equipped b) 16 Agricultural research Institutes retooled with24 units of transport equipment to support research c) 16 Public Agricultural research Institutes retooled with computers.		NA
Expenditures incurred in the Quarter to deliver outputs		UShs Thousand
Item	Spent	
312212 Light Vehicles - Acquisition	5,981,200.000	
312221 Light ICT hardware - Acquisition	150,070.000	
312222 Heavy ICT hardware - Acquisition	88,137.529	
312229 Other ICT Equipment - Acquisition	400,000.000	
312233 Medical, Laboratory and Research & appliances - Acquisition	457,317.815	
312235 Furniture and Fittings - Acquisition	188.995	
Total For Budget Output	7,076,914.339	
GoU Development	7,076,914.339	
External Financing	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
Project:1619 Retooling of National Agricultural Research Organization		
	Arrears	0.000
	<i>AIA</i>	0.000

Budget Output:010008 Capacity Strengthening**PIAP Output: 01040705 Demand driven agriculture technologies developed****Programme Intervention: 010407 Strengthen agricultural research and technology development**

NARO human resource capacity strengthened through support to completion of 32 PhDs for research and product development. NARO laboratory management strengthened towards accreditation of 1 National laboratories.	<p>(A) On Human Resources NARO human resource capacity strengthened through support to completion of 5 PhDs and 2 Msc for research and product development.</p> <p>(B) On NARO land title secured. (a) Titles of Aduku, Katakwi and Amuria secured. (b)Titling process still on going. (1) Boundary Opening at Maziba,Nyamigogo Kyanamira in Kisoro and part of Lorengdwart in Nabuin ZARDI (completed). (2) Survey works at Kibimbiri (completed but titling yet to be done). (3) Land Boundary Opening at NaRL-Kawanda (Completed). (4) Finalizing the titling of NaSARRI and Variety Trial Centres. (5) Sensitization of stakeholders and Survey support for Kuju and Katakwi Variety Trial Centre (VTCs) in Amuria and Katakwi District (Completed).</p>	There was under performance which was occasioned by limited funds. The progress is:
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Expenditures incurred in the Quarter to deliver outputs		<i>US\$ Thousand</i>
Item		Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)		5,968.600
211107 Boards, Committees and Council Allowances		331,880.750
221001 Advertising and Public Relations		68,737.201
221003 Staff Training		73,329.159
221004 Recruitment Expenses		21,852.500
221007 Books, Periodicals & Newspapers		8,430.000
221008 Information and Communication Technology Supplies.		19,364.501

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
Project:1619 Retooling of National Agricultural Research Organization		
Expenditures incurred in the Quarter to deliver outputs		UShs Thousand
Item		Spent
221009 Welfare and Entertainment		40,000.000
221011 Printing, Stationery, Photocopying and Binding		145,437.083
221016 Systems Recurrent costs		19,350.000
221017 Membership dues and Subscription fees.		10,062.990
222001 Information and Communication Technology Services.		4,135.919
223002 Property Rates		30,000.000
223004 Guard and Security services		29,008.000
224002 Veterinary supplies and services		1,661.000
224005 Laboratory supplies and services		116,814.000
224011 Research Expenses		50,007.042
225101 Consultancy Services		73,868.552
225202 Environment Impact Assessment for Capital Works		70,000.000
225204 Monitoring and Supervision of capital work		26,462.600
226002 Licenses		25,000.000
227001 Travel inland		171,310.549
227004 Fuel, Lubricants and Oils		20,868.600
228001 Maintenance-Buildings and Structures		295,996.690
228002 Maintenance-Transport Equipment		121.600
228003 Maintenance-Machinery & Equipment Other than Transport Equipment		1,429.400
Total For Budget Output		1,661,096.736
GoU Development		1,661,096.736
External Financing		0.000
Arrears		0.000
AIA		0.000
Budget Output:010009 Research Partnerships		

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
Project:1619 Retooling of National Agricultural Research Organization		
PIAP Output: 01040705 Demand driven agriculture technologies developed		
Programme Intervention: 010407 Strengthen agricultural research and technology development		
NNARO annual subscription to 1 international research organizations maintained	Contribution to International Organizations were made for two international organisation I.e. Africa Rice and Biodiversity International(IPGRI).	There was under performance occasioned by inadequate release of funds during the year.
Expenditures incurred in the Quarter to deliver outputs		
Item		Spent
262201 Contributions to International Organisations-Capital		112,131.042
282201 Contributions to Non-Government Institutions		5,000.000
Total For Budget Output		117,131.042
GoU Development		117,131.042
External Financing		0.000
Arrears		0.000
AIA		0.000
Budget Output:010010 Technology Generation		
PIAP Output: 01040705 Demand driven agriculture technologies developed		
Programme Intervention: 010407 Strengthen agricultural research and technology development		
10 Agricultural research studies to generate information and products for industry conducted under the competitive grants scheme. 3 of research products and services suitable for food Nutrition and industry developed	34 agricultural research studies were supported to generate information and products for the industry under competitive grants scheme.	There was under performance was occasioned by inadequate release of funds.
Expenditures incurred in the Quarter to deliver outputs		
Item		Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)		15,303.000
221003 Staff Training		16,321.500
221008 Information and Communication Technology Supplies.		5,000.000
221011 Printing, Stationery, Photocopying and Binding		10,000.000
222002 Postage and Courier		149.692
224005 Laboratory supplies and services		51,259.986
224010 Protective Gear		2,070.000
224011 Research Expenses		143,499.927

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
Project:1619 Retooling of National Agricultural Research Organization		
Expenditures incurred in the Quarter to deliver outputs		UShs Thousand
Item		Spent
225101 Consultancy Services		10,800.000
226002 Licenses		100.000
227001 Travel inland		84,042.000
227004 Fuel, Lubricants and Oils		39,750.000
228004 Maintenance-Other Fixed Assets		20,464.200
	Total For Budget Output	398,760.305
	GoU Development	398,760.305
	External Financing	0.000
	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		
3 agricultural research innovations and IPs commercialized, 1multi-stakeholders agricultural research innovation platforms established, 2 climate-smart technologies demonstrations established in all the ZARDIs 4 Public-Private Partnerships established for technology development and promotion	Identified and designed trademarks for six (06) products. One patent application drafted on African Swine Fever vaccine development protocol. Four industrial designs for skin care products and one trademark (KAV 400) filed with the national IP office. 5 multi-stakeholders agricultural research innovation platforms established and supported. 9 climate-smart technologies demonstrations established in all the ZARDIs. 16 Public-Private Partnerships established. Two (2) plant variety licensing agreements were initiated with BRAC and Okeba seeds	
Expenditures incurred in the Quarter to deliver outputs		UShs Thousand
Item		Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)		73,768.500

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Reasons for Variation in performance
Project:1619 Retooling of National Agricultural Research Organization		
Expenditures incurred in the Quarter to deliver outputs		US\$ Thousands
Item		Spent
221001 Advertising and Public Relations		59,265.282
221003 Staff Training		330.999
221007 Books, Periodicals & Newspapers		400.000
221008 Information and Communication Technology Supplies.		1,885.000
221009 Welfare and Entertainment		69,616.000
221011 Printing, Stationery, Photocopying and Binding		3,876.000
222001 Information and Communication Technology Services.		85,165.492
222002 Postage and Courier		500.000
224003 Agricultural Supplies and Services		112,000.000
224011 Research Expenses		99,154.850
226002 Licenses		31,169.000
227001 Travel inland		12,591.440
227004 Fuel, Lubricants and Oils		32,250.000
228002 Maintenance-Transport Equipment		13,750.000
	Total For Budget Output	595,722.563
	GoU Development	595,722.563
	External Financing	0.000
	Arrears	0.000
	AIA	0.000
	Total For Project	9,849,624.985
	GoU Development	9,849,624.985
	External Financing	0.000
	Arrears	0.000
	AIA	0.000
	GRAND TOTAL	30,606,619.537
	Wage Recurrent	9,957,777.318
	Non Wage Recurrent	10,257,234.321
	GoU Development	10,391,607.898
	External Financing	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
	Arrears	0.000
	AIA	0.000

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

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: 01040701 Demand driven agriculture technologies developed		
Programme Intervention: 010407 Strengthen agricultural research and technology development		
11 audit reports for risk, value for money, systems, assets management, human resource , off budget and competitive Grants scheme reports generated to support management improvement of Agricultural research.	(1) 4 audit staff attained skills and techniques in auditing in dynamic environment and update knowledge on emerging trends in the Accountancy profession (2) 4 Internal Audit staff facilitated to attend 27th Annual Seminar for the Institute of Certified Public Accountants of Uganda and attained 21 hours of structured Continuous Professional Development (CPD). (1)-15 audit staff attained skills and techniques in auditing in a dynamic environment and emerging trends in the Accountancy profession, and the role of timely reporting to audit. (2)- 9 audit staff facilitated to attend the National Annual Internal Audit conference at Commonwealth resort Munyonyo to update knowledge pertaining industry best practices and audit standards. One final report produced on Public relations function of NARO, and Legal Services and actions taken by management on the audit recommendations. (1)-One audit report produced on the performance of NHL in generating revenue.	
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs		UShs Thousand
Item		Spent
221003 Staff Training		36,574.703
224011 Research Expenses		84,035.000
Total For Budget Output		120,609.703
Wage Recurrent		0.000
Non Wage Recurrent		120,609.703
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:000014 Administrative and Support Services			
PIAP Output: 01040701 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
Annual subscription for insurance of research vessels, machinery and equipment maintained. 6Public-Private Partnerships established for technology 16 research support infrastructure establishment supported 8 Governing council sessions supported 16 resear		NA	
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			
Annual subscription for insurance of research vessels, machinery and equipment maintained. 6Public-Private Partnerships established for technology 16 research support infrastructure establishment supported 8 Governing council sessions supported		(a)Three NARO Governing council sessions supported. (a)Three NARO Governing council sessions supported. (b) There were efforts to support for infrastructure establishment. (i) some contract were awarded, however contract not signed due to insufficient funds. (ii) Some contracts were Signed. Contractors on board. Status of implementation currently at various percentages. (iii) Others are at the defects liability period ended. Contract closed and payment effected.	
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs		UShs Thousand	
Item		Spent	
211102 Contract Staff Salaries		39,811,109.272	
211104 Employee Gratuity		9,702,777.320	
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)		482,251.531	
212101 Social Security Contributions		3,881,110.927	
212102 Medical expenses (Employees)		850,000.000	
212103 Incapacity benefits (Employees)		613,735.045	
221009 Welfare and Entertainment		78,476.000	
Total For Budget Output		55,419,460.095	
Wage Recurrent		39,811,109.272	
Non Wage Recurrent		15,608,350.823	

