

Vote:142 National Agricultural Research Organisation

QUARTER 2: Highlights of Vote Performance

V1: Summary of Issues in Budget Execution

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

	Approved Budget	Released by End Q 2	Spent by End Q2	% Budget Released	% Budget Spent	% Releases Spent
Recurrent Wage	22.472	11.236	11.236	50.0%	50.0%	100.0%
Non Wage	19.717	9.820	8.680	49.8%	44.0%	88.4%
Dev't. GoU	37.473	15.657	10.670	41.8%	28.5%	68.1%
Ext. Fin.	0.000	0.000	0.000	0.0%	0.0%	0.0%
GoU Total	79.662	36.713	30.587	46.1%	38.4%	83.3%
Total GoU+Ext Fin (MTEF)	79.662	36.713	30.587	46.1%	38.4%	83.3%
Arrears	0.000	0.000	0.000	0.0%	0.0%	0.0%
Total Budget	79.662	36.713	30.587	46.1%	38.4%	83.3%
<i>A.I.A Total</i>	0.000	0.000	0.000	0.0%	0.0%	0.0%
Grand Total	79.662	36.713	30.587	46.1%	38.4%	83.3%
Total Vote Budget Excluding Arrears	79.662	36.713	30.587	46.1%	38.4%	83.3%

Table V1.2: Releases and Expenditure by Program*

<i>Billion Uganda Shillings</i>	Approved Budget	Released	Spent	% Budget Released	% Budget Spent	% Releases Spent
Program: 0151 Agricultural Research	79.66	36.71	30.59	46.1%	38.4%	83.3%
Total for Vote	79.66	36.71	30.59	46.1%	38.4%	83.3%

Matters to note in budget execution

- 1) Inadequate financial resources for research to meet existing and emerging demands.
- 2) Inadequate physical infrastructure (Offices, laboratories, transport and specialized machinery)
- 3) Weakening teams and programs due to staff turnover
- 4) Small and inadequate staff size due to staff turnover
- 5) Weak institutional security systems & structures due to limitations in funding
- 6) Inadequate funding to patent the technologies generated, which makes the prone to piracy.
- 7) Inadequate funding to titling NARO land, and also facilitate long training

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

<i>(i) Major unspent balances</i>	
Programs , Projects	
Program 0151 Agricultural Research	
0.945 Bn Shs	SubProgram/Project :01 Headquarters

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Reason: Invoices were received late during the quarter from service providers.
The process of updating service providers new bank details took long.
Due to heavy rains during the quarter, some of the monitoring activities were postponed to beginning of the 3rd quarter.

Some of the non-executive members of the committees were not within the country thus causing postponement of the meetings to 3rd quarter .
Invoices were received late during the quarter from service providers

Items

228,445,117.000 USHs	221001 Advertising and Public Relations
	Reason: Invoices were received late during the quarter from service providers
166,417,226.000 USHs	227001 Travel inland
	Reason: Due to heavy rains during the quarter, some of the monitoring activities were postponed to beginning of the 3rd quarter.
97,289,664.000 USHs	221002 Workshops and Seminars
	Reason: The process of updating service providers new bank details took long
66,249,527.000 USHs	228002 Maintenance - Vehicles
	Reason: Invoices were received late during the quarter from service providers
64,838,835.000 USHs	221006 Commissions and related charges
	Reason: Some of the non-executive members of the committees were not within the country thus causing postponement of the meetings to 3rd quarter
0.020 Bn Shs	SubProgram/Project :26 NARO Internal Audit
	Reason: Some of the monitoring exercises were postponed from 2nd qtr to QTR 3, due heavy rainfalls in some parts of the country.
	The bill from the service provider was received late in the quarter.
	The process of updating service providers new bank details took long.
	Items
10,693,697.000 USHs	227001 Travel inland
	Reason: Some of the monitoring exercises were postponed from 2nd qtr to QTR 3, due heavy rainfalls in some parts of the country.
7,801,000.000 USHs	221002 Workshops and Seminars
	Reason: The process of updating service providers new bank details took long
1,400,000.000 USHs	221003 Staff Training
	Reason: The bill from the service provider was received late in the quarter.
4.731 Bn Shs	SubProgram/Project :0382 Support for NARO

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Reason: The third certificate and demand note had not been received by NARO by the end of the QTR.

The demand note for the international workshop was received late in the quarter.

The second supplier's details were captured in IFMS on the last day of the QTR.

The payment to the supplier encountered some issues regarding the supplier's details on the IFMS system by the end of QTR 2.

Delivery was not made by the end of QTR 2. However, it was made in the 2nd week of quarter 3

Items

703,017,442.000 UShs 221002 Workshops and Seminars

Reason: The demand note for the international workshop was received late in the quarter.

620,143,092.000 UShs 312202 Machinery and Equipment

Reason: Delivery was not made by the end of QTR 2. However, it was made in the 2nd week of quarter 3

593,480,838.000 UShs 312101 Non-Residential Buildings

Reason: The third certificate and demand note had not been received by NARO by the end of the QTR

519,489,459.000 UShs 225001 Consultancy Services- Short term

Reason: The second supplier's details were captured in IFMS on the last day of the QTR

352,692,122.000 UShs 221001 Advertising and Public Relations

Reason: The payment to the supplier encountered some issues regarding the supplier's details on the IFMS system by the end of QTR 2.

0.125 Bn Shs *SubProgram/Project :1560 Relocation and Operationalisation of the National Livestock Resources Research Institute (NALIRRI)*

Reason: Supplier's customer details were not in IFMS by the end of qtr 2.

Items

125,000,000.000 UShs 312202 Machinery and Equipment

Reason: Supplier's customer details were not in IFMS by the end of qtr 2.

(ii) Expenditures in excess of the original approved budget

V2: Performance Highlights

Table V2.1: Programme Outcome and Outcome Indicators*

Programme : 51 Agricultural Research
Responsible Officer: Director General
Programme Outcome: Increased production and productivity of priority and strategic commodities
Sector Outcomes contributed to by the Programme Outcome
1 .Increased production and productivity of priority and strategic commodities

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Programme Outcome Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
Percentage of new varieties promoted and adopted by farmers and other users	Percentage	12%	7%
Number of commercialisable technologies and innovations generated through competitive grant projects	Number	5	1
Increased production and productivity at some level resulting from utilization of improved technologies	Percentage	1.8%	0.9%

Table V2.2: Key Vote Output Indicators*

Programme : 51 Agricultural Research			
Sub Programme : 01 Headquarters			
KeyOutPut : 01 Generation of agricultural technologies			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of improved productivity technologies generated	Number	60	23
No. of new varieties submitted to Variety Release Committee for release	Number	15	15
No. of research studies under competitive grants scheme	Number	19	38
KeyOutPut : 02 Research extension interface promoted and strengthened			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of technological innovation platforms established/supported	Number	20	12
No. of technological innovations delivered to uptake pathways	Number	50	45
Sub Programme : 07 National Crops Resources Research Institute			
KeyOutPut : 01 Generation of agricultural technologies			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of improved productivity technologies generated	Number	8	11
No. of new varieties submitted to Variety Release Committee for release	Number	5	13
No. of research studies under competitive grants scheme	Number		4
KeyOutPut : 02 Research extension interface promoted and strengthened			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of technological innovation platforms established/supported	Number	3	4
No. of technological innovations delivered to uptake pathways	Number	10	4
Sub Programme : 08 National Fisheries Resources Research Institute			

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KeyOutputPut : 01 Generation of agricultural technologies			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of improved productivity technologies generated	Number	8	4
No. of research studies under competitive grants scheme	Number		4
KeyOutputPut : 02 Research extension interface promoted and strengthened			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of technological innovations delivered to uptake pathways	Number	10	5
Sub Programme : 09 National Forestry Resources Research Institute			
KeyOutputPut : 01 Generation of agricultural technologies			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of improved productivity technologies generated	Number	8	4
No. of research studies under competitive grants scheme	Number		3
KeyOutputPut : 02 Research extension interface promoted and strengthened			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of technological innovation platforms established/supported	Number	3	1
No. of technological innovations delivered to uptake pathways	Number	5	3
Sub Programme : 10 National Livestock Resources Research			
KeyOutputPut : 01 Generation of agricultural technologies			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of improved productivity technologies generated	Number	8	5
No. of research studies under competitive grants scheme	Number		10
KeyOutputPut : 02 Research extension interface promoted and strengthened			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of technological innovation platforms established/supported	Number	5	9
No. of technological innovations delivered to uptake pathways	Number	10	9
Sub Programme : 11 National Semi arid Resources Research			
KeyOutputPut : 01 Generation of agricultural technologies			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of improved productivity technologies generated	Number	8	4

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No. of new varieties submitted to Variety Release Committee for release	Number	5	5
No. of research studies under competitive grants scheme	Number		2
Sub Programme : 12 National Laboratories Research			
KeyOutputPut : 01 Generation of agricultural technologies			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of improved productivity technologies generated	Number	8	3
No. of new varieties submitted to Variety Release Committee for release	Number	5	4
No. of research studies under competitive grants scheme	Number		3
KeyOutputPut : 02 Research extension interface promoted and strengthened			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of technological innovation platforms established/supported	Number	5	7
No. of technological innovations delivered to uptake pathways	Number	5	14
Sub Programme : 13 Abi ZARDI			
KeyOutputPut : 01 Generation of agricultural technologies			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of improved productivity technologies generated	Number	5	3
KeyOutputPut : 02 Research extension interface promoted and strengthened			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of technological innovation platforms established/supported	Number	2	1
No. of technological innovations delivered to uptake pathways	Number	10	6
Sub Programme : 14 Bulindi ZARDI			
KeyOutputPut : 01 Generation of agricultural technologies			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of improved productivity technologies generated	Number	5	4
KeyOutputPut : 02 Research extension interface promoted and strengthened			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of technological innovation platforms established/supported	Number	3	2
No. of technological innovations delivered to uptake pathways	Number	10	9

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Sub Programme : 15 Kachwekano ZARDI			
KeyOutputPut : 01 Generation of agricultural technologies			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of improved productivity technologies generated	Number	5	3
No. of new varieties submitted to Variety Release Committee for release	Number	2	0
Sub Programme : 16 Mukono ZARDI			
KeyOutputPut : 01 Generation of agricultural technologies			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of improved productivity technologies generated	Number	5	3
Sub Programme : 17 Ngetta ZARDI			
KeyOutputPut : 01 Generation of agricultural technologies			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of improved productivity technologies generated	Number	5	3
KeyOutputPut : 02 Research extension interface promoted and strengthened			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of technological innovation platforms established/supported	Number	2	3
No. of technological innovations delivered to uptake pathways	Number	10	7
Sub Programme : 18 Nabium ZARDI			
KeyOutputPut : 01 Generation of agricultural technologies			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of improved productivity technologies generated	Number	5	2
No. of new varieties submitted to Variety Release Committee for release	Number	1	0
KeyOutputPut : 02 Research extension interface promoted and strengthened			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of technological innovation platforms established/supported	Number	2	1
No. of technological innovations delivered to uptake pathways	Number	5	3
Sub Programme : 19 Mbarara ZARDI			

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KeyOutPut : 01 Generation of agricultural technologies			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of improved productivity technologies generated	Number	5	13
Sub Programme : 20 Buginyaya ZARDI			
KeyOutPut : 01 Generation of agricultural technologies			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of improved productivity technologies generated	Number	10	5
No. of new varieties submitted to Variety Release Committee for release	Number	3	0
Sub Programme : 21 Rwebitaba ZARDI			
KeyOutPut : 01 Generation of agricultural technologies			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of improved productivity technologies generated	Number	5	6
Sub Programme : 27 National Coffee Research Institute			
KeyOutPut : 01 Generation of agricultural technologies			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of improved productivity technologies generated	Number	8	3
No. of new varieties submitted to Variety Release Committee for release	Number	5	0
KeyOutPut : 02 Research extension interface promoted and strengthened			
Key Output Indicators	Indicator Measure	Planned 2019/20	Actuals By END Q2
No. of technological innovation platforms established/supported	Number	1	6
No. of technological innovations delivered to uptake pathways	Number	5	5

Performance highlights for the Quarter

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NARO highlights during the quarter can be broadly categorized as under (1) Research, (2) training and funding.

(1) Under agricultural research

(a) Crop variety release:

- i) two Sorghum varieties released
- ii) three coffee arabica varieties near release
- iii) six varieties released(2 rice, 4 maize)
- iv) ten varieties submitted to VRC
- v) Seven candidate lines of sorghum selected for further evaluation
- vi) Two promising potato genotypes submitted for release (20151.28 (37t/ha) and 20158.14 (35t/ha).

(b) 45 technologies generated

(c) Re-aligning livestock research - Currently, the four (4) research programmes at NaLIRRI have been realigned to five (5) to improve delivery of research products and services.

(d) 38 Technological innovations delivered to uptake pathways

(e) 38 Research studies under CGS

(f) 18 Technological innovation platforms established/supported

(g) Intellectual property

(i) - Ten (10) technologies with IP potential identified through TDF submissions and one-on-one engagements.

(ii) - One utility model (Afatoxin binder - NaLIRRI), one trademark applications filed (NARO Logo)

(iii) - Initiated the process for developing a framework for access to NARO varieties

(iv) - One patent application (BCTB trap – NaCORI) and one NARO copyright filed (NARO Musical Bed)

(h) Online systems

(i) - Online web-based CABI Resources Platform deployed 4 PARIs, and made available for access by Scientists.

(ii) - The NARO Information Hub refined, and populated with information materials useful for both staff and the public - farmers, etc.

(iii) - Developed an Online Recruitment Platform for the Directorate of Human Resources.

(iv) - Developed an E-File/Document Tracking system (Records).

(v) - UJAS Volume 18 issue 1 was published online, Vol. 18 issue 2 review initiated.

(vi) - Thirty (30) content packages developed and uploaded on the NARO Information Hub.

(vii) - Seed mobile application completed and accessible on google store. Contains information on all NARO seed-based technologies, their attributes, sources of seed, contacts of district extension workers and provision for feedback from user.

(2) PHD training - 10 staff completed their training and graduated.

(3) Funding

(a) New funding for NARO by the European Union thru Office of the Prime Minister - Development Initiative for Northern Uganda.

(b) NARO Council ratified the establishment of the NARO Grants Office. The NARO Grants Office is to take lead in mobilization for sustainable funding agricultural research and institutional capacity development in the NARS.

V3: Details of Releases and Expenditure

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

<i>Billion Uganda Shillings</i>	Approved Budget	Released	Spent	% GoU Budget Released	% GoU Budget Spent	%GoU Releases Spent
Program 0151 Agricultural Research	79.66	36.71	30.59	46.1%	38.4%	83.3%
<i>Class: Outputs Provided</i>	<i>60.91</i>	<i>31.69</i>	<i>27.50</i>	<i>52.0%</i>	<i>45.2%</i>	<i>86.8%</i>
015101 Generation of agricultural technologies	10.82	6.57	6.23	60.8%	57.6%	94.8%
015102 Research extension interface promoted and strengthened	5.62	2.71	1.13	48.2%	20.1%	41.7%
015103 Internal Audit	0.13	0.07	0.05	51.1%	35.8%	70.0%
015104 Agricultural research capacity strengthened	44.34	22.35	20.10	50.4%	45.3%	89.9%

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<i>Billion Uganda Shillings</i>	Approved Budget	Released	Spent	% GoU Budget Released	% GoU Budget Spent	%GoU Releases Spent
Class: Outputs Funded	1.84	0.92	0.87	49.8%	47.3%	95.0%
015151 Payments to International Organisations (CGIAR, ASARECA, WARDA)	1.84	0.92	0.87	49.8%	47.3%	95.0%
Class: Capital Purchases	16.91	4.10	2.21	24.3%	13.1%	53.9%
015172 Government Buildings and Administrative Infrastructure	12.92	3.03	1.98	23.4%	15.3%	65.3%
015176 Purchase of Office and ICT Equipment, including Software	0.79	0.27	0.02	34.1%	2.4%	7.2%
015177 Purchase of Specialised Machinery & Equipment	2.72	0.56	0.06	20.7%	2.4%	11.4%
015178 Purchase of Office and Residential Furniture and Fittings	0.49	0.24	0.15	50.0%	31.0%	61.9%
Total for Vote	79.66	36.71	30.59	46.1%	38.4%	83.3%

Table V3.2: 2019/20 GoU Expenditure by Item

<i>Billion Uganda Shillings</i>	Approved Budget	Released	Spent	% GoU Budget Released	% GoU Budget Spent	%GoU Releases Spent
Class: Outputs Provided	60.91	31.69	27.50	52.0%	45.2%	86.8%
211102 Contract Staff Salaries	22.47	11.24	11.24	50.0%	50.0%	100.0%
211103 Allowances (Inc. Casuals, Temporary)	2.32	1.39	1.34	59.6%	57.8%	96.9%
212101 Social Security Contributions	2.23	1.12	1.12	50.0%	50.0%	100.0%
213001 Medical expenses (To employees)	0.30	0.20	0.20	66.7%	66.7%	100.0%
213002 Incapacity, death benefits and funeral expenses	0.15	0.08	0.08	50.0%	50.0%	100.0%
213004 Gratuity Expenses	1.86	0.93	0.93	50.0%	50.0%	100.0%
221001 Advertising and Public Relations	1.82	0.90	0.32	49.5%	17.5%	35.5%
221002 Workshops and Seminars	4.67	2.29	1.49	49.2%	31.8%	64.8%
221003 Staff Training	1.44	0.42	0.32	29.2%	22.2%	76.1%
221004 Recruitment Expenses	0.20	0.17	0.11	84.0%	53.6%	63.9%
221006 Commissions and related charges	0.93	0.46	0.30	50.0%	32.9%	65.7%
221007 Books, Periodicals & Newspapers	0.14	0.07	0.02	50.0%	14.5%	29.1%
221008 Computer supplies and Information Technology (IT)	0.30	0.16	0.12	53.7%	39.0%	72.6%
221009 Welfare and Entertainment	0.51	0.26	0.22	50.0%	42.1%	84.1%
221011 Printing, Stationery, Photocopying and Binding	0.76	0.39	0.18	51.2%	23.3%	45.5%
221012 Small Office Equipment	0.03	0.01	0.01	50.0%	42.0%	83.9%
221016 IFMS Recurrent costs	0.26	0.13	0.06	50.0%	22.1%	44.2%
221017 Subscriptions	0.15	0.08	0.03	50.0%	21.0%	41.9%
222001 Telecommunications	0.15	0.08	0.07	50.0%	46.3%	92.5%
222002 Postage and Courier	0.01	0.00	0.00	50.0%	34.0%	68.0%
222003 Information and communications technology (ICT)	0.49	0.32	0.11	65.3%	23.0%	35.2%
223001 Property Expenses	0.30	0.30	0.30	100.0%	99.1%	99.1%
223002 Rates	0.10	0.10	0.00	100.0%	0.0%	0.0%
223004 Guard and Security services	0.34	0.17	0.17	50.0%	49.9%	99.8%
223005 Electricity	1.47	0.73	0.67	49.5%	45.7%	92.4%