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter	
	Arrears	0.000
	AIA	0.000
	Total For Department	55,540,069.798
	Wage Recurrent	39,811,109.272
	Non Wage Recurrent	15,728,960.526
	Arrears	0.000
	AIA	0.000

Development Projects

N/A

SubProgramme:02 Agricultural Production and Productivity

Sub SubProgramme:01 Agricultural Research

Departments

Department:001 Abi Zonal Agriculture Research Institute(ZARDI)

Budget Output:010010 Technology Generation

PIAP Output: 01040705 Demand driven agriculture technologies developed

Programme Intervention: 010407 Strengthen agricultural research and technology development

Two appropriate tools developed for Tamarind, Shear, Rubber vine and Combratum and 1 management technology Two fish branded nutritive products Two highly nutritious composite products one cereal gene bank established One food and one feed product	Two appropriate tools developed for Tamarind, Shear, Rubber vine and Combratum and 1 management technology were initiated. Development of two fish branded nutritive products was initiated. Development of two highly nutritious composite products was initiated. The establishment of a cereal gene bank was initiated.
13 Research-extension farmer linkages developed and strengthened, 6 newly released root crop varieties introduced to uptake pathways in the west Nile region, 56,000 seedlings of (10,000) Mango, five thousand (5,000) Citrus, Ten thousand (10,000) Avocado	13 Research-extension farmer linkages strengthened including one functional product and services (MSIP) based platform supported for fish products and services in WNR. Two hectares of newly released cassava varieties (Mukumba and Ug 120/195) establsihed and evaluated on station and on-farm in Arua district Olupi parish. 15,000 seedlings of (5,000) Mango, five thousand (5,000) Citrus, Ten thousand (5,000) Avocado

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Annual Planned OutputsCumulative Outputs Achieved by End of Quarter

PIAP Output: 01040705 Demand driven agriculture technologies developed

Programme Intervention: 010407 Strengthen agricultural research and technology development

Two appropriate tools developed for Tamarind, Shear, Rubber vine and Combratum and 1 management technology Two fish branded nutritive products Two highly nutritious composite products one cereal gene bank established One food and one feed product	Developed one fish product branded and promoted. Research capacity to train bee keepers in the zone strengthened.
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PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened

Programme Intervention: 010407 Strengthen agricultural research and technology development

13 Research-extension farmer linkages developed and strengthened, 6 newly released root crop varieties introduced to uptake pathways in the west Nile region, 56,000 seedlings of (10,000) Mango, five thousand (5,000) Citrus, Ten thousand (10,000) Avocado	5 Research-extension farmer linkages were developed and strengthened; 2 newly released root crop varieties were introduced to uptake pathways in the west Nile region.
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Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative OutputsUShs Thousand

Item	Spent
224011 Research Expenses	36,680.000
Total For Budget Output	36,680.000
Wage Recurrent	0.000
Non Wage Recurrent	36,680.000
Arrears	0.000
ALA	0.000

Budget Output:010011 Technology Promotion

PIAP Output: 01040705 Demand driven agriculture technologies developed

Programme Intervention: 010407 Strengthen agricultural research and technology development

Two functional public private partnerships and platforms established for promotion of Fish and Cassava products and services Market information generated on 2 selected commodities of sorghum and goats in West Nile region	One platform established for promotion of Fish products, services and market information generated in West Nile region.
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VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 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			
Two functional public private partnerships and platforms established for promotion of Fish and Cassava products and services Market information generated on 2 selected commodities of sorghum and goats in West Nile region		One functional product and services (MSIP) based platform supported for fish products and services in WNR. Market survey conducted to generate information on sorghum technology. Work still on-going.	
Forty-five thousand high quality seedlings of citrus, avocado, mango, apples and coffee One soil and water conservation practice promoted Two climate resilient and farmer preferred dry land legumes varieties 6 newly released root crop varieties promoted		30,000 high quality seedlings of citrus, avocado, mango, apples and coffee generated and are being accessed by farmers. 2 fertilizer blends for maize coffee and potato at validation.	
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs			US\$ Thousand
Item			Spent
221008 Information and Communication Technology Supplies.			500.000
221011 Printing, Stationery, Photocopying and Binding			13,570.000
222001 Information and Communication Technology Services.			375.000
224003 Agricultural Supplies and Services			20,000.000
224011 Research Expenses			40,120.000
227004 Fuel, Lubricants and Oils			5,435.000
Total For Budget Output			80,000.000
Wage Recurrent			0.000
Non Wage Recurrent			80,000.000
Arrears			0.000
AIA			0.000
Total For Department			116,680.000
Wage Recurrent			0.000
Non Wage Recurrent			116,680.000
Arrears			0.000
AIA			0.000
Department:002 Buginyaya Zonal Agriculture Research Institute(ZARDI)			
Budget Output:010008 Capacity Strengthening			

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter
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PIAP Output: 01040705 Demand driven agriculture technologies developed

Programme Intervention: 010407 Strengthen agricultural research and technology development

4 partnerships promoted for technology generation 2 research products commercialized 3 research platforms established	2 partnerships promoted for technology generation. 1 research product commercialized. 1 research platforms was established.
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Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs *US\$ Thousand*

Item	Spent
211107 Boards, Committees and Council Allowances	5,740.000
212103 Incapacity benefits (Employees)	1,764.000
221001 Advertising and Public Relations	5,216.000
221007 Books, Periodicals & Newspapers	1,356.000
221008 Information and Communication Technology Supplies.	6,260.000
221009 Welfare and Entertainment	1,200.000
221011 Printing, Stationery, Photocopying and Binding	5,272.000
221012 Small Office Equipment	2,088.000
222001 Information and Communication Technology Services.	22,436.000
223001 Property Management Expenses	3,128.000
223004 Guard and Security services	13,044.000
223005 Electricity	4,176.000
223006 Water	3,132.000
224011 Research Expenses	18,264.000
226001 Insurances	520.000
227004 Fuel, Lubricants and Oils	5,220.000
228001 Maintenance-Buildings and Structures	2,608.000
228002 Maintenance-Transport Equipment	21,200.000
228003 Maintenance-Machinery & Equipment Other than Transport	5,220.000
228004 Maintenance-Other Fixed Assets	2,608.000
Total For Budget Output	130,452.000
Wage Recurrent	0.000
Non Wage Recurrent	130,452.000
Arrears	0.000
<i>AIA</i>	0.000

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			
Four (4) Industrial products for yield improvement and commercialization developed for industry		Two (02) products for industry yield improvement and industry were developed for bakery and beverage. Two (02) maize and 4 wheat candidate lines were developed.	
PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
Four (4) Industrial products for yield improvement and commercialization developed for industry		Four (4) Industrial products for yield improvement and commercialization developed for industry.	
Two varieties with adequate resistance to major pests and diseases developed to support house food security and incomes Two packages for sustainable disease management in Arabica coffee and potato developed		Research on two varieties with adequate resistance to major pests and diseases was initiated to support house food security and incomes. Two packages for sustainable disease management in Arabica coffee and potato developed.	
2 pests resistant varieties 2 disease management packages for strategic crops Generate 25 tons of potato seed 15 adaptive trials, demos 4 Industrial products for yield improvement developed 4 scientific papers published		6000 fingerlings; 3000 each of Mirror carp and Nile tilapia produced and disseminated to uptake path ways. 4 breeding boer bucks availed to farmer groups and 34 improved genotypes (Boer X indigenous crosses) maintained at Bulegeni station. 20 tons f Longe 5 seed, 1.27 tons of Narobean1 and 0.618 tons Narobean 2 handed and 0.6 tons of Nabe15 of early generation seed bulked.	
Two varieties with adequate resistance to major pests and diseases developed to support house food security and incomes Two packages for sustainable disease management in Arabica coffee and potato developed		Fertilizer blends trials for maize, coffee and potato have been harvest and samples are being processed for final yield data collection. One NPK fertilizer blend suitable for coffee under trial. Preliminary results showed an increase in number of berries on bearing nodes, which likely implies increase in yield, more data will be collected in the season.	

Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs		US\$ Thousand
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Item	Spent
221011 Printing, Stationery, Photocopying and Binding	3,101.000
221012 Small Office Equipment	1,070.000
224002 Veterinary supplies and services	1,000.000
224003 Agricultural Supplies and Services	13,800.000
224011 Research Expenses	9,200.000

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 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
227004 Fuel, Lubricants and Oils			3,600.000
228002 Maintenance-Transport Equipment			1,200.000
	Total For Budget Output		32,971.000
	Wage Recurrent		0.000
	Non Wage Recurrent		32,971.000
	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			
2 improved technologies and innovations promoted and adopted 2research products and services for food and nutrition security promoted		Developed promotional and informational materials and packages for two (02) improved technologies (maize and beans) and innovations. Promoted and adopted two research products and services for food and nutrition security using radio and participation in exhibitions.	
2 improved technologies and innovations promoted and adopted 2research products and services for food and nutrition security promoted		Developed promotional and informational materials for two (02) improved technologies (maize and beans) and innovations. Promoted and adopted two research products and services for food and nutrition security using radio and participation in exhibitions.	
Four scientific papers published to promote and disseminate technologies and innovations for improved nutrition, food security and household incomes		7 scientific papers published to promote and disseminate technologies and innovations for improved nutrition, food security and household incomes	
PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
15 adaptive trials, demos and one field day carried out to increase access and utilization of improved technologies		15 adaptive trials, demos and one field day carried out to increase access and utilization of improved technologies were carried out in Bukwo, Kapchorwa, Kween and Bulambuli.	
PIAP Output: 0103020112 Agricultural Research platforms established			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
Four scientific papers published to promote and disseminate technologies and innovations for improved nutrition, food security and household incomes		Four scientific papers published to promote and disseminate technologies and innovations for improved nutrition, food security and household incomes.	

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 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	
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)	8,696.000	
211107 Boards, Committees and Council Allowances	3,828.000	
212103 Incapacity benefits (Employees)	1,392.000	
221001 Advertising and Public Relations	3,480.000	
221007 Books, Periodicals & Newspapers	904.000	
221008 Information and Communication Technology Supplies.	4,176.000	
221009 Welfare and Entertainment	800.000	
221011 Printing, Stationery, Photocopying and Binding	5,420.000	
221012 Small Office Equipment	1,392.000	
222001 Information and Communication Technology Services.	14,960.000	
223001 Property Management Expenses	2,084.000	
223004 Guard and Security services	8,692.000	
223005 Electricity	2,784.000	
223006 Water	2,084.000	
224002 Veterinary supplies and services	2,793.000	
224003 Agricultural Supplies and Services	5,652.000	
224011 Research Expenses	14,740.000	
226001 Insurances	348.000	
227004 Fuel, Lubricants and Oils	3,480.000	
228001 Maintenance-Buildings and Structures	1,740.000	
228002 Maintenance-Transport Equipment	13,916.000	
228003 Maintenance-Machinery & Equipment Other than Transport	3,480.000	
228004 Maintenance-Other Fixed Assets	1,736.000	
Total For Budget Output		108,577.000
Wage Recurrent		0.000
Non Wage Recurrent		108,577.000
Arrears		0.000
AIA		0.000
Total For Department		272,000.000
Wage Recurrent		0.000

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter	
	Non Wage Recurrent	272,000.000
	Arrears	0.000
	AIA	0.000

Department:003 Bulindi Zonal Agriculture Research Institute(ZARDI)

Budget Output:010010 Technology Generation

PIAP Output: 01040705 Demand driven agriculture technologies developed

Programme Intervention: 010407 Strengthen agricultural research and technology development

2 MSIPs (Soybean and Rice) Initiated to promote technologies 5 crop, 3 livestock and 2 post-harvest handling technologies & practices promoted 5 Climate smart agricultural technologies demonstrated	2 MSIPs (Soybean and Rice) Initiated to promote technologies 5 crop, 3 livestock and 2 post-harvest handling technologies & practices promoted 5 Climate smart agricultural technologies demonstrated
Quality seed for 3 improved priority crop Varieties multiplied and disseminated Information of 3 bee floral resources 2 technology adaptation report on 2 crop technologies developed	36 tones of 1 improved priority crop Varieties multiplied and disseminated (soybean foundation seed) for farmer access in the LACZ.

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

Programme Intervention: 010407 Strengthen agricultural research and technology development

Quality seed for 3 improved priority crop Varieties multiplied and disseminated Information of 3 bee floral resources 2 technology adaptation report on 2 crop technologies developed	Generated 12803kg of three (03) soyabean foundation seed One (01) bee floral resource established and maintained. One (01) study on crop technology adaptation initiated.
Quality seed for 3 improved priority crop Varieties multiplied and disseminated Information of 3 bee floral resources 2 technology adaptation report on 2 crop technologies developed	Generated 12803kg of three (03) soyabean foundation seed One (01) bee floral resource established and maintained. One (01) study on crop technology adaptation initiated.

Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	UShs Thousand
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Item	Spent
221001 Advertising and Public Relations	7,148.572
221007 Books, Periodicals & Newspapers	2,382.856
221008 Information and Communication Technology Supplies.	5,957.144
221009 Welfare and Entertainment	7,148.572
221011 Printing, Stationery, Photocopying and Binding	7,148.572

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 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	
221012 Small Office Equipment	3,574.284	
221017 Membership dues and Subscription fees.	2,382.856	
222002 Postage and Courier	1,191.428	
223001 Property Management Expenses	4,765.716	
223004 Guard and Security services	11,914.284	
224010 Protective Gear	2,382.856	
224011 Research Expenses	57,882.856	
228002 Maintenance-Transport Equipment	11,914.284	
228003 Maintenance-Machinery & Equipment Other than Transport	9,531.428	
273102 Incapacity, death benefits and funeral expenses	3,574.292	
Total For Budget Output		138,900.000
Wage Recurrent		0.000
Non Wage Recurrent		138,900.000
Arrears		0.000
AIA		0.000
Total For Department		138,900.000
Wage Recurrent		0.000
Non Wage Recurrent		138,900.000
Arrears		0.000
AIA		0.000
Department:004 Kachwekano Zonal Agriculture Research Institute(ZARDI)		
Budget Output:010010 Technology Generation		
PIAP Output: 01040705 Demand driven agriculture technologies developed		
Programme Intervention: 010407 Strengthen agricultural research and technology development		
8 Demand driven agriculture technologies developed and promoted	Information and promotional packages on eight (08) demand driven agricultural technologies (seed potato of, 3 apple varieties and one (01) kigezi goat) were developed.	

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 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			
Six technologies promoted for food, nutrition and industry Two technologies for food and nutrition security generated		Information and promotional packages on Six technologies (3 potato, 2 nutrient dense beans, 1 highland sorghum) for food, nutrition and industry were developed and delivered to uptake pathways. Two technologies on potato and apple were generated for food and nutrition security.	
8 Demand driven agriculture technologies developed and promoted for food and nutrition security; and industry		Data collected and analysed on the Three (03) demand driven agriculture technologies namely, Narorice 3, KAF39 and Namche5 which were developed and promoted in Kanungu.	
8 Demand driven agriculture technologies developed and promoted for food and nutrition; and industry		Data collected and analysed on the Three (03) demand driven agriculture technologies namely, Narorice 3, KAF39 and Namche5 which were developed and promoted in Kanungu.	
8 Demand driven agriculture technologies developed and promoted		Data collected and analysed on the Three (03) demand driven agriculture technologies namely, Narorice 3, KAF39 and Namche5 which were developed and promoted in Kanungu.	

Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	US\$hs Thousand
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Item	Spent
211107 Boards, Committees and Council Allowances	1,600.000
221008 Information and Communication Technology Supplies.	8,000.000
221009 Welfare and Entertainment	7,200.000
221012 Small Office Equipment	1,400.000
222001 Information and Communication Technology Services.	800.000
223001 Property Management Expenses	8,400.000
223004 Guard and Security services	40,316.000
223005 Electricity	3,200.000
223006 Water	3,000.000
224003 Agricultural Supplies and Services	24,008.000
224011 Research Expenses	69,074.400
226001 Insurances	1,170.000
227004 Fuel, Lubricants and Oils	16,125.600
228001 Maintenance-Buildings and Structures	20,006.000
228002 Maintenance-Transport Equipment	9,600.000

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Annual Planned Outputs		Cumulative Outputs Achieved by End of Quarter	
		Total For Budget Output	213,900.000
		Wage Recurrent	0.000
		Non Wage Recurrent	213,900.000
		Arrears	0.000
		AIA	0.000
		Total For Department	213,900.000
		Wage Recurrent	0.000
		Non Wage Recurrent	213,900.000
		Arrears	0.000
		AIA	0.000
Department:005 Mbarara Zonal Agriculture Research Institute(ZARDI)			
Budget Output:010008 Capacity Strengthening			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
Five technologies for food, nutrition and industry promoted in ten districts of the Zone Two technologies generated for market and Industry 6 Research facilities maintained to support research		Five technologies for food, nutrition and industry promoted in ten districts of the Zone. (Banana suckers, Feeds and supplements, Fruit trees and yoghurt starter). 6 Research facilities maintained to support research.	
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs			UShs Thousand
Item		Spent	
224002 Veterinary supplies and services		15,000.000	
224003 Agricultural Supplies and Services		10,000.000	
224011 Research Expenses		91,800.000	
		Total For Budget Output	116,800.000
		Wage Recurrent	0.000
		Non Wage Recurrent	116,800.000
		Arrears	0.000
		AIA	0.000
		Total For Department	116,800.000
		Wage Recurrent	0.000
		Non Wage Recurrent	116,800.000

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter	
	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

4adaptable seed varieties produced and availed to farmers 5technologies of new cereal and two pulse varieties adapted to NEAZ farmers	4 adaptable seed varieties produced and availed to farmers (two livestock feed and Green gram, one sorghum) 5 technologies of new cereal and two pulse varieties adapted to NEAZ farmers
Seven (07) technologies for food, Nutrition, income & industry promoted in the zone Efficacy of 2 biological control strategies on FAW & desert locusts determined & Efficacy of 2 biological control strategies on FAW and desert locusts determined.	Seven (07) technologies for food, Nutrition, income & industry promoted in the zone Efficacy of two biological control strategies on FAW determined

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

Programme Intervention: 010407 Strengthen agricultural research and technology development

Seven (07) technologies for food, Nutrition, income & industry promoted in the zone Efficacy of 2 biological control strategies on FAW & desert locusts determined & Efficacy of 2 biological control strategies on FAW and desert locusts determined.	(1) Germplasm collected and field trials established in the zone; Field trials managed. Data on agronomic performance and reaction to field diseases collected and analyzed. (2) One improved variety (NAROsorg3) and two local laces (Eliba and Abir) were selected for their brewery qualities (low Tanin levels).
4adaptable seed varieties produced and availed to farmers 5technologies of new cereal and two pulse varieties adapted to NEAZ farmers	NA

Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	UShs Thousand
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Item	Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)	13,500.000
211107 Boards, Committees and Council Allowances	5,000.000
212103 Incapacity benefits (Employees)	1,500.000
221001 Advertising and Public Relations	2,000.000
221009 Welfare and Entertainment	1,900.000
221011 Printing, Stationery, Photocopying and Binding	5,644.000
222002 Postage and Courier	600.000

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 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
223001 Property Management Expenses		4,000.000
223004 Guard and Security services		6,000.000
223005 Electricity		4,500.000
224002 Veterinary supplies and services		2,000.000
224003 Agricultural Supplies and Services		8,226.000
224011 Research Expenses		8,800.000
226001 Insurances		400.000
227004 Fuel, Lubricants and Oils		19,200.000
228001 Maintenance-Buildings and Structures		12,530.000
228002 Maintenance-Transport Equipment		15,000.000
228003 Maintenance-Machinery & Equipment Other than Transport		6,000.000
	Total For Budget Output	116,800.000
	Wage Recurrent	0.000
	Non Wage Recurrent	116,800.000
	Arrears	0.000
	AIA	0.000
	Total For Department	116,800.000
	Wage Recurrent	0.000
	Non Wage Recurrent	116,800.000
	Arrears	0.000
	AIA	0.000
Department:007 NARO-SECRETARIATE		
Budget Output:010008 Capacity Strengthening		