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223006 Water	0.20	0.10	0.09	50.0%	43.8%	87.5%
224001 Medical Supplies	2.15	1.07	1.07	49.7%	49.6%	99.9%
224004 Cleaning and Sanitation	0.30	0.15	0.15	50.0%	48.5%	97.0%
224005 Uniforms, Beddings and Protective Gear	0.07	0.03	0.01	50.0%	13.6%	27.2%
224006 Agricultural Supplies	3.68	2.21	2.21	60.1%	60.1%	100.0%
225001 Consultancy Services- Short term	1.57	1.03	0.50	65.5%	31.7%	48.5%
226001 Insurances	0.22	0.16	0.11	72.6%	50.4%	69.5%
226002 Licenses	0.25	0.13	0.07	50.0%	28.7%	57.3%
227001 Travel inland	3.78	1.90	1.44	50.4%	38.1%	75.5%
227002 Travel abroad	0.52	0.26	0.21	50.0%	39.8%	79.6%
227004 Fuel, Lubricants and Oils	1.63	0.95	0.87	58.7%	53.6%	91.3%
228001 Maintenance - Civil	1.34	0.67	0.60	49.6%	44.5%	89.6%
228002 Maintenance - Vehicles	1.12	0.70	0.58	62.6%	51.7%	82.6%
228003 Maintenance – Machinery, Equipment & Furniture	0.47	0.25	0.16	51.8%	33.7%	65.1%
228004 Maintenance – Other	0.12	0.06	0.04	50.0%	30.1%	60.3%
273102 Incapacity, death benefits and funeral expenses	0.08	0.04	0.02	50.0%	22.5%	45.0%
Class: Outputs Funded	1.84	0.92	0.87	49.8%	47.3%	95.0%
262201 Contributions to International Organisations (Capital)	1.80	0.90	0.87	50.0%	48.3%	96.7%
264101 Contributions to Autonomous Institutions	0.04	0.02	0.00	41.6%	3.4%	8.2%
Class: Capital Purchases	16.91	4.10	2.21	24.3%	13.1%	53.9%
281501 Environment Impact Assessment for Capital Works	0.40	0.03	0.00	7.5%	0.0%	0.0%
281502 Feasibility Studies for Capital Works	0.52	0.13	0.00	25.1%	0.4%	1.7%
281503 Engineering and Design Studies & Plans for capital works	0.52	0.20	0.00	38.6%	0.0%	0.0%
281504 Monitoring, Supervision & Appraisal of capital works	0.40	0.13	0.06	32.5%	14.9%	45.8%
312101 Non-Residential Buildings	7.79	2.51	1.92	32.2%	24.6%	76.4%
312102 Residential Buildings	1.63	0.00	0.00	0.0%	0.0%	0.0%
312104 Other Structures	1.67	0.03	0.00	1.8%	0.0%	0.0%
312202 Machinery and Equipment	3.50	0.83	0.08	23.7%	2.4%	10.1%
312203 Furniture & Fixtures	0.49	0.24	0.15	50.0%	31.0%	61.9%
Total for Vote	79.66	36.71	30.59	46.1%	38.4%	83.3%

Table V3.3: GoU Releases and Expenditure by Project and Programme*

<i>Billion Uganda Shillings</i>	Approved Budget	Released	Spent	% GoU Budget Released	% GoU Budget Spent	%GoU Releases Spent
Program 0151 Agricultural Research	79.66	36.71	30.59	46.1%	38.4%	83.3%
<i>Recurrent SubProgrammes</i>						
01 Headquarters	35.07	17.46	16.34	49.8%	46.6%	93.6%
07 National Crops Resources Research Institute	0.65	0.33	0.33	50.2%	50.2%	100.0%
08 National Fisheries Resources Research Institute	0.99	0.49	0.49	50.0%	50.0%	100.0%
09 National Forestry Resources Research Institute	0.65	0.32	0.32	49.6%	49.6%	100.0%
10 National Livestock Resources Research	0.18	0.09	0.09	50.1%	50.1%	100.0%

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QUARTER 2: Highlights of Vote Performance

11 National Semi arid Resources Research	0.08	0.04	0.04	50.0%	50.0%	100.0%
12 National Laboratories Research	0.30	0.15	0.15	50.1%	50.1%	100.0%
13 Abi ZARDI	0.28	0.14	0.14	50.3%	50.3%	100.0%
14 Bulindi ZARDI	0.49	0.24	0.24	50.0%	50.0%	100.0%
15 Kachwekano ZARDI	0.48	0.24	0.24	50.0%	50.0%	100.0%
16 Mukono ZARDI	0.48	0.24	0.24	50.0%	50.0%	100.0%
17 Ngetta ZARDI	0.48	0.26	0.26	54.0%	54.0%	100.0%
18 Nabium ZARDI	0.35	0.18	0.18	50.2%	50.2%	100.0%
19 Mbarara ZARDI	0.48	0.24	0.24	50.0%	50.0%	100.0%
20 Buginyaya ZARDI	0.48	0.23	0.23	47.9%	47.9%	100.0%
21 Rwebitaba ZARDI	0.48	0.26	0.26	55.6%	55.6%	100.0%
26 NARO Internal Audit	0.13	0.07	0.05	51.1%	35.8%	70.0%
27 National Coffee Research Institute	0.18	0.09	0.09	49.9%	49.9%	100.0%
<i>Development Projects</i>						
0382 Support for NARO	35.44	14.79	9.93	41.7%	28.0%	67.1%
1560 Relocation and Operationalisation of the National Livestock Resources Research Institute (NALIRRI)	2.03	0.86	0.74	42.6%	36.4%	85.5%
Total for Vote	79.66	36.71	30.59	46.1%	38.4%	83.3%

Table V3.4: External Financing Releases and Expenditure by Sub Programme

<i>Billion Uganda Shillings</i>	Approved Budget	Released	Spent	% Budget Released	% Budget Spent	%Releases Spent
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Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
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Program: 51 Agricultural Research

Recurrent Programmes

Subprogram: 01 Headquarters

Outputs Provided

Output: 01 Generation of agricultural technologies

		Item	Spent
1. Prepare, Print and submit the NARO (BFP, MPS and NARO Annual Work Plan);	- NARO Budget framework paper compiled and submitted.	211103 Allowances (Inc. Casuals, Temporary)	6,390
2. Conduct Budget committee meeting;	- Compiled NARO Annual Report FY 2017-2018.	221002 Workshops and Seminars	6,250
3. Support PARIs during the ARPM;		221006 Commissions and related charges	37,842
4. Conduct NAROSEC and NARO Wide ARPM and other stakeholder engagements;	- Compiled NARO Annual work plan FY 2019-2020.. Printed and distributed 200 copies.	222001 Telecommunications	10,000
5. Status of work plan implement		223006 Water	3,200
		227001 Travel inland	2,530

Reasons for Variation in performance

Total	66,212
Wage Recurrent	0
Non Wage Recurrent	66,212
AIA	0

Output: 02 Research extension interface promoted and strengthened

		Item	Spent
- NARO visibility in public events and Agricultural shows enhanced;	- Organised four farm clinics.		
- Improved technologies, planting materials and agricultural Information materials generated, promoted and availed to stakeholders;	- Printed and distributed 500 corporate diaries and calendars	221002 Workshops and Seminars	8,971
- Strengthen processes for linking research products to	- Two high level engagements for key stake holders were held in relation for future research funding. One was for the Russians and the second was for the Koreans, - Conducted two farm clinics at NACORI and the other at Buginyanya this has enhanced research and extension interface to deliver service to the farmers and at the same time tackle the Agriculture emerging issues amongst farmers. - Participated and exhibited in Source of the Nile Agriculture show where New technologies and NARO innovations were exhibited to farmers.	227001 Travel inland	9,754

Reasons for Variation in performance

Total	18,725
Wage Recurrent	0
Non Wage Recurrent	18,725
AIA	0

Output: 04 Agricultural research capacity strengthened

- NARO land assets titled, monitored and In the effort to strengthen land security in

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

		Item	Spent
secured;	NARO the following interventions were undertaken; i) Trial Variety Centers (TVCs) of Kumi, Bukedea, Kaberamaido and Pallisa were surveyed and the deed plans are now available for titling.	211102 Contract Staff Salaries	11,236,114
-NARO Land issues attended to;		211103 Allowances (Inc. Casuals, Temporary)	351,786
- NARO Infrastructure (office, laboratory, residence, farm and field) facilities monitored and maintained.		212101 Social Security Contributions	1,115,059
- MoUs, contracts and SMTAs drafted, reviewed and signed and legal advisory rendered.	- NARO land assets in Tororo surveyed.	213001 Medical expenses (To employees)	200,000
- NARO represented in courts of judicature, . in liaison with external legal counsel,	- Surveyed Land fenced at Entebbe Botanical gardens and NARO Secretariat Entebbe.	213002 Incapacity, death benefits and funeral expenses	75,000
- Legal advice and guidance to the NARO Governing Council and Management;	New consultancies on Legal and Other Issues for NARO in place	213004 Gratuity Expenses	929,959
- Assessment report of PARI levels of Compliance;	- Functional NAROSEC fleet.	221001 Advertising and Public Relations	77,221
- Annual workshop for NARO Procurement Officers and committees		221002 Workshops and Seminars	201,431
- NARO Procurement Plan;	- Enhanced, clean, safe and enabling workplace environment strengthened through maintenance of both research facilities, and equipment and payment for utilities, guarding services, cleaning services.	221003 Staff Training	1,735
- report on Board of Survey for Disposal/ Evaluation of NARO Assets.	Tendering completed. Contract signed with Des Consultants for a consultancy for Engineering and Designs	221006 Commissions and related charges	11,302
- Managing and maintaining fleet & office equipment;	- In order to guide agricultural research in Uganda, NARO Governing Council and its three committees were facilitated to meet and also monitor research in the institutes.	221007 Books, Periodicals & Newspapers	3,156
- Managing utilities;	In order to facilitate funding agricultural research NARO budget committee was facilitated.	221008 Computer supplies and Information Technology (IT)	11,000
- Maintaining office space and infrastructure;	Financial and internal controls were strengthened through budget monitoring in the institute of Mbarara, Rwebtaba, KaZARDI, Muzardi, NaFIRRI and NaCRRI , ABI, NaLIRRI, Bulindi, NARL, NaFORRI and NaCORRI	221009 Welfare and Entertainment	144,571
- Managing cleaning services;	Six months' financial reports produced	221011 Printing, Stationery, Photocopying and Binding	36,738
- Availing staff transport		221012 Small Office Equipment	5,066
- Managing security		221016 IFMS Recurrent costs	31,490
- NARO Engineering services procured and facilitated.		222001 Telecommunications	32,986
- NARO Governing Council meetings and other sub-committees activities facilitated;		222002 Postage and Courier	1,309
- Coordination, lobbying and supervision engagements facilitated and conducted.		222003 Information and communications technology (ICT)	23,912
• Conduct Budget committee meeting		223004 Guard and Security services	48,684
• Prepare, Print and submit the NARO (BFP, MPS and NARO Annual Work Plan);		223005 Electricity	218,309
• Support PARIs during the ARPM		224001 Medical Supplies	67,231
• Conduct NAROSEC ARPM		224004 Cleaning and Sanitation	83,280
• Conduct NARO Wide ARPM		224005 Uniforms, Beddings and Protective Gear	992
• Participate in JASAR and other stakeholder engagements		224006 Agricultural Supplies	318,650
• C		226001 Insurances	2,311
- Top Management (TPM) meetings and other committees activities facilitate;	- Functional infrastructure at the secretariat, safe, secure and clean office space furniture, ICTs, , transport.	227001 Travel inland	145,944
- Coordination, lobbying and supervision of research and development conducted;	- A research and non research work force, facilitated and enumerated.	227002 Travel abroad	629
- Undertake and participate in engagement with stakeholders, collaborators and dev. partners.	Two new PARI Directors and appointed and performance contracts issued.	227004 Fuel, Lubricants and Oils	225,018
Research activities coordinated, managed and monitored	- Staff facilitated to undertake/complete post graduate studies (PhD, MSc, Professional certifications)	228001 Maintenance - Civil	378,545
- Financial Management compliance status of 16 PARIs established on quarterly basis;		228002 Maintenance - Vehicles	161,078
- Documenting NARO financial transactions into financial statements quarterly, half year and annual accounts achieved;		228003 Maintenance – Machinery, Equipment & Furniture	71,948
- Internal and External audit exercise		228004 Maintenance – Other	34,344
		273102 Incapacity, death benefits and funeral expenses	4,700
	- 10 PHD staff finalized and graduated.		

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

conducted.

- NARO financial information prepared consolidate/ communicate/submitted (NARO financial year budget, Quarterly warranties; NARO wide budgets; Quarterly/Annual financial and supervision reports.

- Budget monitored

- NARO financial payments concluded.

• Solid data, voice network and server room maintained;

• Effective use of the acquired ICT resources;

• Voice and data integration piloted.

• ICT-IFMS technical training and sensitization of staff .

• Enhanced services: website, IFMIS, MBD, and internet

A vibrant, facilitated and well motivated work force enumerated

Staff performance plans monitored and appraised

- Staff facilitated to undertake/complete post graduate studies (PhD, MSc, Professional certifications)

- Students supported to carry out research;

- Short term skills improvement programs undertaken;

- Travel support for International engagements.

Research activities, services and products promoted

Reasons for Variation in performance

Total	16,251,498
Wage Recurrent	11,236,114
Non Wage Recurrent	5,015,384
AIA	0
Total For SubProgramme	16,336,435
Wage Recurrent	11,236,114
Non Wage Recurrent	5,100,321
AIA	0

Recurrent Programmes

Subprogram: 07 National Crops Resources Research Institute

Outputs Provided

Output: 01 Generation of agricultural technologies

	Item	Spent
Fruit tree seedling and product value chains supported	Interim selection finalized of the 12 promising tomato lines with the right attributes such blight tolerance.	211103 Allowances (Inc. Casuals, Temporary)
Research activities undertaken and monitored	NACRRI research guided and monitored in Kiige station, Kamuli district.	224006 Agricultural Supplies
	Established research on course.	227001 Travel inland

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
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Reasons for Variation in performance

	Total	127,500
	Wage Recurrent	0
	Non Wage Recurrent	127,500
	AIA	0

Output: 02 Research extension interface promoted and strengthened

new and improved crop technologies, innovations, information and management practices (TIMPS) promoted

Item	Spent
221002 Workshops and Seminars	49,200
221011 Printing, Stationery, Photocopying and Binding	4,400
227001 Travel inland	10,000

Reasons for Variation in performance

	Total	63,600
	Wage Recurrent	0
	Non Wage Recurrent	63,600
	AIA	0

Output: 04 Agricultural research capacity strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
Improved fish seed and feed production and productivity - Operationalization of the hatchery, ponds and concrete tanks; - Commercialisation of fish feed production by NAFIRRI at ARDC; - Selective breeding programmes of Nile tilapia and the African catfish enhanced.	- Strengthened fish hatchery and feed mil. Both repaired and functional to enhance selective breeding programme for Nile tilapia and African catfish at Kajjansi. NAFIRRI research agenda strengthened by facilitating the advisory committee and participating in external consultative review meetings NAFIRRI has maintained on station fish demonstration ponds, at Kajjansi, Wakiso district. And cage sites in lake Victoria (Source of the Nile cage site).	Item 211103 Allowances (Inc. Casuals, Temporary) 221006 Commissions and related charges 221011 Printing, Stationery, Photocopying and Binding 222001 Telecommunications 223004 Guard and Security services 223005 Electricity 223006 Water 224001 Medical Supplies 224006 Agricultural Supplies 227001 Travel inland 227004 Fuel, Lubricants and Oils	Spent 15,600 5,000 1,500 4,100 2,939 7,000 5,000 114,500 22,015 3,500 3,000
Improved fish seed and feed production and productivity Functional aquaria, onstation ponds, cage sites, feed mills, offices, marine vessels and sites.			