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			
1 Impact report on groundnut and sunflower technologies on the livelihoods and economy of Uganda generated. 1 market study report developed to inform research and farmer enterprise section. 1 NARO work plans FY 2023/2024 & M&E report developed,		Initiated one impact study on groundnut and sunflower technologies. And worked towards finalization of the impact study sorghum and rice on the livelihoods and economy of Uganda. One market study on the performance of NARO released technologies was conducted. The study revealed that report are the most preferred varieties bazooka and long-H by both farmers and input dealers. And favorably compete with other inported maize varieties. One NARO annual workplan and budget FY 2023/2024 was developed and appropriated.	
1 biosecurity access point for the vaccine research facility diverted and maintained as per guidance from from National Council of science and technology for National Bio safety committee, PANVAC and global acceptability for commercialization.		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)		242,053.498	
211107 Boards, Committees and Council Allowances		41,178.325	
221007 Books, Periodicals & Newspapers		6,975.665	
221008 Information and Communication Technology Supplies.		10,434.000	
221009 Welfare and Entertainment		30,741.000	
221011 Printing, Stationery, Photocopying and Binding		62,244.433	
221012 Small Office Equipment		8,259.122	
222001 Information and Communication Technology Services.		40,993.250	
222002 Postage and Courier		3,255.310	
223001 Property Management Expenses		59,174.325	
223004 Guard and Security services		51,345.360	
223005 Electricity		60,693.217	
223006 Water		24,876.153	
224002 Veterinary supplies and services		37,682.000	
224003 Agricultural Supplies and Services		458,950.678	
224004 Beddings, Clothing, Footwear and related Services		29,065.271	

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Annual Planned Outputs		Cumulative Outputs Achieved by End of Quarter
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs		US\$ Thousand
Item		Spent
224011 Research Expenses		3,469,899.788
226001 Insurances		64,368.597
227001 Travel inland		36,912.894
227004 Fuel, Lubricants and Oils		185,612.975
228001 Maintenance-Buildings and Structures		4,797,486.409
228002 Maintenance-Transport Equipment		124,211.704
228003 Maintenance-Machinery & Equipment Other than Transport		50,170.719
228004 Maintenance-Other Fixed Assets		16,291.108
352882 Utility Arrears Budgeting		143,762.518
	Total For Budget Output	10,056,638.319
	Wage Recurrent	0.000
	Non Wage Recurrent	9,912,875.801
	Arrears	143,762.518
	AIA	0.000
	Total For Department	10,056,638.319
	Wage Recurrent	0.000
	Non Wage Recurrent	9,912,875.801
	Arrears	143,762.518
	AIA	0.000
Department:008 National Agricultural Research Laboratories		
Budget Output:010008 Capacity Strengthening		
PIAP Output: 01040705 Demand driven agriculture technologies developed		
Programme Intervention: 010407 Strengthen agricultural research and technology development		
1 animal drawn weeding implement, 1 power tiller weeding implement, 1 low horsepower weeding implement, 1 Aqua Crop guidelines for maize 5 Agriculture Research Innovations and IPs commercialized 4 research products and services for food and nutrition s	Developed technologies and information packages digitized. The technologies are 1 animal drawn weeding implement, 1 power tiller weeding implement, 1 low horsepower weeding implement, 1 Aqua Crop guidelines for maize 5 Agriculture Research Innovations and IPs commercialized, 4 research products and services for food and nutrition	

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 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
221008 Information and Communication Technology Supplies.		12,000.000
221011 Printing, Stationery, Photocopying and Binding		19,600.000
222001 Information and Communication Technology Services.		6,500.000
223001 Property Management Expenses		8,900.000
223004 Guard and Security services		11,000.000
223005 Electricity		19,000.000
223006 Water		11,800.000
224003 Agricultural Supplies and Services		25,000.000
224011 Research Expenses		134,200.000
226001 Insurances		2,300.000
227004 Fuel, Lubricants and Oils		20,800.000
228002 Maintenance-Transport Equipment		10,900.000
228003 Maintenance-Machinery & Equipment Other than Transport		18,000.000
	Total For Budget Output	300,000.000
	Wage Recurrent	0.000
	Non Wage Recurrent	300,000.000
	Arrears	0.000
	AIA	0.000
	Total For Department	300,000.000
	Wage Recurrent	0.000
	Non Wage Recurrent	300,000.000
	Arrears	0.000
	AIA	0.000
Department:009 National Coffee Research Institute		
Budget Output:010008 Capacity Strengthening		

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			
1 alternative pathway for utilization of cocoa waste developed Best-bet coffee system for optimum water use efficiency in Robusta coffee & soil moisture conservation practice for optimum soil moisture stress management developed 2 Coffee byproducts refi		One (01) alternative pathway for utilization of cocoa waste developed. Best-bet coffee system for optimum water use efficiency in Robusta coffee & soil moisture conservation practice for optimum soil moisture stress management was developed. One (01) coffee byproduct refined.	
PIAP Output: 0103020116 Functional public-private partnerships established for technology development and promotion			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
1 alternative pathway for utilization of cocoa waste developed Best-bet coffee system for optimum water use efficiency in Robusta coffee & soil moisture conservation practice for optimum soil moisture stress management developed 2 Coffee byproducts refine		One (01) alternative pathway for utilization of cocoa waste developed. Best-bet coffee system for optimum water use efficiency was determined. Conducted quality analysis of coffee-yoghurt samples with UNBS. All prototypes were less by 0.1 units from the recommended pH. Established experiments to optimise fermentation time for coffee-infused yoghurt. Dietary information for 2 yoghurt prototypes documented following UNBS standard guidelines for whole yoghurt (milk fat content and milk solids non-fat). Both prototypes were in acceptable ranges for these parameters and were free of aflatoxins. For best-bait coffee systems, research protocols and activity plans for 3 trials/demonstration on soil fertility management/moisture conservation laid out; pest/disease management and cropping systems (banana/agro-forestry) using Kituza Robusta (KR) coffee varieties on-station and on-farm developed. Three sites/host for trials/demonstrations identified in 2 districts and prepared for planting.	

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Annual Planned Outputs		Cumulative Outputs Achieved by End of Quarter	
PIAP Output: 0103020116 Functional public-private partnerships established for technology development and promotion			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
1 alternative pathway for utilization of cocoa waste developed Best-bet coffee system for optimum water use efficiency in Robusta coffee & soil moisture conservation practice for optimum soil moisture stress management developed 2 Coffee byproducts refi		2 samples of coffee lotion and 2 samples of cream prepared and analysed for UNBS regulated microbes. All the lotions and creams passed UNBS microbiology tests. Only the lotions fully passed chemistry selection criteria. • No soluble coffee prototype developed. Work still on-going. • 1 coffee byproduct profiled for phytochemical attributes. Conducted quality analysis of coffee-yoghurt samples with UNBS. All prototypes were less by 0.1 units from the recommended pH. Established experiments to optimise fermentation time for coffee-infused yoghurt. Dietary information for 2 yoghurt prototypes documented following UNBS standard guidelines for whole yoghurt (milk fat content and milk solids non-fat). Both prototypes were in acceptable ranges for these parameters and were free of aflatoxins. Work still on-going. For best-bait coffee systems, research protocols and activity plans for 3 trials/demonstration on soil fertility management/moisture conservation laid out; pest/disease managemen	
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs			US\$ Thousand
Item			Spent
221007 Books, Periodicals & Newspapers			1,549.300
221008 Information and Communication Technology Supplies.			4,744.728
221009 Welfare and Entertainment			9,876.780
221011 Printing, Stationery, Photocopying and Binding			4,405.820
222002 Postage and Courier			968.312
223001 Property Management Expenses			4,308.988
223004 Guard and Security services			3,873.248
223005 Electricity			4,357.404
224003 Agricultural Supplies and Services			42,363.652
224010 Protective Gear			3,389.092
224011 Research Expenses			30,171.024
227004 Fuel, Lubricants and Oils			50,594.300

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 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
228001 Maintenance-Buildings and Structures			15,657.604
228002 Maintenance-Transport Equipment			8,714.808
228003 Maintenance-Machinery & Equipment Other than Transport			9,949.408
228004 Maintenance-Other Fixed Assets			484.156
273102 Incapacity, death benefits and funeral expenses			1,791.376
	Total For Budget Output		197,200.000
	Wage Recurrent		0.000
	Non Wage Recurrent		197,200.000
	Arrears		0.000
	AIA		0.000
	Total For Department		197,200.000
	Wage Recurrent		0.000
	Non Wage Recurrent		197,200.000
	Arrears		0.000
	AIA		0.000
Department:010 National Crops Resources Research Institute			
Budget Output:010008 Capacity Strengthening			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
10 market-oriented products generated 5 research products and services suitable for industry developed	During the financial year, market-oriented products generated stood at ten (11): 2 rice, 3 maize, 3 potato, 3 cassava. These included market-oriented products generated for food, nutrition security and industry (3 cassava - (NAROCASS 2, 3, 4) and 2 sweet potato varieties-NKB 135 (orange fleshed) and NKB 216 (cream fleshed)) were developed. 5 research products and services suitable for industry were developed. (2 cassava, 1 bean and 2 sweet potato). 123.5 acres of improved varieties of cassava (120 acres) and sweet potato (3.5 acres) established for seed (cassava varieties: UG120193, UG120156, Mkumba & NAROCASS1); (sweet potato varieties: NKB 216, NKB 135, NASPOT 8 and NAROSPOT 1).		

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 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
221001 Advertising and Public Relations			17,000.000
221008 Information and Communication Technology Supplies.			3,000.000
221011 Printing, Stationery, Photocopying and Binding			5,000.000
222001 Information and Communication Technology Services.			3,000.000
223004 Guard and Security services			7,000.000
223005 Electricity			29,800.000
224005 Laboratory supplies and services			3,000.000
224011 Research Expenses			46,420.000
227004 Fuel, Lubricants and Oils			8,000.000
228001 Maintenance-Buildings and Structures			5,000.000
228002 Maintenance-Transport Equipment			16,000.000
228003 Maintenance-Machinery & Equipment Other than Transport			4,000.000
	Total For Budget Output		147,220.000
	Wage Recurrent		0.000
	Non Wage Recurrent		147,220.000
	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			
15 Agriculture Research I products for food, nutrition and industry promoted along uptake pathways.		Information and promotional packages for five (05) research products for food, nutrition and industry were developed and promoted along uptake pathways. 123.5 acres of improved varieties of cassava (120 acres) and sweet potato (3.5 acres) established for seed (cassava varieties: UG120193, UG120156, Mkumba & NAROCASS1); (sweet potato varieties: NKB 216, NKB 135, NASPOT 8 and NAROSPOT 1).	

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 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			
15 Agriculture Research products for food, nutrition and industry promoted along uptake pathways.		15 Agriculture Research products for food, nutrition and industry promoted along uptake pathways including five (05) biofortified bean varieties NAROBAN 1,2,3,6 & 7 and scaled out in Karomoja, Kasanda and Mayuge. One automated simple bean planter demonstrated..	
15 Agriculture Research Innovations and IPs commercialized 12 public-private partnerships established for technology development and promotion 8 Agricultural research platforms established 19 improved technologies and innovations adapted		15 Agriculture Research Innovations and IPs commercialized. 12 platforms supported and or operationalised. 5 platforms supported: i) for TRICOT ii) Vine & Root producer association in Kamuli Region; iii) Digital surveillance of cassava pests & diseases by farmers; iv) Digital estimation of CBSD necrosis severity; v) electronic whitefly nymph phenotyping, 7 platforms operationalized : i) Social media groups for TRICOT hosts & extension ii) Vine & Root producer association in Busoga Region; iii) Knowledge Hub on clean cassava seed system with Divine Organic Ltd iv) OFSP promotion in Karamoja under Settlement Development Initiative (SBDI) with AGROMAX-OPM, v) COFIA-Tororo for cassava & sweet potato. Kikyusa maize platform supported in Luweero district and Kamuli maize platform supported..	
15 Agriculture Research I products for food, nutrition and industry promoted along uptake pathways.		Working with 19 farmer groups. Established 34 demos, being operated, and 123.5 acres of improved varieties of cassava (120 acres) and sweetpotato (3.5 acres) established and being maintained (cassava varieties: UG120193, UG120156, Mkumba & NAROCASS1); (sSweetpotato varieties: NKB 216, NKB 135, NASPOT 8 and NAROSPOT 1).	
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs			UShs Thousand
Item			Spent
221009 Welfare and Entertainment			3,500.000
224003 Agricultural Supplies and Services			20,000.000
224011 Research Expenses			76,500.000
Total For Budget Output			100,000.000
Wage Recurrent			0.000
Non Wage Recurrent			100,000.000
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
		Total For Department
		247,220.000
		Wage Recurrent
		0.000
		Non Wage Recurrent
		247,220.000
		Arrears
		0.000
		<i>AIA</i>
		0.000
Department:011 National Fisheries Resources Research Institute		
Budget Output:010008 Capacity Strengthening		
PIAP Output: 01040705 Demand driven agriculture technologies developed		
Programme Intervention: 010407 Strengthen agricultural research and technology development		
1 freshwater biodiversity portal for Uganda developed Capacity of stakeholders strengthened 4 fish laboratories & 2 aquarium facilities maintained 4 cage research facility maintained 4 vessels and 8 research vehicles maintained		One freshwater biodiversity portal for uganda was developed, maintained and promoted. (i) Incorporated fish species distribution maps for 297 fish species and corresponding shapefiles into the portal. The distribution maps were built using the framework of the International Union for Conservation of Nature (IUCN) for mapping the distribution of freshwater species. Therefore, the maps and shapefiles show the origin (Native, Introduced, and Origin Uncertain) and presence (Extant, Possibly Extant, Possibly Extinct, and Presence Uncertain) of the species (ii) Incorporated into the portal, species summary pages for 16 newly described species (H. concilians, H. erutus, H. planus, H. latifrons, H. rex, H. simba, H. glaucus, H. aquila, H. kimondo, H. falcatus, H. curvidens, H. pardus, H. quasimodo, H. gracilifur, H. molossus, H. relictidens) in Lakes Edward, George and Kazinga channel.
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs		<i>US\$ Thousand</i>
Item	Spent	
221001 Advertising and Public Relations	7,546.560	
221007 Books, Periodicals & Newspapers	3,773.280	
221008 Information and Communication Technology Supplies.	3,144.400	
221009 Welfare and Entertainment	5,974.360	
221011 Printing, Stationery, Photocopying and Binding	5,345.480	
222001 Information and Communication Technology Services.	13,363.700	
223004 Guard and Security services	9,433.200	
223005 Electricity	7,861.000	
223006 Water	7,861.000	
224011 Research Expenses	40,248.720	

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 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
227004 Fuel, Lubricants and Oils			11,791.500
228001 Maintenance-Buildings and Structures			23,897.440
228002 Maintenance-Transport Equipment			7,861.000
228003 Maintenance-Machinery & Equipment Other than Transport			8,898.360
	Total For Budget Output		157,000.000
	Wage Recurrent		0.000
	Non Wage Recurrent		157,000.000
	Arrears		0.000
	AIA		0.000
Budget Output:010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
1 freshwater biodiversity portal for Uganda developed 3 georeferenced maps for fish species for Uganda produced 1 Water quality indicator and explorer developed 1 policy brief		One freshwater biodiversity portal for uganda was developed, maintained and promoted. (i) Incorporated fish species distribution maps for 297 fish species and corresponding shapefiles into the portal. The distribution maps were built using the framework of the International Union for Conservation of Nature (IUCN) for mapping the distribution of freshwater species. Therefore, the maps and shapefiles show the origin (Native, Introduced, and Origin Uncertain) and presence (Extant, Possibly Extant, Possibly Extinct, and Presence Uncertain) of the species (ii) Incorporated into the portal, species summary pages for 16 newly described species (H. concilians, H. erutus, H. planus, H. latifrons, H. rex, H. simba, H. glaucus, H. aquila, H. kimondo, H. falcatus, H. curvidens, H. pardus, H. quasimodo, H. gracilifur, H. molossus, H. relictidens) in Lakes Edward, George and Kazinga channel.	
4 fish laboratories and 2 aquarium facilities maintained and operationalized, 2 cage research facility maintained and operationalized. 50,000 fish seed (25,000 Labeo and 25,000 Barbus) for the aquaculture industry (hatcheries and lead farmers)		NA	

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter
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PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened

Programme Intervention: 010407 Strengthen agricultural research and technology development

4 fish laboratories and 2 aquarium facilities maintained and operationalized, 2 cage research facility maintained and operationalized. 50,000 fish seed (25,000 Labeo and 25,000 Barbus) for the aquaculture industry (hatcheries and lead farmers)	4 fish laboratories and 2 aquarium facilities maintained and operationalized, 2 cage research facility maintained and operationalized. 50,000 fish seed (25,000 Labeo and 25,000 Barbus) for the aquaculture industry (hatcheries and lead farmers)
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Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	US\$ Thousand
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Item	Spent
224003 Agricultural Supplies and Services	25,300.000
224011 Research Expenses	12,220.000
227004 Fuel, Lubricants and Oils	2,700.000
Total For Budget Output	40,220.000
Wage Recurrent	0.000
Non Wage Recurrent	40,220.000
Arrears	0.000
AIA	0.000
Total For Department	197,220.000
Wage Recurrent	0.000
Non Wage Recurrent	197,220.000
Arrears	0.000
AIA	0.000

Department:012 National Forestry Resources Research Institute

Budget Output:010008 Capacity Strengthening

PIAP Output: 01040705 Demand driven agriculture technologies developed

Programme Intervention: 010407 Strengthen agricultural research and technology development

5 best performing clonal avocado rootstocks determined 5 trials in avocado growing zones established 3 Avocado storage and post-harvest equipment developed Avocado oils and seed powder from 10 varieties profiled 5 multi-stakeholder innovation platforms	5 best performing clonal avocado rootstocks determined 5 trials in avocado growing zones established Avocado oils and seed powder from 10 varieties profiled 5 multi-stakeholder innovation platforms supported.
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VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 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	
221009 Welfare and Entertainment		4,000.000	
221011 Printing, Stationery, Photocopying and Binding		4,400.000	
222001 Information and Communication Technology Services.		2,400.000	
222002 Postage and Courier		400.000	
223001 Property Management Expenses		8,000.000	
223004 Guard and Security services		9,936.000	
223005 Electricity		16,680.000	
224010 Protective Gear		724.000	
224011 Research Expenses		4,000.000	
227004 Fuel, Lubricants and Oils		12,000.000	
228001 Maintenance-Buildings and Structures		4,000.000	
228002 Maintenance-Transport Equipment		8,000.000	
228004 Maintenance-Other Fixed Assets		4,000.000	
Total For Budget Output		78,540.000	
Wage Recurrent		0.000	
Non Wage Recurrent		78,540.000	
Arrears		0.000	
AIA		0.000	
Budget Output:010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
15 shea ethno-varieties conserved in 2 Breeding Seed Orchards and used as a source of germplasm and breeding		Information digitized on the 4 Shea ethno-varieties of shea-butter tree breeding seed orchards in Ngetta and Serere.	
One cottage industry for Annona developed Value Chain of Annona profiled		Shea-butter tree breeding seed orchards maintained.	
PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
110,000 Hass Avocado seedlings produced and extended to famers.		35,000 seedlings of various plantation species and trees for other use values produced under nursery conditions.	
		250 hass avocado samples collected for growing of rootstocks.	