Reasons for Variation in performance

Total	184,154
Wage Recurrent	0
Non Wage Recurrent	184,154
AIA	0

Output: 02 Research extension interface promoted and strengthened

- Participate in exhibitions and shows - Staff & stakeholder meetings held - Technologies disseminated and people reached.	-	Item 221001 Advertising and Public Relations 221002 Workshops and Seminars 221011 Printing, Stationery, Photocopying and Binding 224001 Medical Supplies	Spent 3,000 7,500 4,000 16,000
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Reasons for Variation in performance

Total	30,500
Wage Recurrent	0
Non Wage Recurrent	30,500
AIA	0

Output: 04 Agricultural research capacity strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
1. Vehicles serviced; Office buildings maintained; Compound maintained; Office, laboratory and field equipment maintained.	- NAFIRRI physical resources , managed and maintained (offices, laboratories, vehicles, ICTs) , enabling and fully functional..	Item 211103 Allowances (Inc. Casuals, Temporary)	Spent 5,500
2. Maintain effective ICT facilities; Subscription for internet paid;	- NAFIRRI research agenda strengthened by a functional and facilitated work force.	221001 Advertising and Public Relations	947
3. Utilities paid (water utility, electricity, telephone).	Institute marine vessels and field equipment).safe, secure and use-able.	221006 Commissions and related charges	5,000
1. Staff allowances, wages, welfare Lunch and break tea provided for staff provided;	Except Mv Cormorant	221007 Books, Periodicals & Newspapers	500
2. Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals	- NAFIRRI research agenda strengthened by a functional and facilitated advisory and contracts committees.	221009 Welfare and Entertainment	4,000
Institute assets and activity sites secure Governance committees, Management committees and Staff facilitated (Staff allowances, wages, welfare Lunch and break tea provided for staff; Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals Institute visibility and operations enhanced	NAFIRRI technologies disseminated at two stakeholder campaign conducted; i) at the World Food Day (16/10/2019) at Hoima with > 500 people sensitized, (ii) World Fisheries Day (21/11/2019) with >150 people sensitized at Kiyindi Landing site.	223005 Electricity	4,500
		223006 Water	5,000
		224004 Cleaning and Sanitation	8,000
		224006 Agricultural Supplies	27,500
		225001 Consultancy Services- Short term	75,000
		226001 Insurances	1,040
		227001 Travel inland	14,000
		227004 Fuel, Lubricants and Oils	14,500
		228001 Maintenance - Civil	62,500
		228002 Maintenance - Vehicles	20,335
		228003 Maintenance – Machinery, Equipment & Furniture	29,288
		273102 Incapacity, death benefits and funeral expenses	1,186

Reasons for Variation in performance

Total	278,796
Wage Recurrent	0
Non Wage Recurrent	278,796
AIA	0
Total For SubProgramme	493,450
Wage Recurrent	0
Non Wage Recurrent	493,450
AIA	0

Recurrent Programmes

Subprogram: 09 National Forestry Resources Research Institute

Outputs Provided

Output: 01 Generation of agricultural technologies

- Samples of priority tree species collected;	- Study concept finalized and data capture tools developed for the study.	Item 211103 Allowances (Inc. Casuals, Temporary)	Spent 30,000
- Genetic diversity and molecular variation determined;	- a database for priority beneficial and medicinal tree species has been developed;	221006 Commissions and related charges	2,000
- Database of priority beneficial tree species developed;		224006 Agricultural Supplies	78,000
- Market and value addition of priority tree species identified.		227001 Travel inland	16,000
		227004 Fuel, Lubricants and Oils	6,000

Reasons for Variation in performance

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter	Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	<i>UShs Thousand</i>
		Total	132,000
		Wage Recurrent	0
		Non Wage Recurrent	132,000
		<i>AIA</i>	0
Output: 02 Research extension interface promoted and strengthened			
- Participate in exhibitions and agricultural shows	- Forestry innovations were disseminated on radio one talk show, farm clinics and at World Food day celebrations at Bulindi, Hoima district	Item	Spent
- Staff & stakeholder meetings held		221001 Advertising and Public Relations	5,500
- Technologies disseminated and people reached.		221002 Workshops and Seminars	4,875
		221007 Books, Periodicals & Newspapers	736
		221008 Computer supplies and Information Technology (IT)	4,750
Reasons for Variation in performance			
		Total	15,861
		Wage Recurrent	0
		Non Wage Recurrent	15,861
		<i>AIA</i>	0
Output: 04 Agricultural research capacity strengthened			

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QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
Institute assets and activity sites secure Governance committees, Management committees and Staff facilitated (Staff allowances, wages, welfare Lunch and break tea provided for staff; Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals	- - NAFORRI research agenda strengthened by facilitating a functional advisory committee . NAFORRI physical resources (offices, laboratories, vehicles, ICTs) safe, secure, clean, fully functional, managed and well maintained.	Item	Spent
1. Vehicles serviced; Office buildings maintained; Compound maintained; Office, laboratory and field equipment maintained.		211103 Allowances (Inc. Casuals, Temporary)	5,500
2. Maintain effective ICT facilities; Subscription for internet paid;		221001 Advertising and Public Relations	3,000
3. Utilities paid (water utility, electricity, telephone).		221002 Workshops and Seminars	5,000
		221003 Staff Training	3,500
		221006 Commissions and related charges	5,000
		221008 Computer supplies and Information Technology (IT)	2,000
		221011 Printing, Stationery, Photocopying and Binding	6,500
		222001 Telecommunications	1,000
		222003 Information and communications technology (ICT)	764
		223004 Guard and Security services	6,000
		223005 Electricity	24,725
		224004 Cleaning and Sanitation	7,000
		224006 Agricultural Supplies	20,275
		225001 Consultancy Services- Short term	18,500
		227001 Travel inland	13,850
		227004 Fuel, Lubricants and Oils	7,500
		228001 Maintenance - Civil	6,000
		228002 Maintenance - Vehicles	9,400
		228003 Maintenance – Machinery, Equipment & Furniture	27,000

Reasons for Variation in performance

Total	172,514
Wage Recurrent	0
Non Wage Recurrent	172,514
AIA	0
Total For SubProgramme	320,375
Wage Recurrent	0
Non Wage Recurrent	320,375
AIA	0

Recurrent Programmes

Subprogram: 10 National Livestock Resources Research

Outputs Provided

Output: 01 Generation of agricultural technologies

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
- Protocols to produce A. cinerea availed;	In the effort to develop A. cinerea based protein supplement Inclusions for ruminants and non-ruminants and the associated Protocols. The relevant Ingredients and supplies are still being assembled.	Item	Spent
- Production models for small, medium and large scale producers developed;		211103 Allowances (Inc. Casuals, Temporary)	5,000
- A. cinerea based protein supplement Inclusions for ruminants and non ruminants developed and availed.	- A protocol to breed acrida cinerea has been developed.	222001 Telecommunications	1,000
		223004 Guard and Security services	2,000
		223005 Electricity	250
		224001 Medical Supplies	14,650
		224004 Cleaning and Sanitation	500
		224006 Agricultural Supplies	5,000
		227001 Travel inland	3,500
		227004 Fuel, Lubricants and Oils	3,280
		228002 Maintenance - Vehicles	750
		Total	35,930
		Wage Recurrent	0
		Non Wage Recurrent	35,930
		AIA	0

Reasons for Variation in performance

Output: 02 Research extension interface promoted and strengthened

NALIRRI new and improved livestock technologies, innovations, information and management practices (TIMPS) presented to stakeholders.	- NALIRRI new and improved livestock technologies disseminated and accessed during exhibitions i.e. the World Food day and Farm clinic in Kituza mukono.	Item	Spent
		221002 Workshops and Seminars	3,000
		221011 Printing, Stationery, Photocopying and Binding	100
		227001 Travel inland	1,600
		Total	4,700
		Wage Recurrent	0
		Non Wage Recurrent	4,700
		AIA	0

Reasons for Variation in performance

Output: 04 Agricultural research capacity strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
1. Staff allowances, wages, welfare Lunch and break tea provided for staff provided;	- NALIRRI physical and livestock resources secure, safe, cleaned, enhanced, and enabling workplace and research environment strengthened .	Item 211103 Allowances (Inc. Casuals, Temporary)	Spent 5,500
2. Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals	- NALIRRI research agenda has been strengthened by facilitating a functional advisory committee and and a research and non research work force	221001 Advertising and Public Relations	1,000
Institute assets and activity sites secure Governance committees, Management committees and Staff facilitated (Staff allowances, wages, welfare Lunch and break tea provided for staff; Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals.	- Functional fleet maintained. - Enabling office and laboratory environment. with ICTs, water and electricity.	221003 Staff Training	3,500
1. Vehicles serviced; Office buildings maintained; Compound maintained; Office, laboratory and field equipment maintained.		221006 Commissions and related charges	3,000
2. Maintain effective ICT facilities; Subscription for internet paid;		221007 Books, Periodicals & Newspapers	120
3. Utilities paid (water utility, electricity, telephone).		221008 Computer supplies and Information Technology (IT)	2,000
- Exhibitions participated		221011 Printing, Stationery, Photocopying and Binding	3,000
- Staff & stakeholder meetings held		221012 Small Office Equipment	1,500
- Technologies disseminated and people reached.		222001 Telecommunications	250
		222003 Information and communications technology (ICT)	3,425
		223004 Guard and Security services	750
		223005 Electricity	2,000
		224004 Cleaning and Sanitation	2,000
		226001 Insurances	640
		227001 Travel inland	7,000
		227004 Fuel, Lubricants and Oils	7,000
		228001 Maintenance - Civil	2,750
		228002 Maintenance - Vehicles	4,035

Reasons for Variation in performance

Total	49,470
Wage Recurrent	0
Non Wage Recurrent	49,470
AIA	0
Total For SubProgramme	90,100
Wage Recurrent	0
Non Wage Recurrent	90,100
AIA	0

Recurrent Programmes

Subprogram: 11 National Semi arid Resources Research

Outputs Provided

Output: 01 Generation of agricultural technologies

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
Germ plasma for semi arid crops collected , characterised and conserved.	- Four sorghum candidate lines submitted for variety release (2 hybrids, 2 OPVs) ; - 2 greengram lines recommended for DUS; 5 cowpea lines for DUS testing. - One production technology of Microdozing nitrogen nutrient fertilizer on sorghum and fingermillet being evaluated with farmers in Teso region and one production technology of intercropping (2:1, 2:2) patterns on sorghum and finger millet being evaluated with farmers in Teso, Lango, Karamoja and West Nile regions	Item 227001 Travel inland 227004 Fuel, Lubricants and Oils	Spent 5,500 3,000

Reasons for Variation in performance

Total	8,500
Wage Recurrent	0
Non Wage Recurrent	8,500
AIA	0

Output: 04 Agricultural research capacity strengthened

Institute assets and activity sites secure Governance committees, Management committees and Staff facilitated (Staff allowances, wages, welfare Lunch and break tea provided for staff; Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals. 1. Vehicles serviced; Office buildings maintained; Compound maintained; Office, laboratory and field equipment maintained. 2. Maintain effective ICT facilities; Subscription for internet paid; 3. Utilities paid (water utility, electricity, telephone). - Exhibitions participated; - Staff & stakeholder meetings held; - Technologies disseminated and people reached.	NASARRI research agenda strengthened by facilitating the advisory committees, Management committees and institute work force. - NASARRI physical resources (some offices, institute assets, transport equipment, fittings, ,) safe, secured, managed and fully functional. - NASARRI technologies disseminated and accessed by farmers through Source of the Nile Agricultural show, farm clinics and world food day.	Item	Spent
		211103 Allowances (Inc. Casuals, Temporary)	5,500
		221001 Advertising and Public Relations	2,500
		221006 Commissions and related charges	3,000
		221007 Books, Periodicals & Newspapers	500
		221009 Welfare and Entertainment	448
		221011 Printing, Stationery, Photocopying and Binding	2,000
		222001 Telecommunications	2,000
		223004 Guard and Security services	3,000
		223005 Electricity	6,000
		224004 Cleaning and Sanitation	2,000
		226001 Insurances	640
		228002 Maintenance - Vehicles	2,412
		273102 Incapacity, death benefits and funeral expenses	1,500

Reasons for Variation in performance

Total	31,500
Wage Recurrent	0
Non Wage Recurrent	31,500
AIA	0
Total For SubProgramme	40,000

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
		Wage Recurrent	0
		Non Wage Recurrent	40,000
		AIA	0

Recurrent Programmes

Subprogram: 12 National Laboratories Research

Outputs Provided

Output: 01 Generation of agricultural technologies

		Item	Spent
- Formulation and optimization of nanosurface package;	1). Information on Market dynamics of fresh foods documented	211103 Allowances (Inc. Casuals, Temporary)	12,500
- Validate and pilot optimised nanosurface packages;	2). Partial information on shelf life of peeled and non-peeled bananas as indicators of fresh and minimally-processed foods is documented	222001 Telecommunications	1,520
- Promote nanosurface packed foods. Priority commodities collected , characterised and conserved.	3). Procedured for extraction of essential oils developed	223005 Electricity	7,500
- Factors that influence infusion / impregnation kinetics of the plant extracts into the pre-cooked bean matrix determined and optimized;		223006 Water	6,000
- Culinary and market parameters of bio-preserved pre-cooked beans optimized;		224006 Agricultural Supplies	34,000
- : Bio-preserved pre-cooked bean prod		227001 Travel inland	17,050
		227004 Fuel, Lubricants and Oils	2,000
		228003 Maintenance – Machinery, Equipment & Furniture	5,000

Reasons for Variation in performance

Total	85,570
Wage Recurrent	0
Non Wage Recurrent	85,570
AIA	0

Output: 02 Research extension interface promoted and strengthened

		Item	Spent
NARL and NARL TIMPs promoted	Construction and equipping seed bank is underway in Nakasongola. 95 % constructional works completed.	221001 Advertising and Public Relations	400
		221002 Workshops and Seminars	500
		221011 Printing, Stationery, Photocopying and Binding	500

Reasons for Variation in performance

Total	1,400
Wage Recurrent	0
Non Wage Recurrent	1,400
AIA	0

Output: 04 Agricultural research capacity strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
Institute assets and activity sites secure	-	Item	Spent
Governance committees, Management committees, Staff facilitated and Staff training (Staff allowances, wages, welfare	- NARL research agenda strengthened by facilitating a functional management committee and NARL of work force motivated (40 scientist and 20 laborers) .	211103 Allowances (Inc. Casuals, Temporary)	8,750
Lunch and break tea provided for staff;	- NARL physical resources (vehicles, fittings, offices laboratories, farm and field equipment) and assets safe, secured, clean and fully functional.	221003 Staff Training	5,000
Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals	- NARL technologies demonstrated at two farm clinics, two events (WFD and Jinja agricultural show).	221006 Commissions and related charges	1,225
Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals		221007 Books, Periodicals & Newspapers	1,124
1. Vehicles serviced; Office buildings maintained; Compound maintained; Office, laboratory and field equipment maintained.		221008 Computer supplies and Information Technology (IT)	1,020
2. Maintain effective ICT facilities;		221009 Welfare and Entertainment	2,200
Subscription for internet paid;		221011 Printing, Stationery, Photocopying and Binding	1,620
3. Utilities paid (water utility, electricity, telephone).		222002 Postage and Courier	400
- Exhibitions participated		223004 Guard and Security services	2,600
- Staff & stakeholder meetings held		223005 Electricity	5,600
- Technologies disseminated and people reached.		224004 Cleaning and Sanitation	2,730
		225001 Consultancy Services- Short term	5,750
		227001 Travel inland	7,675
		227004 Fuel, Lubricants and Oils	12,500
		228002 Maintenance - Vehicles	2,585
		228003 Maintenance – Machinery, Equipment & Furniture	1,125

Reasons for Variation in performance

Total	61,903
Wage Recurrent	0
Non Wage Recurrent	61,903
AIA	0
Total For SubProgramme	148,873
Wage Recurrent	0
Non Wage Recurrent	148,873
AIA	0

Recurrent Programmes

Subprogram: 13 Abi ZARDI

Outputs Provided

Output: 01 Generation of agricultural technologies

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
Priority crops for northwestern zone collected , characterised, conserved and demonstrated At least four food products and three livestock feed products developed from cassava and its by-products	Abi ZARDI technologies, innovations, information and management practices (TIMPS) for the northwestern zone were generated and promoted. 1. One (Efficacy of an indigenous shrub for enhancing quality of manure for improved crop yield has been identified) 2. Two (Cassava value addition and Improvement of land race sorghum 'Godo') 3. One Nutrition platform (Key actors in the cassava value chain identified and processes for establishment of a nutrition platform for nutrient enhanced cassava products initiated). 4. 6 technologies (Pure Mubende goat, NAROBAN 2 & 3, NAROCAS 1 & 2, and Maksoy 3N multiplied and delivered to uptake pathways in highland areas of West Nile). - Five (5) crop varieties of beans, cassava, soy, rice and groundnuts being evaluated for agro-industrialization -	Item 221001 Advertising and Public Relations 221006 Commissions and related charges 222001 Telecommunications 224006 Agricultural Supplies 227001 Travel inland	Spent 2,000 4,350 400 33,000 37,500

Reasons for Variation in performance

Total	77,250
Wage Recurrent	0
Non Wage Recurrent	77,250
AIA	0

Output: 02 Research extension interface promoted and strengthened

Abi ZARDI corporate image and new and improved technologies, innovations, information and management practices (TIMPS) for the zone promoted. - Two functional cassava out-grower schemes, each with over 500 members, established and linked to baking and brewing industries; - One nutrition platform established to inform development of cassava based products.	Abi ZARDI corporate image and new and improved technologies, innovations, information and management practices (TIMPS) for the zone promoted at 3 farm clinic and two agricultural shows - Two functional cassava out-grower schemes supported; - One nutrition platform supported.	Item 221001 Advertising and Public Relations 221002 Workshops and Seminars 221008 Computer supplies and Information Technology (IT) 221011 Printing, Stationery, Photocopying and Binding	Spent 1,500 10,500 2,500 1,000
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Reasons for Variation in performance

Total	15,500
Wage Recurrent	0
Non Wage Recurrent	15,500

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
		AIA	0

Output: 04 Agricultural research capacity strengthened

Managing Abi ZARDI physical resources	Abi ZARDI physical resources.(vehicles, offices, farm and laboratories). Safe, secure, clean and fully functional.	Item	Spent
Managing and facilitating Abi ZARDI operations		211103 Allowances (Inc. Casuals, Temporary)	4,500
Managing and facilitating Abi ZARDI Human resource	- Abi ZARDI research agenda strengthened by facilitating the advisory committee and work force facilitated, motivated and remunerated.	221002 Workshops and Seminars	600
Institute assets and activity sites secure		221008 Computer supplies and Information Technology (IT)	2,000
1. Exhibitions participated		221009 Welfare and Entertainment	2,000
2. Staff & stakeholder meetings held		222001 Telecommunications	400
3. Technologies disseminated and people reached		223004 Guard and Security services	3,000
		223005 Electricity	1,000
		223006 Water	200
		224004 Cleaning and Sanitation	2,000
		226001 Insurances	200
		227001 Travel inland	8,600
		227004 Fuel, Lubricants and Oils	14,750
		228001 Maintenance - Civil	500
		228002 Maintenance - Vehicles	5,500
		228003 Maintenance – Machinery, Equipment & Furniture	850
		273102 Incapacity, death benefits and funeral expenses	1,000

Reasons for Variation in performance

Total	47,100
Wage Recurrent	0
Non Wage Recurrent	47,100
AIA	0
Total For SubProgramme	139,850
Wage Recurrent	0
Non Wage Recurrent	139,850
AIA	0

Recurrent Programmes

Subprogram: 14 Bulindi ZARDI

Outputs Provided

Output: 01 Generation of agricultural technologies

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
<ul style="list-style-type: none"> - Goat feedlot unit comprising of a house, fenced paddocks and feeding and watering in place; - A goat breeding unit established for raising mubende and boer goats; - A pasture improvement unit established for supplying planting materials to farmers. 	<ul style="list-style-type: none"> - Architectural housing designs for goat breeding and feedlot ready. - And construction of housing for goat breeding and feedlot health. and for the fattening goats under the project for commercialization of goat value chain through industrial park approach. - Complete the consultative inception meeting with stakeholders. - Established and managed 5 acres of demos for maize, soybean, millet and sorghum; Maintained 3 acres of demos of cassava (1 acre), Banana (1/2 acre), Pastures (1 acre) and coffee (1/4 acre); 1,056 students, 97 farmers from SNV and 75 farmers from CCAFS accessed information through training; 12 Farmers accessed pastures i.e. Napier & Bracharia species; 5 Farmers accessed mango seedlings. 	<p>Item</p> <ul style="list-style-type: none"> 211103 Allowances (Inc. Casuals, Temporary) 224001 Medical Supplies 227001 Travel inland 	<p>Spent</p> <ul style="list-style-type: none"> 20,000 27,500 19,680
Onfarm research activities monitored			
		Total	67,180
		Wage Recurrent	0
		Non Wage Recurrent	67,180
		AIA	0