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 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		
110,000 Hass Avocado seedlings produced and extended to famers.	35,000 seedlings of various plantation species and trees for other use values produced under nursery conditions.	
	250 hass avocado samples collected for growing of rootstocks.	
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs		UShs Thousand
Item	Spent	
221001 Advertising and Public Relations	4,329.916	
221007 Books, Periodicals & Newspapers	1,298.976	
222001 Information and Communication Technology Services.	8,659.832	
224011 Research Expenses	32,171.276	
Total For Budget Output		46,460.000
Wage Recurrent		0.000
Non Wage Recurrent		46,460.000
Arrears		0.000
AIA		0.000
Total For Department		125,000.000
Wage Recurrent		0.000
Non Wage Recurrent		125,000.000
Arrears		0.000
AIA		0.000
Department:013 Mukono Zonal Agriculture Research 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
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PIAP Output: 01040705 Demand driven agriculture technologies developed

Programme Intervention: 010407 Strengthen agricultural research and technology development

Two Value added products of tomato and pineapple developed and promoted	Nakati value addition was initiated i.e. Nakati powder was prepared to be used as a fortifier in cassava and wheat flour for making confectionaries; Product development for healthy, nutritious, and tasty beverages was initiated using powder from different spices and blends of avocado seed powder. In addition, making of cosmetics from avocado was initiated and prototypes of oil, soap and jellys were developed. Nakati flavoured confectionery protocols were developed using different quantities of nakati powder to increase its consumability. We also developed the apple pectic extraction protol. This was aimed at developing a cheap natural juice thickener with good digestibility rate. Value addition on Okra was initiated. This involved developing a protocol for preparing okra seed powder which was aimed at improving its consumability due to the enormous health benefits. This Product is directed for healthy, nutritious, and tasty beverages which was initiated using mature okra seeds.
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Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	US\$ Thousand
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Item	Spent
221011 Printing, Stationery, Photocopying and Binding	7,500.000
222001 Information and Communication Technology Services.	4,632.000
223004 Guard and Security services	24,000.000
223005 Electricity	21,000.000
223006 Water	3,400.000
224011 Research Expenses	34,536.000
227004 Fuel, Lubricants and Oils	6,300.000
Total For Budget Output	101,368.000
Wage Recurrent	0.000
Non Wage Recurrent	101,368.000
Arrears	0.000
AIA	0.000

Budget Output:010011 Technology Promotion

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			
5 technology demonstration established		Information and video materials developed for technology demonstration for urban farming at Mukono Ntaawo. And technology demonstration. established.	
50,000 coffee and 100,000 cocoa seedlings produced		Information and video materials developed for multiplication of improved planting materials. And availed to uptake pathways for improved household food, nutritional security and incomes.	
		37,551 coffee and cocoa seedlings were produced.	
PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
5 technology demonstration established		For coffee seedlings , a total of 30,082 seedlings were raised of which 12,835 were used for the establishment of demonstrations and trials; 8,974 were availed to uptake pathways; A total of 10,295 tomato seedlings were raised, 5,710 were used for the establishment of trials and demonstrations and 895 were availed to uptake pathways; A total of 1,953 eggplant seedlings A total of 72,900 cuttings were put into the humid chamber/cages of which 19,336 were sold, 700 seedlings were used to establish a new coffee demonstration and for gap filling at Kamenyamiggo, 7,000 seedlings are available for sale, and 45,000 still in the humid chamber and not ready for sale, 3,423 ready for sale.	
50,000 coffee and 100,000 cocoa seedlings produced		For cocoa seedlings, on station gardens were maintained. No seedlings produced.	
5 technology demonstration established		NA	
50,000 coffee and 100,000 cocoa seedlings produced			
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs			UShs Thousand
Item			Spent
221001 Advertising and Public Relations			7,500.000
221009 Welfare and Entertainment			2,400.000
222001 Information and Communication Technology Services.			10,594.000
223001 Property Management Expenses			10,372.000
224011 Research Expenses			87,564.000

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 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	
226001 Insurances		2,000.000	
228001 Maintenance-Buildings and Structures		13,500.000	
228002 Maintenance-Transport Equipment		14,000.000	
228003 Maintenance-Machinery & Equipment Other than Transport		6,602.000	
228004 Maintenance-Other Fixed Assets		2,000.000	
273102 Incapacity, death benefits and funeral expenses		6,000.000	
Total For Budget Output		162,532.000	
Wage Recurrent		0.000	
Non Wage Recurrent		162,532.000	
Arrears		0.000	
AIA		0.000	
Total For Department		263,900.000	
Wage Recurrent		0.000	
Non Wage Recurrent		263,900.000	
Arrears		0.000	
AIA		0.000	
Department:014 National Livestock Resources Research Institute (NaLIRRI)			
Budget Output:010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
1 pasture system mapped & characterized 1 constraint diagnostic study conducted 200 MT of conserved feed resources 150 Inbred line with different genetic back ground assembled 200 Samples for genotyping collected & processed 10 candidate varieties		1 pasture system mapped & characterized 1 constraint diagnostic study conducted 200 MT of conserved feed resources 150 Inbred line with different genetic back ground assembled 200 Samples for genotyping collected & processed. 10 candidate varieties identified.	
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs		UShs Thousand	
Item		Spent	
221003 Staff Training		20,000.000	

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 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	
221008 Information and Communication Technology Supplies.	37,700.000	
221009 Welfare and Entertainment	12,496.000	
221011 Printing, Stationery, Photocopying and Binding	7,252.000	
221012 Small Office Equipment	21,492.000	
221017 Membership dues and Subscription fees.	22,028.000	
222002 Postage and Courier	11,448.000	
223001 Property Management Expenses	13,000.000	
223002 Property Rates	4,498.000	
223004 Guard and Security services	40,000.000	
223005 Electricity	40,000.000	
223006 Water	10,000.000	
224001 Medical Supplies and Services	40,000.000	
224002 Veterinary supplies and services	10,000.000	
224003 Agricultural Supplies and Services	80,500.000	
224004 Beddings, Clothing, Footwear and related Services	33,000.000	
224005 Laboratory supplies and services	16,000.000	
224011 Research Expenses	91,806.000	
225101 Consultancy Services	3,000.000	
226002 Licenses	7,000.000	
227001 Travel inland	5,000.000	
227004 Fuel, Lubricants and Oils	2,000.000	
228001 Maintenance-Buildings and Structures	42,500.000	
228002 Maintenance-Transport Equipment	31,500.000	
228004 Maintenance-Other Fixed Assets	20,000.000	
Total For Budget Output		622,220.000
Wage Recurrent		0.000
Non Wage Recurrent		622,220.000
Arrears		0.000
AIA		0.000
Total For Department		622,220.000

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter	
	Wage Recurrent	0.000
	Non Wage Recurrent	622,220.000
	Arrears	0.000
	<i>AIA</i>	0.000

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 and technology development

Diversity of two crop varieties germplasm (mungbean and sesame) determined	For green gram, advance promising green gram lines for release for one season have been identified. Work underway to conduct MLT & NPT for Greengram in NaSARRI- Serere, Mayuge & Nabuin ZARDI for one season.
Five cotton lines resilient to climatic change with high yield potential identified to support the textile industry and related cotton value chains,	400 mungbean + 94 sesame genotypes planted in the screenhouse in preparation for leaf sampling. Work still on-going.
	For cotton, 4 cotton varieties resistant to Fusarium wilt and bacterial blight are still at under trials. Turkish cotton varieties which showed better resistance to Fusarium wilt were B440 and Edessa at Tororo. The two Indian cotton varieties with better yields across Serere and Kasese were M55 (1346 kg/ha) and MCH 84 (1227 kg/ha). However, cotton varieties Edessa (391 kg/ha) and Flash (418 kg/ha) had the least seed cotton yields from 2 locations.

Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	<i>US\$hs Thousand</i>
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Item	Spent
224003 Agricultural Supplies and Services	3,330.000
224011 Research Expenses	15,540.000
227004 Fuel, Lubricants and Oils	2,220.000
228003 Maintenance-Machinery & Equipment Other than Transport	1,130.000
Total For Budget Output	22,220.000
Wage Recurrent	0.000
Non Wage Recurrent	22,220.000
Arrears	0.000

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Annual Planned Outputs		Cumulative Outputs Achieved by End of Quarter
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		
Generation Seed (EGS) produced to promote uptake of technologies. through private sector. Technologies for food, nutrition and Industry promoted in 4 Districts located 4 Argo ecological zones		Five (05) technologies(sun flower, sorghum, groundnuts, finger millet) for food, nutrition and Industry were promoted through private sector in the agro ecological zones
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs		UShs Thousand
Item	Spent	
221001 Advertising and Public Relations	3,000.000	
221007 Books, Periodicals & Newspapers	5,000.000	
221008 Information and Communication Technology Supplies.	11,000.000	
221009 Welfare and Entertainment	5,000.000	
221011 Printing, Stationery, Photocopying and Binding	3,000.000	
222001 Information and Communication Technology Services.	2,000.000	
223001 Property Management Expenses	4,000.000	
223004 Guard and Security services	9,600.000	
223005 Electricity	14,400.000	
223006 Water	4,000.000	
224011 Research Expenses	22,000.000	
226001 Insurances	1,000.000	
227004 Fuel, Lubricants and Oils	6,000.000	
228002 Maintenance-Transport Equipment	6,000.000	
273102 Incapacity, death benefits and funeral expenses	4,000.000	
Total For Budget Output		100,000.000
Wage Recurrent		0.000
Non Wage Recurrent		100,000.000
Arrears		0.000
AIA		0.000
Total For Department		122,220.000
Wage Recurrent		0.000
Non Wage Recurrent		122,220.000

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

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

Department:016 Ngetta ZARDI

Budget Output:010010 Technology Generation

PIAP Output: 01040705 Demand driven agriculture technologies developed

Programme Intervention: 010407 Strengthen agricultural research and technology development

3 new multiple stress tolerant, high yielding and nutrient dense crop varieties of beans, groundnuts, soybean varieties in different sub ecologies in NAEZ established one most effective propagation protocol for three medicinal plants developed	One (01) multiple stress tolerant, high yielding and nutrient dense variety of bean identified. One (01) propagation protocol for three medicinal plants was developed.
new multiple stress tolerant, high yielding and nutrient dense crop varieties of beans, groundnuts, soybean varieties in different sub ecologies in NAEZ established one most effective propagation protocol for three medicinal plants developed 12 acres of	New multiple stress tolerant, high yielding and nutrient dense crop varieties of beans, groundnuts, soybean varieties in different sub ecologies in NAEZ establishment was initiated one most effective propagation protocol for three medicinal plants was initiated

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

Programme Intervention: 010407 Strengthen agricultural research and technology development

new multiple stress tolerant, high yielding and nutrient dense crop varieties of beans, groundnuts, soybean varieties in different sub ecologies in NAEZ established one most effective propagation protocol for three medicinal plants developed 12 acres of	One (01) multiple stress tolerant, high yielding and nutrient dense variety of bean identified. One (01) propagation protocol for three medicinal plants was developed.
new multiple stress tolerant, high yielding and nutrient dense crop varieties of beans, groundnuts, soybean varieties in different sub ecologies in NAEZ established one most effective propagation protocol for three medicinal plants developed 12 acres of	

Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	UShs Thousand
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Item	Spent
212103 Incapacity benefits (Employees)	12,000.000
221011 Printing, Stationery, Photocopying and Binding	2,000.000

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 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
223006 Water			7,000.000
224003 Agricultural Supplies and Services			16,000.000
224011 Research Expenses			64,680.000
228001 Maintenance-Buildings and Structures			5,000.000
228002 Maintenance-Transport Equipment			5,000.000
228003 Maintenance-Machinery & Equipment Other than Transport			5,000.000
	Total For Budget Output		116,680.000
	Wage Recurrent		0.000
	Non Wage Recurrent		116,680.000
	Arrears		0.000
	AIA		0.000
	Total For Department		116,680.000
	Wage Recurrent		0.000
	Non Wage Recurrent		116,680.000
	Arrears		0.000
	AIA		0.000
Department:017 Rwebitaba ZARDI			
Budget Output:010010 Technology Generation			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
40,000 clonal plantlets of selected tea clones multiplied. 15 tea clones characterized for biochemical attributes 1000 open pollinated hybrid tea seeds collected		5,000 clonal plantlets of selected tea clones multiplied.	