Reasons for Variation in performance

Output: 02 Research extension interface promoted and strengthened

<ul style="list-style-type: none"> - A baseline survey conducted and value chain actors characterized. - Stakeholders identified, mobilised and empowered. - Demonstrations and information Materials prepared and developed. - Public awareness of research outputs; - Exhibitions participated; - Staff & stakeholder meetings held; - Technologies disseminated and people reached. 	<ul style="list-style-type: none"> 1) Baseline survey in 8 districts of LACZ conducted. Data collection concluded. Data analysis on going. (2) Acquired pasture germ plasma and established mother gardens. (3) Conserved 2.2 tones of silage. (Napier and lablab). - In the effort to increase technology uptake for increased production and productivity, Awareness campaigns were intensified through; , - One fam clinic conducted on station, - Two (2) radio talk shows on spice, Liberty and BBS radio stations were conducted. 	<p>Item</p> <ul style="list-style-type: none"> 221001 Advertising and Public Relations 	<p>Spent</p> <ul style="list-style-type: none"> 7,000
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Reasons for Variation in performance

Total	7,000
Wage Recurrent	0
Non Wage Recurrent	7,000
AIA	0

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
Output: 04 Agricultural research capacity strengthened			
Managing Bulindi ZARDI physical resource	- Bulindi ZARDI physical resources (vehicle, office farm livestock and other asset) fully functional, enhanced, safe, secure and enabling workplace and research environment.	Item	Spent
Institute assets and activity sites secure	-	211103 Allowances (Inc. Casuals, Temporary)	4,500
Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals	-	221002 Workshops and Seminars	25,000
Governance committees, Management committees and Staff facilitated (Staff allowances, wages, welfare Lunch and break tea provided for staff; Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals	- Bulindi research agenda for the Bunyoro sub region strengthened by facilitating a fully functional advisory committee and Institute work force.	221003 Staff Training	10,000
		221007 Books, Periodicals & Newspapers	700
		221009 Welfare and Entertainment	4,500
		221011 Printing, Stationery, Photocopying and Binding	2,500
		222001 Telecommunications	1,000
		222002 Postage and Courier	50
		223004 Guard and Security services	3,500
		223005 Electricity	16,000
		224004 Cleaning and Sanitation	4,000
		224005 Uniforms, Beddings and Protective Gear	5,500
		225001 Consultancy Services- Short term	7,500
		226001 Insurances	640
		227001 Travel inland	23,500
		227004 Fuel, Lubricants and Oils	13,500
		228001 Maintenance - Civil	27,500
		228002 Maintenance - Vehicles	18,500
		228003 Maintenance – Machinery, Equipment & Furniture	500
		228004 Maintenance – Other	310
		273102 Incapacity, death benefits and funeral expenses	500

Reasons for Variation in performance

Total	169,700
Wage Recurrent	0
Non Wage Recurrent	169,700
AIA	0
Total For SubProgramme	243,880
Wage Recurrent	0
Non Wage Recurrent	243,880
AIA	0

Recurrent Programmes

Subprogram: 15 Kachwekano ZARDI

Outputs Provided

Output: 01 Generation of agricultural technologies

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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	
New and improved livestock technologies, innovations, information and management practices (TIMPS) for the zone identified	- Four multi-locational trials containing five sorghum varieties established in different agro-ecologies.	Item	Spent	
		223005 Electricity	2,750	
		223006 Water	2,000	
		224006 Agricultural Supplies	122,500	
		227001 Travel inland	2,920	
		227004 Fuel, Lubricants and Oils	2,003	
			Total	132,173
			Wage Recurrent	0
			Non Wage Recurrent	132,173
			AIA	0

Reasons for Variation in performance

Output: 04 Agricultural research capacity strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
Institute assets and activity sites secure Governance committees, Management committees and Staff facilitated (Staff allowances, wages, welfare Lunch and break tea provided for staff; Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals 1. Vehicles serviced; Office buildings maintained; Compound maintained; Office, laboratory and field equipment maintained. 2. Maintain effective ICT facilities; Subscription for internet paid; 3. Utilities paid (water utility, electricity, telephone). - Exhibitions participated - Staff & stakeholder meetings held - Technologies disseminated and people reached.	Safe institute assets and research and experimental sites secure. - Kachwekano ZARDI research agenda for the southwestern zone strengthened by a functional advisory committees and research and non-research work force.. - Maintained a functional institute fleet. - Kachwekano ZARDI physical resources functional, safe and secure. - Office work space enabling workplace and research environment strengthened through maintenance of both research facilities and equipment and payment for utilities. 1. 5 Planting materials and animal breeds availed to 29 farmers (500 banana, 500 fruit tree seedlings, 1,750,000 cassava cuttings, 250 bags of forages, 2000 Nile tilapia fish seed, and 32 piglets) 2. 4 Climate smart technologies demonstrated (DT varieties, soil & water conservation & agroforestry) in 12 climate-smart model farms in Hoima. 3. 11 Production and value addition technologies (maize, rice, banana, cassava, fish, dairy, piggery, apiculture, aquaculture) disseminated at farm clinics, WFD2019 and other community trainings 4. 37 crop varieties & animal structures demonstrated On-station (4 Maize, 4 beans, 4 soybean, 3 finger millet, 3 sorghum, 3 cassava, 3 Sweet potato, 3 Napier, 3 brachiaria, 3 livestock handling structures and 2 animal houses) established and/or maintained 5. Distributed potato seedlings to screen-house operators(20,942), farmers (8,710), ZARDIs (2,770), private companies 2,000 and 6,800 mini-tubers 6. Provided support to CoU Diocese in Kigezi in form of seed for screen house & training 7. The institute has continued to produce apple seedlings to supplement what is produced by private nursery operators 8. Training manual - apple growing & management developed 9. 2 Acres of fodder gardens have been established and maintained at KaZARDI	Item 211103 Allowances (Inc. Casuals, Temporary) 221006 Commissions and related charges 221009 Welfare and Entertainment 221011 Printing, Stationery, Photocopying and Binding 222001 Telecommunications 222003 Information and communications technology (ICT) 223004 Guard and Security services 223005 Electricity 223006 Water 224004 Cleaning and Sanitation 226001 Insurances 227001 Travel inland 227004 Fuel, Lubricants and Oils 228001 Maintenance - Civil 228002 Maintenance - Vehicles 228003 Maintenance – Machinery, Equipment & Furniture	Spent 4,500 2,500 2,500 4,462 777 1,599 10,000 25,000 10,000 4,803 500 13,000 13,600 2,500 7,900 1,750

Reasons for Variation in performance

Total	105,390
Wage Recurrent	0
Non Wage Recurrent	105,390

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
		AIA	0
		Total For SubProgramme	237,563
		Wage Recurrent	0
		Non Wage Recurrent	237,563
		AIA	0

Recurrent Programmes

Subprogram: 16 Mukono ZARDI

Outputs Provided

Output: 01 Generation of agricultural technologies

Germ plasma for priority commodities collected, characterised and conserved.	Mukono ZARDI generated and promoted the following TIMPs"	Item	Spent
	1. Sweetpotato genotypes selected for on farm trials. Seven genotypes evaluated, three are promising.	221011 Printing, Stationery, Photocopying and Binding	2,000
	2. 3 bio-pesticides evaluated for tomato leaf miner management (Beauveria bassiana is most promising.	221012 Small Office Equipment	2,500
		222001 Telecommunications	3,000
	3. 20,000 high quality tilapia fingerlings were produced and distributed to farmers	223005 Electricity	7,000
		224001 Medical Supplies	36,750
		224006 Agricultural Supplies	85,750
	4. Solar system fixed at KMG at Kamenyamiggo station	227001 Travel inland	2,000
		227004 Fuel, Lubricants and Oils	2,000
	5. 4,913 KR, 190 old clonal and 4,605 elite coffee seedlings sold to farmers		
	6. Aailed 465 fruit tree seedlings, 736 vegetable seedlings and 10.75 kg of leafy vegetables		
	MUZARDI technologies promoted and show cased during NACORI exhibition and World Food Day at Bulindi ZARDI.		
	1).. Fish (acquiculture management),		
	2). Banana (proper agronomic practices)		
	3) small gardening (food towers, box gardens, raised beds.		

Reasons for Variation in performance

Total	141,000
Wage Recurrent	0
Non Wage Recurrent	141,000
AIA	0

Output: 04 Agricultural research capacity strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
Managing and facilitating Mukono ZARDI Human resource	- Mukono ZARDI research agenda for the lake Victoria crescent zone was strengthened by facilitating the fully functional advisory committee and the institute work force.	Item	Spent
Institute assets and activity sites secure		211103 Allowances (Inc. Casuals, Temporary)	4,500
Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals	-	221001 Advertising and Public Relations	1,500
1. Vehicles serviced; Office buildings maintained; Compound maintained; Office, laboratory and field equipment maintained.	-	221006 Commissions and related charges	5,000
2. Maintain effective ICT facilities; Subscription for internet paid;	- Mukono ZARDI physical resources were maintained, safe and secure.	221007 Books, Periodicals & Newspapers	625
3. Utilities paid (water utility, electricity, telephone).	- The institute has an enabling, safe and secure research environment.	221009 Welfare and Entertainment	1,875
		221011 Printing, Stationery, Photocopying and Binding	2,500
		222002 Postage and Courier	125
		223004 Guard and Security services	10,000
		223005 Electricity	25,000
		223006 Water	10,000
		224004 Cleaning and Sanitation	4,475
		226001 Insurances	450
		227001 Travel inland	10,000
		227004 Fuel, Lubricants and Oils	10,000
		228002 Maintenance - Vehicles	7,733
		228003 Maintenance – Machinery, Equipment & Furniture	500
		273102 Incapacity, death benefits and funeral expenses	2,218

Reasons for Variation in performance

Total	96,500
Wage Recurrent	0
Non Wage Recurrent	96,500
AIA	0
Total For SubProgramme	237,500
Wage Recurrent	0
Non Wage Recurrent	237,500
AIA	0

Recurrent Programmes

Subprogram: 17 Ngetta ZARDI

Outputs Provided

Output: 01 Generation of agricultural technologies

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

		Item	Spent
Effective management practices for livestock parasite and disease control developed	Tissue sample collection equipment delivered (1 assorted set of blood collection tubes, sample collection packs, sterile swabs, cold packs, collar boxes, syringes and needles, rotary shakers, latex gloves, vaccine carrier box, dissecting set, formaline). sample collection and analysis awaits	224001 Medical Supplies	50,800
- Capacity of soil laboratory to effectively conduct soil analysis enhanced	- Procurement process on-going .	224006 Agricultural Supplies	90,450
- Survival and field establishment of the shea tree seedlings generated from cuttings, tissue culture and seed enhanced	- 750 sq.mtrs of black shade net, 50 kgs of potting bags and 2kgs of pure IBA procured. Procurement of autoclave is on-going.	227001 Travel inland	1,090
Local poultry research enhanced	Poultry experimental units and infrastructure rehabilitation initiated. Not fully functional.	227004 Fuel, Lubricants and Oils	2,000
The newly released crop varieties adapted in the zone	- Procurement of assorted agricultural inputs were made (pesticides, lab agents and consumables).	228002 Maintenance - Vehicles	2,000
Cost effective Integrated disease and pest management technology for citrus and mango developed	Four trials on integrated disease management options (Pruning+ fungicide application + field sanitation, and bark horning+ pruning+ fungicide+ sanitation) established on farm at Ngetta Sub county.	228003 Maintenance – Machinery, Equipment & Furniture	2,920
Appropriate SLM technologies adapted			
The capacity of the laboratory for detection of plant pathogen enhanced			
Fish farming technologies demonstrated			
Effective technologies for management of post harvest seed pests and diseases for QDS production developed			
Mid-Northern and northern Uganda research areas and priorities identified			
	4 grow out ponds for evaluating the developed feed packages rehabilitated. Not full functional.		
	-		
	Ngetta ZARDI generated the following TIMPs:		
	1. One solar hay drier for conservation of dairy forage feed resources validated.		
	2. One -(CGS on value addition of fruit pulp of shea submitted and funded)		
	3. Nine Enhancing yield using Rhizobium inoculant in new improved varieties of soybean and beans (5 sites) under trial.		
	4. Development and management of shea tree grafted seedlings-manual).		
	5. Information parks on Value addition for 8 priority crops in Northern Uganda compiled and awaiting peer reviews..		
	6. 'Survey report produced .Maize and soybean were the most preferred commodities for intervention followed by cassava. Pest and diseases (Maize fall army worm and CBSD) management, access to seed (price and quality) and markets) topped community research agenda for intervention along the commodities prioritized.		

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
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Reasons for Variation in performance

Total	149,260
Wage Recurrent	0
Non Wage Recurrent	149,260
<i>AIA</i>	0

Output: 02 Research extension interface promoted and strengthened

Stake holders made aware of the various agricultural technologies available at Ngetta ZARDI Enhanced corporate image, new and improved technologies, innovations, information and management practices (TIMPS) for the zone promoted		Item	Spent
- To bridge the gap between research and extension, NARO disseminated research outputs to farming communities in lango and Acholi through exhibitions and radio talks hows. Ngetta TIMPS for the northern and mid northern Uganda sub zones were promoted.		221001 Advertising and Public Relations	1,380
		221007 Books, Periodicals & Newspapers	500
		221008 Computer supplies and Information Technology (IT)	875
- Two radio talk shows (Unity FM-Lira) conducted to disseminate information on citrus disease and maize fall army worm management, and on aflatoxin contamination of crops and livestock products.			
- Dissemination materials produced and distributed to visiting school teachers and World Food day celebrations.			

Reasons for Variation in performance

Total	2,755
Wage Recurrent	0
Non Wage Recurrent	2,755
<i>AIA</i>	0

Output: 04 Agricultural research capacity strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
Institute assets and activity sites secure Governance committees, Management committees and Staff facilitated (Staff allowances, wages, welfare Lunch and break tea provided for staff; Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals 1. Vehicles serviced; Office buildings maintained; Compound maintained; Office, laboratory and field equipment maintained. 2. Maintain effective ICT facilities; Subscription for internet paid; 3. Utilities paid (water utility, electricity, telephone). 1. Exhibitions participated 2. Staff & stakeholder meetings held 3. Technologies disseminated and people reached.	- Ngetta ZARDI research agenda for the northern and mid northern Uganda sub zones monitored and strengthened by facilitating the Functional advisory committee and institute work force. - Ngetta ZARDI physical resource (offices, farm buildings, transport equipment and specialized equipment) managed, safe, secure some fully functional.	Item 211103 Allowances (Inc. Casuals, Temporary) 221006 Commissions and related charges 221009 Welfare and Entertainment 221011 Printing, Stationery, Photocopying and Binding 222001 Telecommunications 222002 Postage and Courier 223004 Guard and Security services 223005 Electricity 223006 Water 224004 Cleaning and Sanitation 226001 Insurances 227001 Travel inland 227004 Fuel, Lubricants and Oils 228001 Maintenance - Civil 228002 Maintenance - Vehicles 273102 Incapacity, death benefits and funeral expenses	Spent 4,500 4,500 1,850 4,500 1,000 250 12,000 29,000 14,000 4,932 640 10,000 10,000 1,433 5,000 1,000

Reasons for Variation in performance

Total	104,605
Wage Recurrent	0
Non Wage Recurrent	104,605
AIA	0
Total For SubProgramme	256,620
Wage Recurrent	0
Non Wage Recurrent	256,620
AIA	0

Recurrent Programmes

Subprogram: 18 Nabium ZARDI

Outputs Provided

Output: 01 Generation of agricultural technologies

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
Priority commodities collected , characterised and conserved. TIMPS for Brucellosis developed 10 acres of ground nuts (sel 14), 10 acres of maize (MM3), 10 acres of sorghum in place	20 Sahiwal cattle, and 25 Friesian cattle maintained on-station. - 32 Mubende goats maintained on-station. - 25 Cambrough pigs maintained on-station. Seroprevalence determined from Amudat District using Rose bengal test, in 322 cattle (13.04% positive equivalent of 42/322), 328 goats (0.9% positive equivalent of 3/328), 300 sheep (1% positive equivalent of 3/300), 46 camels (4.3% positive equivalent of 2/46). 3 acres of serenut 11 managed and harvested for seed production	Item 211103 Allowances (Inc. Casuals, Temporary) 221002 Workshops and Seminars 221011 Printing, Stationery, Photocopying and Binding 222001 Telecommunications 223004 Guard and Security services 223005 Electricity 224001 Medical Supplies 224006 Agricultural Supplies 227001 Travel inland 227004 Fuel, Lubricants and Oils	Spent 15,750 4,200 7,000 2,500 8,000 16,875 26,750 25,000 25,500 5,750

Reasons for Variation in performance

Total	137,325
Wage Recurrent	0
Non Wage Recurrent	137,325
AIA	0

Output: 02 Research extension interface promoted and strengthened

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter	Item	Spent
40 seed production farmers identified and 4 farmer groups formed 40 seed production farmers trained on quality seed production, processing, storage and marketing 4 farmer groups monitored and backstopped; 30 radio spot announcements, 10 TV adverts strengthened seed systems and storage platforms	- 40 farmers trained on quality seed processing, storage and marketing. - Five 5 farmer groups comprising 50 seed production farmers were in the effort to increase quality seed production in the country for increased production and productivity along the value chain. In order to strengthen seed systems and storage platforms, 200 farmers were trained on quality seed production and management techniques of drought resilient crops these included women and men at a ratio of 2:1. - 20 farmers trained on quality seed production. - Developed network of over 120 host farmers working together to demonstrate and measure what is possible for the communities while taking care of the environment . - 200 farmers (50 youth, 100 women, 50 men) trained on quality seed production and management techniques of drought resilient crops.	221001 Advertising and Public Relations 221002 Workshops and Seminars	2,000 6,000

Reasons for Variation in performance

Total	8,000
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Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
		Wage Recurrent	0
		Non Wage Recurrent	8,000
		AIA	0

Output: 04 Agricultural research capacity strengthened

Institute assets and activity sites secured Governance committees, Management committees and Staff facilitated (Staff allowances, wages, welfare Lunch and break tea provided for staff; Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals 1. Vehicles serviced; Office buildings maintained; Compound maintained; Office, laboratory and field equipment maintained. 2. Maintain effective ICT facilities; Subscription for internet paid; 3. Utilities paid (water utility, electricity, telephone). 1. Exhibitions participated 2. Staff & stakeholder meetings held 3. Technologies disseminated and people reached.	- Functional Nabuin work place, clean, safe, secure and enabling environment for research (3 office blocks, one laboratory). - Nabuin ZARDI strengthened research agenda for the northeastern dry lands agro ecologies. - Functional transport machinery maintained (3 vehicles, 2 tractors). - Nabuin ZARDI physical resources strengthened, safe, secure and fully functional. - Technology demonstrations for farmer learning during Jinja agriculture show attended. - Nabuin visibility enhanced as improved technologies are demonstrated at Bulindi in Hoima during World Food day.	Item	Spent
		211103 Allowances (Inc. Casuals, Temporary)	4,500
		221001 Advertising and Public Relations	1,250
		221006 Commissions and related charges	3,012
		221007 Books, Periodicals & Newspapers	500
		221009 Welfare and Entertainment	1,850
		222002 Postage and Courier	250
		224004 Cleaning and Sanitation	2,250
		224005 Uniforms, Beddings and Protective Gear	1,500
		226001 Insurances	640
		227004 Fuel, Lubricants and Oils	5,500
		228001 Maintenance - Civil	2,625
		228002 Maintenance - Vehicles	4,037
		228003 Maintenance – Machinery, Equipment & Furniture	500
		273102 Incapacity, death benefits and funeral expenses	1,500

Reasons for Variation in performance

Total	29,914
Wage Recurrent	0
Non Wage Recurrent	29,914
AIA	0
Total For SubProgramme	175,239
Wage Recurrent	0
Non Wage Recurrent	175,239
AIA	0

Recurrent Programmes

Subprogram: 19 Mbarara ZARDI

Outputs Provided

Output: 01 Generation of agricultural technologies

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
Germ plasma for Priority commodity for southern range lands collected , characterised, conserved and demonstrated	Mbarara ZARDI generated and promoted the following TIMPS	Item	Spent
		221011 Printing, Stationery, Photocopying and Binding	1,200
	Demonstrated thirteen (13) new improved crop varieties i.e.:	222001 Telecommunications	800
	(a) 2 bean varieties including NARO Bean 1 and 3;	223004 Guard and Security services	9,000
		223006 Water	4,000
	(b)2 cassava (NAROCAS 1 & 2); and	224001 Medical Supplies	73,500
		224006 Agricultural Supplies	49,000
	(c) 5 improved pasture varieties including NARO Napier 1, 2, 3 and Kakamega and Brachiaria mulato	227001 Travel inland	6,500
		227004 Fuel, Lubricants and Oils	3,000
	(d) 2 technologies for improved dry season feeding (hay and silage making)		
	(e) 1 innovation: improved pasture utilization (paddock design and management guidelines)		
	(f). 8 MSIPs supported;		
	(f1) 1 banana MSIP (now a National-based banana Cooperative Union).		
(f2) West Ankole Dairy Forum was supported			
(f3) 4 District-based Bean Seed MSIPs (Ntungamo			
(g) - Institute experimental animals (30 cows), 2 fish ponds maintained and managed. 2			
(h) Banana demonstration gardens maintained and managed.			

Reasons for Variation in performance

Total	147,000
Wage Recurrent	0
Non Wage Recurrent	147,000
AIA	0

Output: 04 Agricultural research capacity strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
Institute assets and activity sites secure Governance committees, Management committees and Staff facilitated (Staff allowances, wages, welfare Lunch and break tea provided for staff; Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals	- Mbarara ZARDI managed, maintained and monitored the research agenda for the southern ranged lands by facilitating the one advisory committee, two management committees and a work force of 40 Staff.	Item 211103 Allowances (Inc. Casuals, Temporary) 221001 Advertising and Public Relations 221006 Commissions and related charges 221011 Printing, Stationery, Photocopying and Binding	Spent 4,500 645 5,500 3,000
1. Vehicles serviced; Office buildings maintained; Compound maintained; Office, laboratory and field equipment maintained.	- Mbarara ZARDI managed, maintained and monitored the physical resources/assets of the institute Functional Mbarara ZARDI fleet.(vehicles and 1 tractor)	223004 Guard and Security services 223005 Electricity 223006 Water 224004 Cleaning and Sanitation	10,000 25,000 10,000 4,500
2. Maintain effective ICT facilities; Subscription for internet paid;	- The physical resources/assets, are clean, safe and enabling workplace and research environment strengthened..	226001 Insurances 227001 Travel inland	640 10,000
3. Utilities paid (water utility, electricity, telephone).	Mbarara ZARDI technologies were promoted.	227004 Fuel, Lubricants and Oils 228002 Maintenance - Vehicles	10,000 6,715
1. Exhibitions participated 2. Staff & stakeholder meetings held 3. Technologies disseminated and people reached.	- 100 brochures detailing the work done at Mbazardi produced for dissemination to teachers of secondary schools and tertiary institutions. - Over 100 people reached with exhibition of aflatoxin free fish feed and Dairy meal in The Source of the Nile Jinja Agricultural Show.		

Reasons for Variation in performance

Total	90,500
Wage Recurrent	0
Non Wage Recurrent	90,500
AIA	0
Total For SubProgramme	237,500
Wage Recurrent	0
Non Wage Recurrent	237,500
AIA	0

Recurrent Programmes

Subprogram: 20 Buginyaya ZARDI

Outputs Provided

Output: 01 Generation of agricultural technologies

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
Germplasm for Priority commodity for eastern lowlands and highlands collected, characterized, conserved and demonstrated	1) Rehabilitating of 10 breeding and nursery ponds in Mbale fry centre	Item	Spent
	2) 5 QPM (Quality Protein Maize) hybrids with highland adaptability ascertained. One MLN PYT at grain hardening stage at Ikulwe, Mayuge	221011 Printing, Stationery, Photocopying and Binding	2,000
	3) Demo on best performing NERICA upland rice cultivars at harvesting stage.	222001 Telecommunications	2,000
		223004 Guard and Security services	5,500
		223005 Electricity	4,000
		223006 Water	2,000
	4) 2.5 tons of beans foundation seed produced	224001 Medical Supplies	36,750
	5) Procured 1kg of Eucalyptus grandis to be sown at Buginyanya station.	224006 Agricultural Supplies	85,750
	6) Maintained the apple orchards and carried out training of the plants	227001 Travel inland	2,250
	7) More 7 ha of assorted tree species planted at Buginyanya and Bulegeni	227004 Fuel, Lubricants and Oils	2,000
	8) Maintained the 5 ha of Murlbury trees in collaboration with MoSTI for sericulture production	228002 Maintenance - Vehicles	2,000
	9) Established and maintained 0.5 ha of seed plots which is at flowering stage		
	10) 100 bags of sweet potato vines distributed to Swisscontact farmers in Mayuge. 120 bags of cassava distributed to farmers in Iganga, Jinja and Luuka		
	11) 0.2 Ha of Chloris gayana maintained and seed ready for harvesting at Bulegeni satellite station		
	12) 76 Farmers (68 female and 8 male) from Nabugimbi Yetana Women's group in Bulambuli district trained on seed management.		
	13) Six pasture production fields established in Bukwo, Kapchorwa, Kween, Bulambuli and Sironko districts		
	14) 32 field pea germplasm were planted for characterisation. Materials are being harvested and full information for next quarter		
	15) 5 farmer groups identified and worked with for both characterisation and seed increment		
	16) 12 wheat lines selected at AYT and being advanced to NPT		
17) Use of rooted apical cuttings has been recommended for uptake by potato farmers; and preliminary information on management of Phalaris minor generated			
18) 5 LSBs were supported during the quarter through trainings, field monitoring, farm clinic and marketing of their seeds; one MSIP was also supported.			
19) a total of 4 technologies and management practices delivered to uptake pathways			

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
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Reasons for Variation in performance

Total	144,250
Wage Recurrent	0
Non Wage Recurrent	144,250
AIA	0

Output: 04 Agricultural research capacity strengthened

Institute assets and activity sites secure Governance committees, Management committees and Staff facilitated (Staff allowances, wages, welfare Lunch and break tea provided for staff; Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals	Item	Spent
1. Vehicles serviced; Office buildings maintained; Compound maintained; Office, laboratory and field equipment maintained.	211103 Allowances (Inc. Casuals, Temporary)	4,500
2. Maintain effective ICT facilities; Subscription for internet paid;	221001 Advertising and Public Relations	1,000
3. Utilities paid (water utility, electricity, telephone).	221006 Commissions and related charges	5,500
1. Exhibitions participated	221007 Books, Periodicals & Newspapers	750
2. Staff & stakeholder meetings held	221009 Welfare and Entertainment	1,500
3. Technologies disseminated and people reached.	221011 Printing, Stationery, Photocopying and Binding	2,500
	223004 Guard and Security services	10,000
	223005 Electricity	10,000
	223006 Water	4,000
	224004 Cleaning and Sanitation	4,650
	225001 Consultancy Services- Short term	5,000
	226001 Insurances	850
	227001 Travel inland	10,000
	227004 Fuel, Lubricants and Oils	10,000
	228002 Maintenance - Vehicles	13,250
	228003 Maintenance – Machinery, Equipment & Furniture	1,000
	273102 Incapacity, death benefits and funeral expenses	1,250
- Buginyanya managed, maintained and monitored the research agenda for the eastern agro-ecologies by facilitating one advisory and consultative meeting .		
- Buginyanya physical resources fully functional, safe, secure. and clean and providing an enabling environment (institute offices, and farm machinery, transport and research research sites		
1) 2.5 tons of beans foundation seed produced		
2) Maintained the 5 ha of Murlbury trees in collaboration with MoSTI for sericulture production		
3) 100 bags of sweet potato vines distributed to Swisscontact farmers in Mayuge. 120 bags of cassava distributed to farmers in Iganga, Jinja and Luuka		
4) 76 Farmers (68 female and 8 male) from Nabugimbi Yetana Women's group in Bulambuli district trained on seed management.		
5) Six pasture production fields established in Bukwo, Kapchorwa, Kween, Bulambuli and Sironko districts		
6) 5 farmer groups identified and worked with for both characterisation and seed increment		
7) Use of rooted apical cuttings has been recommended for uptake by potato farmers; and preliminary information on management of Philaris minor generated		
8) 5 LSBs were supported during the quarter through trainings, field monitoring, farm clinic and marketing of their seeds; one MSIP was also supported.		
9) a total of 4 technologies and management practices delivered to uptake pathways		

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
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Reasons for Variation in performance

Total	85,750
Wage Recurrent	0
Non Wage Recurrent	85,750
AIA	0
Total For SubProgramme	230,000
Wage Recurrent	0
Non Wage Recurrent	230,000
AIA	0

Recurrent Programmes

Subprogram: 21 Rwebitaba ZARDI

Outputs Provided

Output: 01 Generation of agricultural technologies

	Item	Spent
- Information on station apple performance evaluation trial documented	4 potato Seed and 4 biofortified bean foundation seed multiplication sites established.	221006 Commissions and related charges 2,500
- Baseline information on potato and bean groups generated.		221011 Printing, Stationery, Photocopying and Binding 2,350
- Brochures, left made for exhibitions Existing potato and bean varieties adapted to the project area catalogued and defined.	- Potato technologies made available at exhibitions at Jinja show and world food & other regional shows. - Potato information brochures designed and developed for future exhibitions. - Existing potato and bean varieties adapted to the project area catalogued and defined.	223004 Guard and Security services 10,000
- Foundation bean and potato seed production technology is disseminated		223005 Electricity 17,500
- On-station and farm trials information generated on Catfish propagation, productivity and survival.	- 2 seed production technologies are verified. - Capacity of extension staff of target subcounties as TOTs.	223006 Water 10,000
- On-station and farm trials information generated on Catfish propagation, productivity and survival.		224001 Medical Supplies 25,230
- On-station and farm trials information generated	- Nursery shade renovated and water connection extended to it. - 7 coffee mother gardens supported. - 7 coffee nurseries maintained Agro-inputs (fertilizer,media, seedlings seedlings and cuttings. - 25 coffee mother gardens maintained. - Acquired farm tools, equipment for mother garden maintenance. - 60 participants trained in coffee plantation management and propagation techniques.	224004 Cleaning and Sanitation 2,500
- Improved capacity of quality coffee seedling production facilities and supply at Rwebitaba ZARDI and Seven (7) community-based seedling systems		224006 Agricultural Supplies 120,783
- 40 nursery operators trained on germplasm improvement technologies for coffee in the zone		227001 Travel inland 12,350
- Generating information improved pasture trials on farm & on station.		227004 Fuel, Lubricants and Oils 11,000
- Quality pasture seed produced & pasture samples analysed and demonstrated.	- 3 maintained acres of Chloris gayana planted on station.	228002 Maintenance - Vehicles 12,500
- Quality seed bed prepared for pure pasture seed produced		
- Pasture equipment and tools demonstrated.	- Maintained 3 acres with maize for silage.	
- Generating information from on farm and onstation trials on bee colony and queen development in the Zone.	In order to determine the pests affecting tea and have a long lasting solution, NARO Resumed the two experiments on efficacy of different management techniques for tea pests. On farm in	
- Maintenance of Apiaries for trainings on queen rearing on station and on farm.		

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

<ul style="list-style-type: none"> - Generating information on farm & onstation trials on colonies - Genomic Characterization of Xylaria Pathogen infecting tea in Uganda. - 100 tea accessions profiled biochemically & later documented - 100 tea accessions profiled biochemically & later documented. - On farm trials information generated on growth and y - information on agronomic performance of 14 matooke varieties generated. - Information on suitable decapitation heights in banana generated. - Suitable pature legumes for intercropping in bananas determined. Water used paid. - 100,000 banana plantlets 	<p>Kabale and on-station trials. There was collection of Xylaria Infected samples, culturing and Isolation. 30 tea samples of Xylaria Infected samples collected, cultured and pathogen Isolated, 90 tea accessions profiled biochemically. Experiments on evaluating tea clones for agronomic performance at Kachwekano. Determination of fertilizer rates for tea on station and kachwekano was conducted. Rapid Survey report from tea factories and supermarkets in Rwenzori region have shown high demand for speciality tea was developed and available to guide research decisions. Forty (40) samples of tea clones were collected and taken to NaCRRRI for DNA analysis.</p> <ul style="list-style-type: none"> - Maintained experiments on determining banana growth and yield performance on farm in Kyegegwa . Data collection initiated for - Maintained trial fields on determining banana growth and yield performance on farm in Kasese
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Reasons for Variation in performance

Total	226,713
Wage Recurrent	0
Non Wage Recurrent	226,713
<i>AIA</i>	0

Output: 04 Agricultural research capacity strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
- Effective, facilitated and motivated human resources.		Item	Spent
- Institute property and assets secure		211103 Allowances (Inc. Casuals, Temporary)	4,500
Rwebitaba ZARDI corporate image and new and improved technologies, innovations, information and management practices (TIMPS) for the zone promoted	- Rwebitaba ZARDI technologies disseminated to stakeholders Exhibition at Jinja show and world food & other regional shows.	221001 Advertising and Public Relations	750
- Fleet, machinery & office equipment managed;		221006 Commissions and related charges	2,125
- Utilities (telephone, water, electricity) managed;	- Capacity of 4 groups (40 farmers) in Kyegegwa, Kabarole, Kyenjojo and kamwenge have been strengthened in bean and potato seed production.	221007 Books, Periodicals & Newspapers	750
- Institute space and infrastructure (office, laboratory, residence, farm and field) managed;	- Rwebitaba physical resources (office and farm, laboratory, staff residence) managed and fully functional, clean, safe and secure.	221009 Welfare and Entertainment	1,700
- Cleaning services managed;		221011 Printing, Stationery, Photocopying and Binding	1,500
- Availing staff transport		222001 Telecommunications	750
		223004 Guard and Security services	5,250
		223005 Electricity	4,000
		223006 Water	1,000
		224004 Cleaning and Sanitation	2,110
		224005 Uniforms, Beddings and Protective Gear	1,000
		226001 Insurances	265
		227001 Travel inland	3,750
		227004 Fuel, Lubricants and Oils	3,000
		228001 Maintenance - Civil	2,000
		228002 Maintenance - Vehicles	2,050
		273102 Incapacity, death benefits and funeral expenses	1,000

Reasons for Variation in performance

Total	37,500
Wage Recurrent	0
Non Wage Recurrent	37,500
AIA	0
Total For SubProgramme	264,213
Wage Recurrent	0
Non Wage Recurrent	264,213
AIA	0

Recurrent Programmes

Subprogram: 26 NARO Internal Audit

Outputs Provided

Output: 03 Internal Audit

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
Status reports on reasonable assurance of financial statements, enterprise risk , value-added services, Investigation reports, monitoring function, Governance, risk and control, compliance with applicable laws, rules and regulations, procurement and ICTs	<ul style="list-style-type: none"> One report- on Investigation produced. - Two reports on Governance, risk and control produced - Two reports on compliance with applicable laws, rules and regulations produced - Minutes & report on the functional monitoring and evaluation plus follow up of audit recommendations. - One report on budget performance produced - One report on midyear internal audit performance produced. - One report on the efficiency and effectiveness of procurement controls produced. - One reports on value for money in research programs produced. - Four review routine meetings and report on Risks and mitigation controls at 4 PARI's held. - One audit staff Re-tooled on Risk management and reporting . 	Item 221002 Workshops and Seminars 221003 Staff Training 227001 Travel inland	Spent 7,799 1,400 37,306

Reasons for Variation in performance

Total	46,505
Wage Recurrent	0
Non Wage Recurrent	46,505
AIA	0
Total For SubProgramme	46,505
Wage Recurrent	0
Non Wage Recurrent	46,505
AIA	0

Recurrent Programmes

Subprogram: 27 National Coffee Research Institute

Outputs Provided

Output: 01 Generation of agricultural technologies

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
- Specific antibodies to CWD pathogen, 2 specific primers designed;	Tool for collecting business information on CWD-r ready for validation	Item	Spent
- Information on coffee wilt disease pathogen infective and host defence mechanisms;		211103 Allowances (Inc. Casuals, Temporary)	3,300
- Two markers for screening Robusta coffee against coffee wilt disease.		221007 Books, Periodicals & Newspapers	2,750
		224006 Agricultural Supplies	5,420
		227001 Travel inland	10,271
		227004 Fuel, Lubricants and Oils	2,000
		Total	23,741
		Wage Recurrent	0
		Non Wage Recurrent	23,741
		AIA	0

Reasons for Variation in performance

Output: 02 Research extension interface promoted and strengthened

Information resources functional	50% ICT assets fully functional.	Item	Spent
		221008 Computer supplies and Information Technology (IT)	1,200
		221011 Printing, Stationery, Photocopying and Binding	160
		Total	1,360
		Wage Recurrent	0
		Non Wage Recurrent	1,360
		AIA	0