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 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			
40,000 clonal plantlets of selected tea clones multiplied. 15 tea clones characterized for biochemical attributes 1000 open pollinated hybrid tea seeds collected		Genomic prediction models for 2 quality parameters of tea training population (300 tea accessions) developed. One manuscript of diversity of tea at Rwebitaba published and genomic data collated for genomic selection work. 10,000 clonal plantlets of selected tea clones multiplied Tea botanical seed based value added product (tea oil) developed and prepared for laboratory analytical assessment. The developed products were showcased in a number of trade shows in Uganda and Malawi	

Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	US\$ Thousand
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Item	Spent
221003 Staff Training	5,661.932
221007 Books, Periodicals & Newspapers	2,830.968
221008 Information and Communication Technology Supplies.	5,284.472
221009 Welfare and Entertainment	4,718.276
221011 Printing, Stationery, Photocopying and Binding	5,661.932
222001 Information and Communication Technology Services.	9,247.824
223001 Property Management Expenses	10,380.208
223004 Guard and Security services	8,304.168
223005 Electricity	5,661.932
223006 Water	11,323.864
224003 Agricultural Supplies and Services	11,229.500
224004 Beddings, Clothing, Footwear and related Services	3,774.620
224011 Research Expenses	62,493.576
226001 Insurances	1,132.388
227004 Fuel, Lubricants and Oils	16,042.140
228001 Maintenance-Buildings and Structures	4,718.276
228002 Maintenance-Transport Equipment	15,098.488
228004 Maintenance-Other Fixed Assets	6,039.396
Total For Budget Output	189,603.960
Wage Recurrent	0.000

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter	
	Non Wage Recurrent	189,603.960
	Arrears	0.000
	AIA	0.000
	Total For Department	189,603.960
	Wage Recurrent	0.000
	Non Wage Recurrent	189,603.960
	Arrears	0.000
	AIA	0.000

Development Projects

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

Budget Output:000017 Infrastructure Development and Management

PIAP Output: 01040705 Demand driven agriculture technologies developed

Programme Intervention: 010407 Strengthen agricultural research and technology development

Six Livestock research handling infrastructure & 1 production masterplan for ten square miles developed. 1 kilometer of barbed wire fence constructed.	4 livestock research handling infrastructure, Development of masterplan for ten square miles initiated.1 kilometer of barbed wire fence constructed.
Six Livestock research handling infrastructure & 1 production masterplan for ten square miles developed. 1 kilometer of barbed wire fence constructed.	NA

Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	UShs Thousand
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Item	Spent
312121 Non-Residential Buildings - Acquisition	878,153.493
312139 Other Structures - Acquisition	18,000.000
312232 Electrical machinery - Acquisition	20,000.001
Total For Budget Output	916,153.494
GoU Development	916,153.494
External Financing	0.000
Arrears	0.000
AIA	0.000

Budget Output:010010 Technology Generation

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 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			
3MT tons of forage seed produced, 2 high yielding brachiria developed,3 low-cost pig feeding packages based on forages and animal waste developed, 10 Forage inbred lines with excellent silage production attributes, and stress tolerance identified. 3F1 p		Four feed resource generated. 1) 2 tons of Chloris seed harvested. 2) 7.5tons of dairy feed produced; 4) 190 tons of hay produced; 5) 100 tons of maize silage produced; 6) 200 MT of conserved feed resources (Vines, Sugarcane, lablab, Luciene, Calliandra) produced. 7) Three (03) feeding packages formulated for pigs. 8) Digestibility and ensiling properties of atleast 20 inbred lines determined; 3) Dry Matter and sugar content of atleast 20 inbred lines determined; 3) Dry Matter and sugar content of atleast 20 inbred lines determined; 1) Digestibility and ensiling properties of atleast 20 inbred lines determined.	
3MT tons of forage seed produced, 2 high yielding brachiria developed,3 low-cost pig feeding packages based on forages and animal waste developed, 10 Forage inbred lines with excellent silage production attributes, and stress tolerance identified. 3F1 p		3MT tons of forage seed produced were produced, 2 high yielding brachiria development was initiated,3 low-cost pig feeding packages based on forages and animal waste were initiated, 10 Forage inbred lines with excellent silage production attributes, and stress tolerance identified.	
PIAP Output: 01040706 Research-extension farmer linkages developed and strengthened			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
4 Community Constraint Diagnostic Studies Conducted Development per participating sub-region 1 demo site each on beef, dairy cattle; Goat and pigs established 1 on-farm prediction tool/Model for determination of Pasture productivity developed		Three (03) demo sites on strategic commodities of beef, goat (Maruzi in Apac district) and dairy cattle (Nakyesasa in Wakiso district) were established. One (01) on-farm prediction tool/Model for determination of Pasture (bracharia and chloris guyana) productivity was initiated. Four (04) Community constraint diagnostic studies conducted in Nakaseke and Nakasongola. One technology promotion and mass awareness event conducted per participation zone (Nakasongola, and Nakaseke).	
3MT tons of forage seed produced, 2 high yielding brachiria developed,3 low-cost pig feeding packages based on forages and animal waste developed, 10 Forage inbred lines with excellent silage production attributes, and stress tolerance identified. 3F1 p		NA	

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter
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Project:1560 Relocation and Operationalisation of the National Livestock Resources Research Institute(NALIRRI)

Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	US\$ Thousand
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Item	Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)	283,000.000
221003 Staff Training	13,000.000
221008 Information and Communication Technology Supplies.	20,000.000
221011 Printing, Stationery, Photocopying and Binding	15,000.000
222001 Information and Communication Technology Services.	24,000.000
223004 Guard and Security services	7,000.000
223005 Electricity	15,000.000
224003 Agricultural Supplies and Services	463,000.000
224004 Beddings, Clothing, Footwear and related Services	10,000.000
224005 Laboratory supplies and services	103,000.000
224011 Research Expenses	302,030.000
227003 Carriage, Haulage, Freight and transport hire	6,000.000
227004 Fuel, Lubricants and Oils	246,280.118
228001 Maintenance-Buildings and Structures	29,000.000
228002 Maintenance-Transport Equipment	50,000.000
228003 Maintenance-Machinery & Equipment Other than Transport Equipment	150,000.000
Total For Budget Output	1,736,310.118
GoU Development	1,736,310.118
External Financing	0.000
Arrears	0.000
AIA	0.000
Total For Project	2,652,463.612
GoU Development	2,652,463.612
External Financing	0.000
Arrears	0.000
AIA	0.000

Project:1619 Retooling of National Agricultural Research Organization

Budget Output:000003 Facilities and Equipment Management

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 Organization			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
4 research laboratories equipped and supplied with consumables to support research. Seven research laboratories maintained Five research laboratories Audited and upgraded towards accreditation		4 research laboratories equipped and supplied with consumables to support research. Seven research laboratories maintained, Supplied with assorted Laboratory for laboratories in the PARIs. Balance on laboratory equipment for the vaccine facility (NALIRRI). Supply of Assorted Laboratory Equipment for Aflasafe Research and Production and supply of a High Tech Bioreactor(NALIRRI). Installation of Electricity for the Fish Floating Feed Equipment. Five research laboratories Audited and upgraded towards accreditation and the necessary documentation and recommendations are in place.	
Four Agricultural research laboratories of strategic importance equipped 16 Agricultural research Institutes retooled with 24 units of transport equipment to support research 16 Public Agricultural research Institutes retooled with computers		The secretariat and 16 Agricultural research Institutes retooled with 24 units of transport equipment to support research. The secretariat and 16 Public Agricultural research Institutes retooled with computers for IFMIS, tablets and notebooks.	
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs			US\$ Thousand
Item			Spent
312212 Light Vehicles - Acquisition			5,981,200.000
312221 Light ICT hardware - Acquisition			150,070.000
312222 Heavy ICT hardware - Acquisition			163,510.000
312229 Other ICT Equipment - Acquisition			400,000.000
312233 Medical, Laboratory and Research & appliances - Acquisition			9,889,161.946
312235 Furniture and Fittings - Acquisition			20,000.000
Total For Budget Output			16,603,941.946
GoU Development			16,603,941.946
External Financing			0.000
Arrears			0.000
AIA			0.000
Budget Output:010008 Capacity Strengthening			

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 Organization			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
NARO human resource capacity strengthened through support to completion of 32 PhDs for research and product development. NARO laboratory management strengthened towards accreditation of five National laboratories. 10 titles acquired for research land		(A) On Human Resources NARO human resource capacity strengthened through support to completion of 5 PhDs and 2 Msc for research and product development. (B) On NARO land titles (a) Titles of Aduku, Katakwi and Amuria secured. (b)Titling process still on going. limited progress due to limited funds. The progress is: (1) Boundary Opening at Maziba,Nyamigogo Kyanamira in Kisoro and part of Lorengdwart in Nabuin ZARDI (completed). (2) Survey works at Kibimbiri (completed but titling yet to be done). (3) Land Boundary Opening at NaRL-Kawanda (Completed). (4) Finalizing the titling of NaSARRI and Variety Trial Centres. (5) Sensitization of stakeholders and Survey support for Kuju and Katakwi Variety Trial Centre (VTCs) in Amuria and Katakwi District (Completed).	

Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	US\$ Thousand
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Item	Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)	70,871.000
211107 Boards, Committees and Council Allowances	704,200.000
221001 Advertising and Public Relations	100,000.001
221003 Staff Training	622,061.000
221004 Recruitment Expenses	60,000.000
221007 Books, Periodicals & Newspapers	14,000.000
221008 Information and Communication Technology Supplies.	135,636.001
221009 Welfare and Entertainment	45,000.000
221011 Printing, Stationery, Photocopying and Binding	166,009.000
221012 Small Office Equipment	2,605.000
221016 Systems Recurrent costs	30,000.000
221017 Membership dues and Subscription fees.	40,000.000
222001 Information and Communication Technology Services.	39,576.000
223002 Property Rates	30,000.000

VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter
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Project:1619 Retooling of National Agricultural Research Organization

Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	US\$ Thousand
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Item	Spent
223004 Guard and Security services	30,000.000
223005 Electricity	2,000.000
224002 Veterinary supplies and services	4,959.000
224003 Agricultural Supplies and Services	10,337.000
224005 Laboratory supplies and services	251,605.336
224011 Research Expenses	3,930,371.212
225101 Consultancy Services	328,281.000
225202 Environment Impact Assessment for Capital Works	100,000.000
225204 Monitoring and Supervision of capital work	448,871.000
226001 Insurances	804.000
226002 Licenses	26,723.000
227001 Travel inland	353,483.000
227004 Fuel, Lubricants and Oils	216,740.000
228001 Maintenance-Buildings and Structures	1,153,077.239
228002 Maintenance-Transport Equipment	60,000.000
228003 Maintenance-Machinery & Equipment Other than Transport Equipment	2,047.000
Total For Budget Output	8,979,256.789
GoU Development	8,979,256.789
External Financing	0.000
Arrears	0.000
AIA	0.000

Budget Output:010009 Research Partnerships

PIAP Output: 01040705 Demand driven agriculture technologies developed

Programme Intervention: 010407 Strengthen agricultural research and technology development

NNARO annual subscription to four international research organizations maintained for technology generation and transfer for improved production and productivity.	Contribution to International Organizations were made for two international organization I.e. Africa Rice and Biodiversity International(IPGRI).
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VOTE: 142 National Agricultural Research Organization (NARO)

Quarter 4

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter
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Project:1619 Retooling of National Agricultural Research Organization

Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	US\$ Thousand
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Item	Spent
262201 Contributions to International Organisations-Capital	1,132,000.000
282201 Contributions to Non-Government Institutions	5,000.000
Total For Budget Output	1,137,000.000
GoU Development	1,137,000.000
External Financing	0.000
Arrears	0.000
AIA	0.000

Budget Output:010010 Technology Generation

PIAP Output: 01040705 Demand driven agriculture technologies developed

Programme Intervention: 010407 Strengthen agricultural research and technology development

35 Agricultural research studies to generate information and products for industry conducted under the competitive grants scheme. 12 research products and services suitable for food Nutrition and industry developed	34 agricultural research studies were supported to generate information and products for the industry under competitive grants scheme. These studies will generate 34 products and services for food nutrition and industry.
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Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	US\$ Thousand
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Item	Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)	484,933.000
221001 Advertising and Public Relations	39,520.000
221003 Staff Training	111,556.000
221008 Information and Communication Technology Supplies.	51,928.000
221009 Welfare and Entertainment	1,361.000
221011 Printing, Stationery, Photocopying and Binding	103,003.000
221012 Small Office Equipment	7,796.000
221017 Membership dues and Subscription fees.	1,441.000
222001 Information and Communication Technology Services.	8,040.000
222002 Postage and Courier	21,635.000
223001 Property Management Expenses	1,723.000
223004 Guard and Security services	1,711.000
223005 Electricity	9,455.000

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Quarter 4

Annual Planned Outputs		Cumulative Outputs Achieved by End of Quarter
Project:1619 Retooling of National Agricultural Research Organization		
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs		US\$ Thousand
Item	Spent	
223006 Water	1,600.000	
224002 Veterinary supplies and services	77,367.000	
224003 Agricultural Supplies and Services	1,209,126.000	
224004 Beddings, Clothing, Footwear and related Services	459.000	
224005 Laboratory supplies and services	1,334,438.000	
224010 Protective Gear	11,485.000	
224011 Research Expenses	3,675,920.000	
225101 Consultancy Services	178,179.000	
225204 Monitoring and Supervision of capital work	17,228.000	
226001 Insurances	2,871.000	
226002 Licenses	1,952.000	
227001 Travel inland	270,642.000	
227003 Carriage, Haulage, Freight and transport hire	8,964.000	
227004 Fuel, Lubricants and Oils	261,652.000	
228001 Maintenance-Buildings and Structures	63,373.000	
228002 Maintenance-Transport Equipment	76,166.000	
228003 Maintenance-Machinery & Equipment Other than Transport Equipment	29,175.000	
228004 Maintenance-Other Fixed Assets	70,000.000	
Total For Budget Output		8,134,699.000
GoU Development		8,134,699.000
External Financing		0.000
Arrears		0.000
AIA		0.000
Budget Output:010011 Technology Promotion		

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 Organization			
PIAP Output: 01040705 Demand driven agriculture technologies developed			
Programme Intervention: 010407 Strengthen agricultural research and technology development			
5 agricultural research innovations and IPs commercialized 5 multi-stakeholders agricultural research innovation platforms established 9climate-smart technologies demonstrations established in all the ZARDIs 16Public-Private Partnerships established		Identified and designed trademarks for six (06) products. One patent application drafted on African Swine Fever vaccine development protocol. Four industrial designs for skin care products and one trademark (KAV 400) filed with the national IP office. 5 multi-stakeholders agricultural research innovation platforms established and supported. 9 climate-smart technologies demonstrations established in all the ZARDIs. 16 Public-Private Partnerships established. Two (2) plant variety licensing agreements were initiated with BRAC and Okeba seeds	

Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	US\$ Thousand
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Item	Spent
211106 Allowances (Incl. Casuals, Temporary, sitting allowances)	250,961.000
221001 Advertising and Public Relations	214,445.000
221003 Staff Training	192,783.000
221007 Books, Periodicals & Newspapers	8,153.000
221008 Information and Communication Technology Supplies.	6,836.000
221009 Welfare and Entertainment	185,000.000
221011 Printing, Stationery, Photocopying and Binding	78,340.000
222001 Information and Communication Technology Services.	163,325.000
222002 Postage and Courier	500.000
223004 Guard and Security services	2,182.000
223005 Electricity	1,723.000
224002 Veterinary supplies and services	11,520.000
224003 Agricultural Supplies and Services	1,084,728.000
224005 Laboratory supplies and services	17,917.000

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 Organization		
Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs		US\$ Thousand
Item	Spent	
224011 Research Expenses	2,141,574.000	
226002 Licenses	62,000.000	
227001 Travel inland	81,319.000	
227004 Fuel, Lubricants and Oils	138,214.000	
228002 Maintenance-Transport Equipment	27,500.000	
228003 Maintenance-Machinery & Equipment Other than Transport Equipment	1,945.000	
228004 Maintenance-Other Fixed Assets	1,723.000	
Total For Budget Output		4,672,688.000
GoU Development		4,672,688.000
External Financing		0.000
Arrears		0.000
AIA		0.000
Total For Project		39,527,585.735
GoU Development		39,527,585.735
External Financing		0.000
Arrears		0.000
AIA		0.000
GRAND TOTAL		111,133,101.424
Wage Recurrent		39,811,109.272
Non Wage Recurrent		28,998,180.287
GoU Development		42,180,049.347
External Financing		0.000
Arrears		143,762.518
AIA		0.000

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

Table 4.1: NTR Collections (Billions)

Revenue Code	Revenue Name	Planned Collection FY2022/23	Actuals By End Q4
142120	Sale of Agricultural products and services.-From Private Entities	0.000	0.000
141541	Rent & Rates - Non-Produced Assets – from Gov’t units	0.000	0.000
142119	Sale of bid documents-From Private Entities	0.000	0.000
Total		0.000	0.000

VOTE: 142 National Agricultural Research Organization (NARO)

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Table 4.2: Off-Budget Expenditure By Department and Project

VOTE: 142 National Agricultural Research Organization (NARO)

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Table 4.3: Vote Crosscutting Issues

i) Gender and Equity

Objective:	Promote gender responsive technologies
Issue of Concern:	low agricultural production and productivity, poor storage infrastructure and post harvest management; low value addition; poor market access and low competitive
Planned Interventions:	Development, promotion and commercialisation of gender responsive technologies, innovations, information and management practices for improved agricultural production and productivity,
Budget Allocation (Billion):	0.156
Performance Indicators:	Number of Gender responsive technologies (5) generated, promoted and commercialized.
Actual Expenditure By End Q4	
Performance as of End of Q4	60 NARO staff from Mukono ZARDI sensitised about gender in agricultural research.
Reasons for Variations	

ii) HIV/AIDS

Objective:	Minimize new infections and protect the positive living
Issue of Concern:	High level of new infections of HIV/AIDS
Planned Interventions:	NARO shall sensitize staff and improve welfare of positive living staff.
Budget Allocation (Billion):	0.159
Performance Indicators:	Number of staff sensitized
Actual Expenditure By End Q4	
Performance as of End of Q4	
Reasons for Variations	

iii) Environment

Objective:	Develop and promote climate responsive and environmentally friendly technologies
Issue of Concern:	Concerns arising from extreme climate variability & their resultant effects like land fragility, landslides, soil erosion, disease epidemics, loss of biodiversity, & the lack of technologies, information, innovations, & environmentally sound practices
Planned Interventions:	NARO will strengthen the capacity for NARO institutional biosafety committee (NARO IBC), NARO Institution Animal care use committee to guide environmentally friendly and sound research Preservation and Conservation of national germ plasm
Budget Allocation (Billion):	0.200

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Performance Indicators:	No of interventions (4) by the committees established.
	No of genetic materials (250) conserved
	Number of technologies (5) generated and promoted to counter environmental emerging concerns.
Actual Expenditure By End Q4	
Performance as of End of Q4	
Reasons for Variations	

iv) Covid

Objective:	Maintain a covid-19 free and healthy workforce and work place (office, laboratory and field and covid1-9 responsive technologies)
Issue of Concern:	covid 19 is still a threat that has the potential to disrupt agricultural research system, services, products and research stakeholders.
Planned Interventions:	Implement GOU SOPS across Public Agricultural Research Institutes and promotion of technologies which help in the management of Covid 19, while integrating Covid 19 treatment in NARO medical insurance scheme.
Budget Allocation (Billion):	0.350
Performance Indicators:	No of innovations and technologies (2) promoted for the management of Covid 19
Actual Expenditure By End Q4	
Performance as of End of Q4	
Reasons for Variations	