Reasons for Variation in performance

Output: 04 Agricultural research capacity strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
Institute assets and activity sites secure Governance committees, Management committees and Staff facilitated (Staff allowances, wages, welfare Lunch and break tea provided for staff; Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals 1. Vehicles serviced; Office buildings maintained; Compound maintained; Office, laboratory and field equipment maintained. 2. Maintain effective ICT facilities; Subscription for internet paid; 3. Utilities paid (water utility, electricity, telephone). 1. Exhibitions attended; 2. Staff & stakeholder meetings held; 3. Technologies disseminated and people reached.	NACORI infrastructure clean, safe and secure. - Fully functional advisory and contracts committees. - NACORI work force of 43 facilitated. - 1000 coffee and cocoa farmers accessing NaCORI technologies during Daily Monitor farm clinic in Kituza.	Item 211103 Allowances (Inc. Casuals, Temporary) 221001 Advertising and Public Relations 221006 Commissions and related charges 221007 Books, Periodicals & Newspapers 221009 Welfare and Entertainment 221011 Printing, Stationery, Photocopying and Binding 222001 Telecommunications 222002 Postage and Courier 223004 Guard and Security services 223005 Electricity 224004 Cleaning and Sanitation 225001 Consultancy Services- Short term 226001 Insurances 227004 Fuel, Lubricants and Oils 228002 Maintenance - Vehicles 228003 Maintenance – Machinery, Equipment & Furniture 273102 Incapacity, death benefits and funeral expenses	Spent 5,500 1,250 1,800 1,200 2,275 1,500 1,500 500 4,750 6,000 2,000 28,460 1,000 1,750 3,000 1,000 1,275

Reasons for Variation in performance

Total	64,760
Wage Recurrent	0
Non Wage Recurrent	64,760
AIA	0
Total For SubProgramme	89,861
Wage Recurrent	0
Non Wage Recurrent	89,861
AIA	0

Development Projects

Project: 0382 Support for NARO

Outputs Provided

Output: 01 Generation of agricultural technologies

1. Nutrient enhanced maize product commercialized; 2. Maize based product industrial platform and products based enterprises and maize supply chain; 3. Efficiency and timeliness of aflatoxin detection and monitoring; 4. Linked circuit; 5. Capacities enhanPeriodic status and	At NARL, 1. A nutrient profile of 5 snack formulations. 2. Analytical and processing skills in instant Maize products. 3. Optimal processing conditions and snack properties.	Item 211103 Allowances (Inc. Casuals, Temporary) 221002 Workshops and Seminars 223001 Property Expenses 223005 Electricity 224001 Medical Supplies 224006 Agricultural Supplies	Spent 638,920 684,137 297,225 144,148 533,718 849,552
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Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

performance reports, briefs, bulletins and news letters		227001 Travel inland	452,532
Follow-on Project, NARO MTP, Tools, methodologies RMIS developed	4. Instant Maize snack package developed.- RMI system specifications developed.At NALIRRI,	227004 Fuel, Lubricants and Oils	220,072
Performance of Beneficiaries and technologies documented	(1) Identified 14 lablab lines with high crude protein content (above 24%) and limited levels of anti-nutritional compounds selected for DUS and multi-locational trials.		
NARO PMER capacity Enhanced	(2) Information on lablab research for development disseminated to over 50 decision makers .Four protocepts of low-cost high value Nile perch oil products developed.- At NAFORRI,		
Membership to Uganda Eval. A1.	(1) 700 Eucalyptus seedlings raised and maintained.		
Climate-smart Lablab and brachiaria varieties with Information and agronomic packages.	(2) 2,800 Bronze bug eggs produced for rearing C.nockae egg parasitoid .2000 Red gum lerp psyllids trapped and sexed for rearing P.bliteus bio-agents.		
2. Dairy and poultry feed formulations	(3) 3,100 C.nockae and 2300 P.bliteus reared for release.		
3. Historical phenotypic data and NIRS calibrations	(4) 2,200 C.nockae and 2000 P.bliteus released agaisnt bronzebug and Red Lerp Psyllid in the field; field performance of C.nockae and P.bliteus bio-agents in the field established.		
4. Institutional and research capacity.1.	(5) MSc student of Entomology completed course work and her research proposal approved. - At Kachwekano		
Low-cost high value Nile perch oil products	15,000 plantlets generated from lab for planting.		
2. Linkages between fish processors and researchers	- Testing has reached sub-cultre level six. No differences observed yet .		
3. Marketing strategies for Nile perch oil,			
4. Publications and information dissemination (scientific manuscripts, policy briefs, and posters): Technologies for control of red gum Lerp Psyllid and bronze bug in eucalyptus plantations 1.	- At Buginyanya		
High yielding, early maturing and late blight resistant potato varieties;	(1) 5 QPM (Quality Protein Maize) hybrids with highland adaptability ascertained. One MLN PYT at grain hardening stage at Ikulwe, Mayuge.At NALIRRI,		
2. Propagation system for rapid multiplication of elite potato clones;	1) Colony performance data of sting-less bees reared under two different hive design prototypes determined .		
3. Potato genotypes with heat and drought tolerance.- Highland maize varieties improved for resistance to MLN/common diseases;	2) Two dissemination materials developed - 1 brochure titled "domestication of sting-less bees in Uganda and 1 pull up banner for the project"		
- Bio-fortified maize varieties for highland areas advanced and released;	3) Disseminated information on sting-less bee research at the WFD celebrations and to over 50 key decision makers at Nakyesasa..		
- Sustainable maize intensification technologies adopted;	- Prototype available for evaluation.		
- Highland maize seed.Information and technologies of stingless beekeeping generated, packaged and disseminated. (socio-economics, stingless bee species, stingless bee products, bee hive types designed, Performance of stingless bee species)1. Yeast starter culture and protocols.	- A fabricated stainless cocoa juice extraction press of 15 kg capacity to hygienically extract 20% cocoa juice.		
2. Method for extraction of cocoa pulp from fresh cocoa beans;			
3. Innovative method for cocoa fermentation and utility model;			
4. 2 value added products from cocoa pulp;			
5. Cocoa manuals developed and demos.1) Genetic diversity of tea germplasm compared and determined;			
2) Biochemical characteristics and cup quality of selected clones compared and determined;			
3) Production of specialty teas (green, white, silver, purple, yellow) enhanced;			
4) Dissemination 1. High yielding, resilient and low-tannin coloured			

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

sorghum varieties developed and promoted in food and feed value chains;	- 25 Extension officers and model cocoa farmers trained in Bundibugyo, Kasawo and Buikwe.
2. Training packages, modules and approaches for effective sorghum production technologies developed and disseminated.1. Current status of farmer's knowledge, perceptions and practices on the production of management of Tomato and passion fruit fields understood.	Wine and brandy developed from the juice, currently under maturation at Makerere University incubation center.
2. Improved Tomato lines with multiple resistances to major diseases in Uganda	- Inception meeting with implementation partners and key stakeholders was conducted;
3. Improved Passion fruit1. Screen house; 2. Germplasm characterized; 3. Seed multiplication on station.1. Occurrence/infestation levels mapped	- Interface with participating cocoa farmers in Budibugyo district was initiated.
2. Communities integrated in biological control	At Rwebitaba, (1) Established and maintained an on station nursery of 20,000 clones of specialty tea.
3. Biological control agents and Socio-economic impacts established	(2) Survey carried in Bushenyi, and kanungu factories, no factory found producing specialty tea.
4. Extent of spread reduced to manageable levels	(3) 20 samples of tea clones collected and taken to NaCRRRI for DNA analysis.At NASARRI
5. Economic functionality of the infested water bStrategic Fisheries plans,developments shared and effectively reviewed and framework implementation plans generated.Clientele oriented aquaculture development plans implemented.1. Two sorghum varieties with farmer preferred attributes released;	- 12 Promising genotypes evaluated under multi location trials (10 locations) for adaptability. Selection of the 12 promising tomato varieties : AVTO1315, AVTO0301, AVTO1701, AVTO1424, AVTO1219, AVTO1429, AVTO0102, ADV1287A, MT56, Pruna and Vega has been conducted.
2. 9 farmer groups empowered	- Four sites in Kabale, Mbale, Kasese & Wakiso have been identified for (National performance trials (NPTs). National Fisheries research and development agenda strengthened.1).- 84 lines evaluated for height and maturity period.
3. Agronomic and soil management packages	2). Two sorghum varieties with farmer preferred attributes submitted for release
4. Two Publications in scientific journals1. Milk based products good for clinical improvement of exacerbated cases of stomach ulcers and low body anti-oxidant capacities; recommendable for babies, breast feeding/pregnant mothers	3). 9 farmer groups empowered in agronomic and soil management packages.
2. Develop products using targeted isotope labelled analyAt least, 2,000kgs of maize, 1,000kgs of Beans, 1,000bags of Cassava and 5,000 assorted horticultural seedlings produced. NARO tick vaccine commercialisedIncreased fish production in cages and ponds. Information dissemination using on-station demonstrations like the live fish aquarium, crocodile pen fish museum and fish ponds.1. Low-cost diagnostic kit (prototype) that detects TILV in the field.	4). Two Publications in scientific journals. 1) One milk product fortified with plant-based pharmaceutical compounds against cancer constituted and nutritionally profiled.
2. Geospatial map and risk factors indicating.	(2) One milk based products good for clinical improvement of exacerbated
3. Socio-economic impact.	
4. Capacity of actors strengthened.Fruit tree seedling and product value chains supportedRice technologies developed, disseminated and accessedDiversity of algae species that are efficient in bio filtration determined;	

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QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

<p>Efficacy of different algae strains in effluent bio-filtration; Protocol for propagating the most suitable strains; Potential of identified algae for biofuel production Tree seedling platform supported</p>	<p>cases of stomach ulcers and low body anti-oxidant capacities; recommendable for babies, breast feeding/pregnant mothers.</p> <p>2). Develop products using targeted isotope labelled analysis.5,000 assorted horticultural seedlings maintained.- Efficacy of four candidate anti-tick vaccine molecules against brown ear tick, blue tick and bont legged tick validated through on-station clinical trial at Nakyesasa. - One Ph.D student on vaccinomics supported. (i) Participated in several information dissemination platforms including: The Agricultral show, the World Food Day at Bulindi ZARDI (16th October 2019), 2nd Fish festival at Jinja (1st December 2019), World Fisheries day at Kiyindi landing site (21st November 2019), A talk show held on NTV to raise awareness about fisheries, 13 bibliographic records of grey fisheries literature prepared for inclusion in Aquatic Sciences and Fisheries information system (ASFA database), transmitted electronic fisheries information to and data to databases, outreach and stakeholders in need of information, Fisheries information disseminated to over 2000 school children.(i) Emerging pathogens isolated and characterized including; virulent Aeromonas hydrophila, Streptococcus spp; Surveillance of six (6) fish farms in Buikwe, Jinja and Bugiri districts with 56 fish screened for vAh using selective media; (ii) Effect of Plant N on hematological parameters was determined showing inclusion of Plant N in fish feed increased the number of leucocytes most in treatment 0.5% at 11.38/l, lymphocyte percentage at 70.1% compared to other treatments 0.1%, 0% and 1%. (iii) PocketKit for Nucleic Acid Co-prep Kit and the TiLV reagent Set for 500 samples procured (iv). Target surveillance on 40 fish farms in the Central and Eastern AEZs revealed.Contract for supply of tissue culture laboratory awarded to service provider in December 2019Demo on best performing NERICA upland rice cultivars at harvesting stage. Rice nutrient management trial also at harvesting stage at Ikulwe. 1) Identified and nutritionally characterised two strains of micro-algae including Spirulina platensis & Spirulina lonar as potential low-cost and high value protein sources in dairy and fish feeds.</p>
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QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

2) Designed and constructed one race way pond for massive production of micro-alage at Nakyesasa. Contract for supply of Tissue culture laboratory awarded to service provider in December

Reasons for Variation in performance

Total	3,820,305
GoU Development	3,820,305
External Financing	0
AIA	0

Output: 02 Research extension interface promoted and strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
1. Factors influencing adoption of technologies	At Bulindi,	Item	Spent
2. Factors that affect farmers' ability to learn	(1) Online data collection tool developed,	211103 Allowances (Inc. Casuals, Temporary)	400
3. Farm typologies and characteristics of adopters and non-adopters	21 enumerators from different institutes were trained in real time data collection application, questionnaire for the quantitative survey developed.	221001 Advertising and Public Relations	203,025
4. Model to enhance the efficiency of the domino effect	(2) Baseline survey in 8 districts of LACZ conducted.	221002 Workshops and Seminars	354,617
5. Capacity of farmer developed	(3) Construction of the goat feedlot and breeding unit ongoing.	221007 Books, Periodicals & Newspapers	6,062
1. 2nd generation NARO PAH-Safe technologies adapted	(4) Designed feedlot units.	221008 Computer supplies and Information Technology (IT)	89,488
2. Information on the acceptability of smoked fish processed	(5) Acquired pasture germ plasm and established mother gardens.	221011 Printing, Stationery, Photocopying and Binding	75,137
3. Fish Enterprises engaged in processing/marketing of smoked fish product	(6) Conserved 2.2 tones of silage. (Napier and lablab).At NARL,	222001 Telecommunications	495
4. Fish entrepreneurs with knowledge on processing and marketing	(1) Design and working drawings for prototype II of second generation NARO PAH-Safe smoking kiln.	222003 Information and communications technology (ICT)	25,007
Corporate image enhanced- Knowledge and informations products produced and distributed;	Procurement of materials initiated.	227001 Travel inland	159,896
- Patents and Patentable information produced and distributed;	(2) Design and working drawings for prototype II of NARO PAH-Safe smoke distiller.	227004 Fuel, Lubricants and Oils	675
- Corporate, Scientific, Media and Extension information products produced and distributed.	Procurement of fabrication materials ongoing.		
	(3) Tools for data collection		
	Data on economic viability collected from from 2 fish landing sites (Katosi and Kiyindi).- At NALIRRI,		
	Radio and Television talk shows organised, Design brochures for livestock and fish technologies.At DATP,		
	1. CKM Strategy popularized to 53 stakeholders including members of the user committee, NARO top management, reps of CGIARs, Makerere University, NGOs and CSOs.		
	2. During the stakeholder engagement, a structure of the implementation plan was developed.		

Reasons for Variation in performance

Total	914,804
GoU Development	914,804
External Financing	0
AIA	0

Output: 04 Agricultural research capacity strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
NARO staff supported to enhance competencies Marine vessel CORMORANT insured 1. Laboratory block refurbishment and/or construction 2. Establishment of laboratories - Consultancies (technical backstopping) 3. Equipment and Tools 4. Furniture and supplies 5. Training of staff NARO physical resources maintained NARO land secured and titled	- Supported two staff to pursue PhD Degree at MAK - Four Staff supported to travel to Korea, Washington DC.- Procurement process on-going for purchase of insurance for marine vessel Hamerkop and MV Ibis. - Marine vessel cormorant needs complete overhaul.- Procurement process ongoing for purchase of assortment of supplies and small office and laboratory equipment- NARO physical resources functional, clean, secure, safe and maintained an enabling office environment.- Framework Contract signed running for a period of One (1) Year. - Fencing of surveyed NARO land - Tender concluded. Framework contracts signed with various Service providers. Call off orders to be placed as and when need arises. - Surveyed NARO Land in Tororo (Usukulu).	Item 221002 Workshops and Seminars 221003 Staff Training 221004 Recruitment Expenses 221006 Commissions and related charges 221009 Welfare and Entertainment 221012 Small Office Equipment 221016 IFMS Recurrent costs 221017 Subscriptions 222003 Information and communications technology (ICT) 223005 Electricity 225001 Consultancy Services- Short term 226001 Insurances 226002 Licenses 227001 Travel inland 227002 Travel abroad 227004 Fuel, Lubricants and Oils 228001 Maintenance - Civil 228002 Maintenance - Vehicles 228003 Maintenance – Machinery, Equipment & Furniture 228004 Maintenance – Other	Spent 69,012 295,773 107,297 189,161 41,150 1,500 26,030 31,460 13,800 10,000 346,513 100,000 71,684 254,889 205,043 120,609 21,488 196,616 9,395 1,250

Reasons for Variation in performance

Total	2,112,669
GoU Development	2,112,669
External Financing	0
AIA	0

Outputs Funded

Output: 51 Payments to International Organisations (CGIAR, ASARECA, WARDA)

International subscription and obligations settled	- Full subscription made for International subscription (Biodiversity International, ILRI).	Item	Spent
		262201 Contributions to International Organisations (Capital)	869,884
		264101 Contributions to Autonomous Institutions	1,500

Reasons for Variation in performance

Total	871,384
GoU Development	871,384
External Financing	0
AIA	0

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
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Capital Purchases

Output: 72 Government Buildings and Administrative Infrastructure

		Item	Spent
Functional and rejuvenated PARIs 1. Staff houses rehabilitated asbestos removed and re-roofed with iron sheets.	Tendering completed. Contracts signed with various contractors. Works completed and awaiting payment.	281502 Feasibility Studies for Capital Works	2,206
2. Office blocks re-roofed with iron sheets rehabilitated and functional; 1. NACORI staff houses rehabilitated and habitable;	payment.Tendering completed. Contracts signed with various contractors. Works completed and awaiting payment.- Tendering concluded. Contracts awarded to various firms. Contracts signed with only two firms due to Insufficient funds on Vote. Awaiting signature of other Contracts Tendering completed.	281504 Monitoring, Supervision & Appraisal of capital works	59,580
2. NACORI office blocks rehabilitated with ramps for the weak and disabled and functional;Improved Infrastructure at KajansiImproved value addition Infrastructure at NabuinImproved value addition Infrastructure at Bulindi ZARDINabuin ZARDI perimeter fence in place, farm animals and field experiments secured1. RWEBITABA ZARDI staff houses rehabilitated and habitable;	Contracts signed with various contractors. Works completed and awaiting payment.Tendering completed. Contracts signed with various contractors. Works completed and awaiting payment.At NAROSEC	312101 Non-Residential Buildings	1,916,857
2. RWEBITABA ZARDI Office blocks with ramps rehabilitated;	- Contractor on Board. Work In Progress at 50% (NASARRI office blocks).		
3. RWEBITABA ZARDI drying yards/floors rehabilitated;			
4. RWEBITABA ZARDI vehicle/equipment worksh1. NASARRI staff houses rehabilitated and habitable;			
2. NASARRI office blocks with ramps rehabilitated and functional;			
3. Drying yards/floors rehabilitated and functional;			
4. Vehicle/equipment workshop rehabilitated and functional.			

Reasons for Variation in performance

Total	1,978,643
GoU Development	1,978,643
External Financing	0
AIA	0

Output: 76 Purchase of Office and ICT Equipment, including Software

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QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
Computers (workstations), Firewall, UPSes, patchcodes, External Hard disc, internet data for ISP internet, modems, flash discs, external hard disks soft and hard ware LG air conditioner purchased (Rwebitaba)3 Laptops, 4 computers and accessories, Upgrade Server and LAN, 2 Photocopiers, Upgrade Ms Dynamics, - Ponar Grab, Van Dorn Water Sampler, Cadmium copper column, Hand held portable pump, Portable multi probe purchasedEnhanced and unified NaFIRRI communication infrastructure (Internet, website, email,portals, Active directory, file services, replication and recovery services). NaFIRRI research developments shared on the different communication networks.	Tendering completed. Contracts signed with various contractors. Works completed and awaiting payment.	Item 312202 Machinery and Equipment	Spent 19,238
			Total
			19,238
			GoU Development
			19,238
			External Financing
			0
			AIA
			0

Output: 77 Purchase of Specialised Machinery & Equipment

Annual Planned Outputs	Cumulative Outputs Achieved by End of Quarter	Item	Spent
Functional Marine vessel CORMORANT overhauledNew one tractor with implements Functional solar system in placeFunctional invitro fertilisation and semen processing equipment procured and installedCage equipments and installation, tractor implements like Loader, Slasher, echo sounder ,radar, fire extinguishers, public address system,money counting machine and other water vessel purchased equipmentsIrrigation equipment for one PARIAssortment of labour saving value addition equipment for NACRRI suitable for womenAssortment of value addition equipment for Abi ZARDIAssortment of value addition equipment for Bulindi ZARDIAssortment of value addition equipment for Nabuin ZARDIAssortment of labour saving value addition equipment for NAFIRRI suitable for womenAssortment of labour saving value addition equipment for NAFORRI suitable for womenAssortment of value addition equipment for NARL-Kawanda	Procurement still in Pipeline.Advert placed in the New vision Newspaper. Bid Closure/Opening is 8th January 2020.Tender concluded. Contract signed awaiting delivery and Installation of the equipmentM/S Vitro Cow-Kenya identified to supply equipment. Process on going. Awaiting submission of Bills of Quantities by the end user. Procurement handled at Nabuin. Still awaiting for submission of BOQs by the user department.Tender concluded. Contract signed. Works completed awaiting payment.	312202 Machinery and Equipment	64,188

Reasons for Variation in performance

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
		Total	64,188
		GoU Development	64,188
		External Financing	0
		AIA	0

Output: 78 Purchase of Office and Residential Furniture and Fittings

An assortment of new furniture and laboratory fittings for NACRRI offices and laboratory New furniture and assorted laboratory fittings for new offices and laboratory	Procurement in advanced stages awaiting contract signature Contracts were signed with M/S Pinnacle Concepts and M/S Nina Interiors. Items delivered and assembled at National Secretariat.	Item	Spent
		312203 Furniture & Fixtures	150,748

Reasons for Variation in performance

Total	150,748
GoU Development	150,748
External Financing	0
AIA	0
Total For SubProgramme	9,931,978
GoU Development	9,931,978
External Financing	0
AIA	0

Development Projects

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

Outputs Provided

Output: 01 Generation of agricultural technologies

One square mile of forage and feed production fields established and maintained (2,940 tons of silage and hay, 180 tons of grain produced)	Established livestock feed at Maruzi: 1) 377 tones of conserved feed (320 tones of maize silage, 15, tones of maize seed, 42 tones of hay (round bales) 2) 1064 kgs forgae seed p(Chloris) produced at Maruzi 3) 232.6 acres of forage production fields mainatined at nakyesasa (140 acres of chloris, 70 acres of maize, 9 acres of stylo, 1.6 acres of habarium, 10 acres of experimental feilds and 2 acres of caliandra) 4) 100 acres of forage seed (50 acres of chloris fields & 50 acres of soya bean sead) maintained at maruzi.	Item	Spent
		211103 Allowances (Inc. Casuals, Temporary)	123,685
		221002 Workshops and Seminars	37,500
		224001 Medical Supplies	45,000
		224006 Agricultural Supplies	170,000
		227001 Travel inland	39,750
		227004 Fuel, Lubricants and Oils	107,500

Reasons for Variation in performance

Total 523,435

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
		GoU Development	523,435
		External Financing	0
		AIA	0
Output: 02 Research extension interface promoted and strengthened			
Functional IT utilities established.	- Functional internet system at Nakyesasa.	Item 222003 Information and communications technology (ICT)	Spent 45,000
<i>Reasons for Variation in performance</i>			
		Total	45,000
		GoU Development	45,000
		External Financing	0
		AIA	0
Output: 04 Agricultural research capacity strengthened			
Infrastructural capacity for feed storage and research operations developed Maruzi project vehicles maintained Functional electricity facilities established Institute assets relocated from Tororo to Nakyesasa and Maruzi	<ol style="list-style-type: none"> 1) Five staff office blocks connected to solar system 2) One bore hole and four stance latrine renovated at Maruzi 3) Five staff office blocks connected to RAN internet system 4) One bore hole and four stance latrine renovated at Maruzi 5) Ten fire extinguishers installed at nakyesasa; 6) small scale power-driven mobile Milking system in place 7) CCTV camera system installed at nakyesasa to boost security and research monitoring 8) one Calf weighing scale equipment for growth monitoring of calves 9) one concrete slab and accompanying water system composed of 2 1000liter-water tanks for hydroponic feed production system installed at nakyesasa-Fully functional transport assets (3 vehicles).- Fully functional institute assets including liquid nitrogen production, cold room storage of forage germplasm and sample preservation.All portable assets relocated and finalised the relocation of Institute assets from Tororo to Nakyesasa and Maruzi. 	Item 223005 Electricity 228001 Maintenance - Civil 228002 Maintenance - Vehicles	Spent 20,000 75,000 75,000
<i>Reasons for Variation in performance</i>			
		Total	170,000
		GoU Development	170,000
		External Financing	0
		AIA	0

Vote:142 National Agricultural Research Organisation

QUARTER 2: Cumulative Outputs and Expenditure by End of Quarter

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
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Capital Purchases

Output: 77 Purchase of Specialised Machinery & Equipment

Capacity for mechanized farm operation strengthened	Item	Spent
	1) Ten fire extinguishers installed at nakyesasa.	
	2) small scale power-driven mobile Milking system in place.	
	3) CCTV camera system installed at nakyesasa to boost security and research monitoring.	
	4) one Calf weighing scale equipment for growth monitoring of calves.	

Reasons for Variation in performance

	Total	0
	GoU Development	0
	External Financing	0
	AIA	0
	Total For SubProgramme	738,435
	GoU Development	738,435
	External Financing	0
	AIA	0
	GRAND TOTAL	30,586,851
	Wage Recurrent	11,236,114
	Non Wage Recurrent	8,680,324
	GoU Development	10,670,413
	External Financing	0
	AIA	0

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QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
Program: 51 Agricultural Research			
<i>Recurrent Programmes</i>			
Subprogram: 01 Headquarters			
<i>Outputs Provided</i>			
Output: 01 Generation of agricultural technologies			
1. Prepare, Print and submit the NARO MPS	- NARO Budget framework paper compiled and submitted.	Item 211103 Allowances (Inc. Casuals, Temporary)	Spent 3,195
2. Conduct Budget/Contracts committee meeting;	- Compiled NARO Annual Report FY 2017-2018.	221006 Commissions and related charges	25,342
3. Support PARIs during the QRPM;		222001 Telecommunications	5,000
4. Conduct NAROSEC and NARO Wide ARPM and other stakeholder engagements;	- Compiled NARO Annual work plan FY 2019-2020.. Printed and distributed 200 copies.	227001 Travel inland	660
5. Status report on the work plan implementation.			
Total			34,197
Wage Recurrent			0
Non Wage Recurrent			34,197
<i>AIA</i>			0
Output: 02 Research extension interface promoted and strengthened			
- NARO visibility in public events and Agricultural shows enhanced;	- Organised four farm clinics.	Item	Spent
- Improved technologies, planting materials and agricultural Information materials generated, promoted and availed to stakeholders;	- Printed and distributed 500 corporate diaries and calendars	221002 Workshops and Seminars	8,971
- Strengthen processes for linking research products industry.		227001 Travel inland	9,754
Total			18,725
Wage Recurrent			0
Non Wage Recurrent			18,725
<i>AIA</i>			0
Output: 04 Agricultural research capacity strengthened			
NARO land assets titled, monitored and secured;	- NARO land assets in Tororo surveyed.	Item	Spent
-NARO Land issues attended to;	- Surveyed Land fenced at Entebbe Botanical gardens and NARO Secretariat Entebbe	211102 Contract Staff Salaries	5,688,702
- NARO Infrastructure (office, laboratory, residence, farm and field) facilities monitored and maintained.- MoUs, contracts and SMTAs drafted, reviewed and signed and legal advisory rendered.	New consultancies on Legal and Other Issues for NARO in place	211103 Allowances (Inc. Casuals, Temporary)	173,526
- NARO represented in courts of judicature, . in liaison with external legal counsel,	- Functional NAROSEC fleet. - Enhanced, clean, safe and enabling workplace environment strengthened through maintenance of both research facilities,and	212101 Social Security Contributions	557,529
- Legal advice and guidance to the NARO		213001 Medical expenses (To employees)	100,000
		213002 Incapacity, death benefits and funeral expenses	37,500
		213004 Gratuity Expenses	464,980
		221001 Advertising and Public Relations	11,801

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QUARTER 2: Outputs and Expenditure in Quarter

Governing Council and Management;- Assessment report of PARI levels of Compliance; - Annual workshop for NARO Procurement Officers and committees - NARO Procurement Plan; - report on Board of Survey for Disposal/ Evaluation of NARO Assets.- Managing and maintaining fleet & office equipment; - Managing utilities; - Maintaining office space and infrastructure; - Managing cleaning services; - Availing staff transport - Managing security- Top Management (TPM) meetings and other committees activities facilitate; - Coordination, lobbying and supervision of research and development conducted; - Undertake and participate in engagement with stakeholders, collaborators and dev. partners.- Financial Management compliance status of 16 PARIs established on quarterly basis; - Documenting NARO financial transactions into financial statements quarterly, half year and annual accounts achieved; - Internal and External audit exercise conducted.- Pay staff salaries, allowances, staff welfare, staff facilitation and staff retirement and medical benefitStaff performance plans monitored and appraised- Staff facilitated to undertake/complete post graduate studies (PhD, MSc, Professional certifications) - Students supported to carry out research; - Short term skills improvement programs undertaken; - Travel support for International engagements.	equipment and payment for utilities, guarding services, cleaning services. Tendering completed. Contract signed with Des Consultants for a consultancy for Engineering and Designs - In order to guide agricultural research in Uganda, NARO Governing Council and its three committees were facilitated to meet and also monitor research in the institutes. - Budget framework paper & targets for FY 2020/21 approved; - Strategic partnerships identified for additional funding. - Strategies identified for improved governance & management of research; increasing NARO visibility; mobilisation of resources; mitigating risks. In order to facilitate funding agricultural research NARO budget committee was facilitated. - Research status established and monitored in eight PARIs. Financial and internal controls were strengthened through budget monitoring in the institute of Mbarara,Rwebtaba,KaZARDI, Muzardi, NaFIRRI and NaCRRRI , ABI, NaLIRRI, Bulindi, NARL, NaFORRI and NaCORRI Six months' financial reports produced - Functional infrastructure at the secretariat, Safe, secure and clean office space furniture, ICTs, , transport. - A research and non research work force, facilitated and enumerated. Two new PARI Directors and appointed and performance contracts issued. - Staff facilitated to undertake/complete post graduate studies (PhD, MSc, Professional certifications) - 10 PHD staff finalized and graduated. - Research services and products promoted to the farming community through farm clinics and at exhibitions during WFD at Bulindi, Hoima district.	221002 Workshops and Seminars 221003 Staff Training 221006 Commissions and related charges 221007 Books, Periodicals & Newspapers 221008 Computer supplies and Information Technology (IT) 221009 Welfare and Entertainment 221011 Printing, Stationery, Photocopying and Binding 221012 Small Office Equipment 221016 IFMS Recurrent costs 222001 Telecommunications 222002 Postage and Courier 222003 Information and communications technology (ICT) 223004 Guard and Security services 223005 Electricity 224001 Medical Supplies 224004 Cleaning and Sanitation 224005 Uniforms, Beddings and Protective Gear 224006 Agricultural Supplies 226001 Insurances 227001 Travel inland 227002 Travel abroad 227004 Fuel, Lubricants and Oils 228001 Maintenance - Civil 228002 Maintenance - Vehicles 228003 Maintenance – Machinery, Equipment & Furniture 228004 Maintenance – Other 273102 Incapacity, death benefits and funeral expenses	128,431 1,735 10,302 3,156 11,000 71,097 30,738 4,516 31,490 20,076 1,309 23,912 25,232 103,979 60,231 49,885 992 179,456 694 75,656 629 156,387 295,184 93,139 41,741 33,913 4,200
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Reasons for Variation in performance

Total 8,493,117

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
		Wage Recurrent	5,688,702
		Non Wage Recurrent	2,804,414
		AIA	0
		Total For SubProgramme	8,546,038
		Wage Recurrent	5,688,702
		Non Wage Recurrent	2,857,336
		AIA	0

Recurrent Programmes

Subprogram: 07 National Crops Resources Research Institute

Outputs Provided

Output: 01 Generation of agricultural technologies

	Item	Spent
- 25,000 fruit seedlings produced	211103 Allowances (Inc. Casuals, Temporary)	17,000
- Fruit mother gardens established regionally;	224006 Agricultural Supplies	33,750
- Identification and obtaining new elite citrus and mango germplasm	227001 Travel inland	14,000
- Highly effective IPDM packages for the control of citrus and mango pests and diseases identified;		
- Best management practices for Citrus and mango fruit tree identified and documented		
- Development of the most commercially viable products initiated;		
- Stakeholder engagements conducted to develop fruit seed production standards and guidelines;		
- Capacity of fruit tree nursery operators built;		
- Engagements to put in place a national fruit nursery operators' platform. Research activities undertaken and monitored		

Interim selection finalized of the 12 promising tomato lines with the right attributes such blight tolerance. NACRRI research guided and monitored in Kiige station, Kamuli district. Established research on course.

Reasons for Variation in performance

Total	64,750
Wage Recurrent	0
Non Wage Recurrent	64,750
AIA	0

Output: 02 Research extension interface promoted and strengthened

	Item	Spent
NACRRI, new and improved crop technologies, innovations, information and management practices (TIMPS) promoted	221002 Workshops and Seminars	24,600
	221011 Printing, Stationery, Photocopying and Binding	2,200
	227001 Travel inland	6,000

Reasons for Variation in performance

Total	32,800
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Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
		Wage Recurrent	0
		Non Wage Recurrent	32,800
		AIA	0

Output: 04 Agricultural research capacity strengthened

		Item	Spent
Institute assets and activity sites secure Governance, Management and Staff facilitated (Staff welfare Lunch and break tea provided for staff; Fuel and oil for vehicles and motorcycles procured; stationery)Fiduciary obligations facilitated1. Vehicles serviced; Office buildings maintained; Compound maintained; Office, laboratory and field equipment maintained.	- NACRRI infrastructure Safe, secure clean (offices, laboratory, and farm structures) at Namulonge and at Kiige, in Kamulii district.	211103 Allowances (Inc. Casuals, Temporary)	4,388
2. Maintain effective ICT facilities; Subscription for internet paid;	- NACRRI research agenda strengthened by facilitating the advisory committee.	221001 Advertising and Public Relations	1,250
3. Utilities paid (water utility, electricity, telephone).- Exhibitions participated - Staff & stakeholder meetings held - Technologies disseminated and people reached.	- Fiduciary obligations facilitated for the October-December 2019 period.	221006 Commissions and related charges	2,500
	- Functional NACRRI infrastructure and assest (ICTs, Office space, furniture and fittings, transport equipment).	221007 Books, Periodicals & Newspapers	250
	- Enhanced, clean, safe and secure enabling research environment strengthened.	221008 Computer supplies and Information Technology (IT)	1,000
	- NACRRI technologies disseminated and people reached as NACRRI participated in agricultural exhibition events such as WFD in Bulindi, ZARDI and at NACORRI Farm Clinic in, Kituza Mukono district .	221009 Welfare and Entertainment	1,450
		221011 Printing, Stationery, Photocopying and Binding	1,500
		221012 Small Office Equipment	375
		222001 Telecommunications	1,050
		223004 Guard and Security services	2,500
		223005 Electricity	16,000
		224004 Cleaning and Sanitation	1,500
		225001 Consultancy Services- Short term	6,250
		226001 Insurances	570
		227004 Fuel, Lubricants and Oils	8,250
		228001 Maintenance - Civil	7,500
		228002 Maintenance - Vehicles	8,718
		228003 Maintenance – Machinery, Equipment & Furniture	3,637

Reasons for Variation in performance

Total	68,688
Wage Recurrent	0
Non Wage Recurrent	68,688
AIA	0
Total For SubProgramme	166,238
Wage Recurrent	0
Non Wage Recurrent	166,238
AIA	0

Recurrent Programmes

Subprogram: 08 National Fisheries Resources Research Institute

Outputs Provided

Output: 01 Generation of agricultural technologies

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
- Study project Vehicles serviced and repaired;	- Strengthened fish hatchery and feed mil. Both repaired and functional to enhance selective breeding programme for Nile tilapia and African catfish at Kajjansi.	Item	Spent
- Fish feed ingredients procured		211103 Allowances (Inc. Casuals, Temporary)	7,800
Feed mill repaired & maintained		221006 Commissions and related charges	2,500
- Developed technologies disseminated;		221011 Printing, Stationery, Photocopying and Binding	750
- Wild parental stocked collected and acclimated in ponds on-station and used for selective breeding;	NAFIRRI research agenda strengthened by facilitating the advisory committee and participating in external consultative review meetings	222001 Telecommunications	2,050
- Selective breeding programmes for Nile tilapia and the African catfish enhanced.-		223004 Guard and Security services	1,470
Operationalization of the hatchery, ponds and concrete tanks;	NAFIRRI has maintained on station fish demonstration ponds, at Kajjansi, Wakiso district. And cage sites in lake Victoria (Source of the Nile cage site).	223005 Electricity	3,500
- Commercialisation of fish feed production by NaFIRRI at ARDC;		223006 Water	2,500
- Selective breeding programmes of Nile tilapia and the African catfish enhanced.		224001 Medical Supplies	68,700
- Facilities and substrates for mass production of insects procured and set up;		224006 Agricultural Supplies	11,008
- Feeding experiments and data collection;		227001 Travel inland	1,820
- Contracted guard hired and paid. Functional aquaria, on station ponds, cage sites, feed mills, offices, marine vessels and sites.		227004 Fuel, Lubricants and Oils	1,500
		Total	103,597
		Wage Recurrent	0
		Non Wage Recurrent	103,597
		AIA	0

Reasons for Variation in performance

Output: 02 Research extension interface promoted and strengthened

- Participate in exhibitions and shows	-	Item	Spent
- Staff & stakeholder meetings held;		221001 Advertising and Public Relations	1,500
- Fisheries technologies disseminated		221002 Workshops and Seminars	3,750
		221011 Printing, Stationery, Photocopying and Binding	2,000
		224001 Medical Supplies	9,600

Reasons for Variation in performance

		Total	16,850
		Wage Recurrent	0
		Non Wage Recurrent	16,850
		AIA	0

Output: 04 Agricultural research capacity strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	US\$ Thousand
1. Vehicles serviced; Office buildings maintained; Compound maintained; Office, laboratory and field equipment maintained.	- NAFIRRI physical resources , managed and maintained (offices, laboratories, vehicles, ICTs) , enabling and fully functional..	Item	Spent
2. Maintain effective ICT facilities; Subscription for internet paid;	- NAFIRRI research agenda strengthened by a functional and facilitated work force.	211103 Allowances (Inc. Casuals, Temporary)	2,750
3. Utilities paid (water utility, electricity, telephone).1. Staff allowances, wages, welfare Lunch and break tea provided for staff provided;	Institute marine vessels and field equipment).safe, secure and use-able. Except Mv Cormorant	221001 Advertising and Public Relations	473
2. Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journalsinstitute assets and activity sites secure Governance committees, Management committees and Staff facilitated (Staff allowances, wages, welfare Lunch and break tea provided for staff; Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, JournalsInstitute visibility and operations enhanced	- NAFIRRI research agenda strengthened by a functional and facilitated advisory and contracts committees. NAFIRRI technologies disseminated at two stakeholder campaign conducted; i) at the World Food Day (16/10/2019) at Hoima with > 500 people sensitized, (ii) World Fisheries Day (21/11/2019) with >150 people sensitized at Kiyindi Landing site.	221006 Commissions and related charges	2,500
		221007 Books, Periodicals & Newspapers	250
		221009 Welfare and Entertainment	2,000
		223005 Electricity	2,250
		223006 Water	2,500
		224004 Cleaning and Sanitation	4,000
		224006 Agricultural Supplies	13,750
		225001 Consultancy Services- Short term	45,000
		226001 Insurances	520
		227001 Travel inland	7,000
		227004 Fuel, Lubricants and Oils	7,250
		228001 Maintenance - Civil	31,250
		228002 Maintenance - Vehicles	10,168
		228003 Maintenance – Machinery, Equipment & Furniture	14,644
		273102 Incapacity, death benefits and funeral expenses	593

Reasons for Variation in performance

Total	146,898
Wage Recurrent	0
Non Wage Recurrent	146,898
AIA	0
Total For SubProgramme	267,345
Wage Recurrent	0
Non Wage Recurrent	267,345
AIA	0

Recurrent Programmes

Subprogram: 09 National Forestry Resources Research Institute

Outputs Provided

Output: 01 Generation of agricultural technologies

- Samples of priority tree species collected;	- Study concept finalized and data capture tools developed for the study.	Item	Spent
- Genetic diversity and molecular variation determined;	- a database for priority beneficial and medicinal tree species has been developed;	211103 Allowances (Inc. Casuals, Temporary)	15,000
- Database of priority beneficial tree species developed;		221006 Commissions and related charges	1,000
- Market and value addition of priority tree species identified.		224006 Agricultural Supplies	39,000
		227001 Travel inland	9,000
		227004 Fuel, Lubricants and Oils	3,000

Reasons for Variation in performance

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
		Total	67,000
		Wage Recurrent	0
		Non Wage Recurrent	67,000
		<i>AIA</i>	0

Output: 02 Research extension interface promoted and strengthened

- Exhibitions participated
- Staff & stakeholder meetings held
- Technologies disseminated and people reached.

- Forestry innovations were disseminated on radio one talk show, farm clinics and at World Food day celebrations at Bulindi, Hoima district.

Item	Spent
221001 Advertising and Public Relations	4,125
221002 Workshops and Seminars	2,438
221007 Books, Periodicals & Newspapers	368
221008 Computer supplies and Information Technology (IT)	2,375

Reasons for Variation in performance

Total	9,306
Wage Recurrent	0
Non Wage Recurrent	9,306
<i>AIA</i>	0

Output: 04 Agricultural research capacity strengthened

Institute assets and activity sites secure Governance committees, Management committees and Staff facilitated (Staff allowances, wages, welfare Lunch and break tea provided for staff; Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals). Vehicles serviced; Office buildings maintained; Compound maintained; Office, laboratory and field equipment maintained.
2. Maintain effective ICT facilities; Subscription for internet paid;
3. Utilities paid (water utility, electricity, telephone).

- NAFORRI research agenda strengthened by facilitating a functional advisory committee .
NAFORRI physical resources (offices, laboratories, vehicles, ICTs) safe, secure, clean, fully functional, managed and well maintained.

Item	Spent
211103 Allowances (Inc. Casuals, Temporary)	2,750
221001 Advertising and Public Relations	1,500
221002 Workshops and Seminars	2,500
221003 Staff Training	1,750
221006 Commissions and related charges	2,500
221008 Computer supplies and Information Technology (IT)	1,000
221011 Printing, Stationery, Photocopying and Binding	4,875
222001 Telecommunications	500
222003 Information and communications technology (ICT)	382
223004 Guard and Security services	3,000
223005 Electricity	12,363
224004 Cleaning and Sanitation	3,500
224006 Agricultural Supplies	12,165
225001 Consultancy Services- Short term	13,875
227001 Travel inland	6,925
227004 Fuel, Lubricants and Oils	4,000
228001 Maintenance - Civil	3,000
228002 Maintenance - Vehicles	4,700
228003 Maintenance – Machinery, Equipment & Furniture	13,500

Reasons for Variation in performance

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
		Total	94,785
		Wage Recurrent	0
		Non Wage Recurrent	94,785
		AIA	0
		Total For SubProgramme	171,090
		Wage Recurrent	0
		Non Wage Recurrent	171,090
		AIA	0

Recurrent Programmes

Subprogram: 10 National Livestock Resources Research

Outputs Provided

Output: 01 Generation of agricultural technologies

A. cinerea production models for small, medium and large scale producers developed and availed	In the effort to develop A. cinerea based protein supplement Inclusions for ruminants and non-ruminants and the associated Protocols. The relevant Ingredients and supplies were assembled and the experiments were set up. - A protocol to breed acrida cinerea has been developed.	Item	Spent
		211103 Allowances (Inc. Casuals, Temporary)	3,000
		222001 Telecommunications	500
		223004 Guard and Security services	1,000
		223005 Electricity	125
		224001 Medical Supplies	7,325
		224004 Cleaning and Sanitation	250
		224006 Agricultural Supplies	2,500
		227001 Travel inland	1,750
		227004 Fuel, Lubricants and Oils	1,640
		228002 Maintenance - Vehicles	375

Reasons for Variation in performance

	Total	18,465
	Wage Recurrent	0
	Non Wage Recurrent	18,465
	AIA	0

Output: 02 Research extension interface promoted and strengthened

NALIRRI new and improved livestock technologies, innovations, information and management practices (TIMPS) promoted	- NALIRRI new and improved livestock technologies disseminated and accessed during exhibitions i.e. the World Food day and Farm clinic in Kituza mukono.	Item	Spent
		221002 Workshops and Seminars	1,500
		221011 Printing, Stationery, Photocopying and Binding	50
		227001 Travel inland	800

Reasons for Variation in performance

	Total	2,350
	Wage Recurrent	0
	Non Wage Recurrent	2,350

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
			AIA 0

Output: 04 Agricultural research capacity strengthened

	Item	Spent
1. Staff allowances, wages, welfare Lunch and break tea provided for staff provided;	- NALIRRI physical and livestock resources secure, safe, cleaned, enhanced, and enabling workplace and research environment strengthened .	211103 Allowances (Inc. Casuals, Temporary) 3,300
2. Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, JournalsInstitute assets and activity sites secure Governance committees, Management committees and Staff facilitated (Staff allowances, wages, welfare Lunch and break tea provided for staff; Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals.1. Vehicles serviced; Office buildings maintained; Compound maintained; Office, laboratory and field equipment maintained.	- NALIRRI research agenda has been strengthened by functional advisory committee and a research and non research work force	221001 Advertising and Public Relations 500
2. Maintain effective ICT facilities; Subscription for internet paid;	- Functional fleet maintained. - Enabling office and laboratory environment. with ICTs, water and electricity.	221003 Staff Training 1,750
3. Utilities paid (water utility, electricity, telephone).ons participated		221006 Commissions and related charges 1,500
- Staff & stakeholder meetings held		221007 Books, Periodicals & Newspapers 60
- Technologies disseminated and people		221008 Computer supplies and Information Technology (IT) 1,000
		221011 Printing, Stationery, Photocopying and Binding 1,500
		221012 Small Office Equipment 750
		222001 Telecommunications 125
		222003 Information and communications technology (ICT) 1,713
		223004 Guard and Security services 375
		223005 Electricity 1,000
		224004 Cleaning and Sanitation 1,000
		226001 Insurances 320
		227001 Travel inland 3,600
		227004 Fuel, Lubricants and Oils 3,500
		228001 Maintenance - Civil 1,375
		228002 Maintenance - Vehicles 2,018

Reasons for Variation in performance

Total	25,385
Wage Recurrent	0
Non Wage Recurrent	25,385
AIA	0
Total For SubProgramme	46,200
Wage Recurrent	0
Non Wage Recurrent	46,200
AIA	0

Recurrent Programmes

Subprogram: 11 National Semi arid Resources Research

Outputs Provided

Output: 01 Generation of agricultural technologies

	Item	Spent
Germ plasma for semi arid crops collected , characterized and conserved.	227001 Travel inland	2,750
	227004 Fuel, Lubricants and Oils	1,500

Reasons for Variation in performance

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
		Total	4,250
		Wage Recurrent	0
		Non Wage Recurrent	4,250
		AIA	0

Output: 04 Agricultural research capacity strengthened

	Item	Spent
Institute assets and activity sites secure		
Governance committees, Management committees and Staff facilitated (Staff allowances, wages, welfare Lunch and break tea provided for staff; Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals)	NASARRI research agenda strengthened by facilitating the advisory committees, Management committees and institute work force.	
Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals	- NASARRI physical resources (some offices, institute assets, transport equipment, fittings, ,) safe, secured, managed and fully functional.	
Vehicles serviced; Office buildings maintained; Compound maintained; Office, laboratory and field equipment maintained.	- NASARRI technologies disseminated and accessed by farmers through Source of the Nile Agricultural show, farm clinics and world food day.	
2. Maintain effective ICT facilities; Subscription for internet paid;		
3. Utilities paid (water utility, electricity, telephone).- Participate in exhibitions and shows ;		
- Staff & stakeholder meetings held;		
- Technologies disseminated and people reached.		
	211103 Allowances (Inc. Casuals, Temporary)	2,750
	221001 Advertising and Public Relations	1,250
	221006 Commissions and related charges	1,500
	221007 Books, Periodicals & Newspapers	250
	221009 Welfare and Entertainment	224
	221011 Printing, Stationery, Photocopying and Binding	1,000
	222001 Telecommunications	1,000
	223004 Guard and Security services	1,500
	223005 Electricity	3,000
	224004 Cleaning and Sanitation	1,000
	226001 Insurances	320
	228002 Maintenance - Vehicles	1,206
	273102 Incapacity, death benefits and funeral expenses	750

Reasons for Variation in performance

Total	15,750
Wage Recurrent	0
Non Wage Recurrent	15,750
AIA	0
Total For SubProgramme	20,000
Wage Recurrent	0
Non Wage Recurrent	20,000
AIA	0

Recurrent Programmes

Subprogram: 12 National Laboratories Research

Outputs Provided

Output: 01 Generation of agricultural technologies

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
- Formulation and optimization of nanosurface package; - Validate and pilot optimised nanosurface packages; Priority commodities collected , characterized and conserved.- Factors that influence infusion / impregnation kinetics of the plant extracts into the pre-cooked bean matrix determined and optimized; - Culinary and market parameters of bio-preserved pre-cooked beans optimized;	1. Data on different preservation periods/shelf life of peeled and non-peeled banana using conventional and nano-coating collected 2. A catalogue of essential oils for inclusion in nano-package 3. Procedures for extracting essential oils and application on fresh foods are in place. 30 bean varieties analysed for their nutritional composition.	Item	Spent
		211103 Allowances (Inc. Casuals, Temporary)	6,250
		222001 Telecommunications	760
		223005 Electricity	3,750
		223006 Water	3,000
		224006 Agricultural Supplies	17,000
		227001 Travel inland	8,525
		227004 Fuel, Lubricants and Oils	1,000
		228003 Maintenance – Machinery, Equipment & Furniture	2,500

Reasons for Variation in performance

Total	42,785
Wage Recurrent	0
Non Wage Recurrent	42,785
AIA	0

Output: 02 Research extension interface promoted and strengthened

NARL corporate image and NARL TIMPs promoted	Construction and equipping seed bank is underway in Nakasongola. 95 % constructional works completed.	Item	Spent
		221001 Advertising and Public Relations	200
		221002 Workshops and Seminars	250
		221011 Printing, Stationery, Photocopying and Binding	250

Reasons for Variation in performance

Total	700
Wage Recurrent	0
Non Wage Recurrent	700
AIA	0

Output: 04 Agricultural research capacity strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
Institute assets and activity sites secure Governance committees, Management committees, Staff facilitated and Staff training (Staff allowances, wages, welfare Lunch and break tea provided for staff; Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals 1. Vehicles serviced; Office buildings maintained; Compound maintained; Office, laboratory and field equipment maintained.	- - NARL research agenda strengthened by facilitating a functional management committee and NARL of work force motivated (40 scientist and 20 laborers) . - NARL physical resources (vehicles, fittings, offices laboratories, farm and field equipment) and assets safe, secured, clean and fully functional.	Item 211103 Allowances (Inc. Casuals, Temporary) 221003 Staff Training 221006 Commissions and related charges 221007 Books, Periodicals & Newspapers 221008 Computer supplies and Information Technology (IT) 221009 Welfare and Entertainment 221011 Printing, Stationery, Photocopying and Binding 222002 Postage and Courier 223004 Guard and Security services 223005 Electricity 224004 Cleaning and Sanitation 225001 Consultancy Services- Short term 227001 Travel inland 227004 Fuel, Lubricants and Oils 228002 Maintenance - Vehicles 228003 Maintenance – Machinery, Equipment & Furniture	Spent 4,375 2,500 613 562 510 1,100 810 200 1,300 2,800 1,365 2,875 3,838 6,250 1,292 563
2. Maintain effective ICT facilities; Subscription for internet paid; 3. Utilities paid (water utility, electricity, telephone).- Exhibitions participated - Staff & stakeholder meetings held - Technologies disseminated and people reached.	- - NARL technologies demonstrated at two farm clinics, two events (WFD and Jinja agricultural show).		
		Total	30,952
		Wage Recurrent	0
		Non Wage Recurrent	30,952
		AIA	0
		Total For SubProgramme	74,437
		Wage Recurrent	0
		Non Wage Recurrent	74,437
		AIA	0

Reasons for Variation in performance

Recurrent Programmes

Subprogram: 13 Abi ZARDI

Outputs Provided

Output: 01 Generation of agricultural technologies

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
Priority crops for northwestern zone collected, characterised, conserved and demonstrated. Materials of cassava and associated ingredients collected for formulation	Abi ZARDI technologies, innovations, information and management practices (TIMPS) for the northwestern zone were generated and promoted. 1. One (Efficacy of an indigenous shrub for enhancing quality of manure for improved crop yield has been identified) 2. Two (Cassava value addition and Improvement of land race sorghum 'Godo') 3. One Nutrition platform (Key actors in the cassava value chain identified and processes for establishment of a nutrition platform for nutrient enhanced cassava products initiated). 4. 6 technologies (Pure Mubende goat, NAROBAN 2 & 3, NAROCAS 1 & 2, and Maksoy 3N multiplied and delivered to uptake pathways in highland areas of West Nile). - Five (5) crop varieties of beans, cassava, soy, rice and groundnuts being evaluated for agro-industrialization -	Item 221001 Advertising and Public Relations 221006 Commissions and related charges 222001 Telecommunications 224006 Agricultural Supplies 227001 Travel inland	Spent 1,000 2,175 200 16,500 19,500

Reasons for Variation in performance

Total	39,375
Wage Recurrent	0
Non Wage Recurrent	39,375
<i>AIA</i>	0

Output: 02 Research extension interface promoted and strengthened

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Item	Spent
Abi ZARDI corporate image and new improved technologies, innovations, information and management practices (TIMPS) for the zone promoted.- Two functional cassava out-grower schemes supported; - One nutrition platform supported.	Abi ZARDI corporate image and new improved technologies, innovations, information and management practices (TIMPS) for the zone promoted at 3 farm clinic and two agricultural shows - Two functional cassava out-grower schemes supported; - One nutrition platform supported.	221001 Advertising and Public Relations 221002 Workshops and Seminars 221008 Computer supplies and Information Technology (IT) 221011 Printing, Stationery, Photocopying and Binding	750 5,250 1,250 500

Reasons for Variation in performance

Total	7,750
Wage Recurrent	0
Non Wage Recurrent	7,750
<i>AIA</i>	0

Output: 04 Agricultural research capacity strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
- Functional fleet & office equipment; - Functional utilities; - Functional office space and infrastructure; - Managing cleaning services; - Functional staff transport - Effective security services Abi ZARDI operations facilitated Abi ZARDI Human resource motivated Institute assets and activity sites secure Abi ZARDI corporate image and new and improved technologies, innovations, information and management practices (TIMPS) for the zone promoted	Abi ZARDI physical resources.(vehicles, offices, farm and laboratories). Safe, secure, clean and fully managed and functional. - Abi ZARDI research agenda strengthened by facilitating the advisory committee, Abi ZARDI work force facilitated, motivated and remunerated. Abi ZARDI technologies, innovations, information and management practices (TIMPS) for the northwestern zone were generated and promoted. 1. One (Efficacy of an indigenous shrub for enhancing quality of manure for improved crop yield has been identified) 2. Two (Cassava value addition and Improvement of land race sorghum 'Godo') 3. One Nutrition platform (Key actors in the cassava value chain identified and processes for establishment of a nutrition platform for nutrient enhanced cassava products initiated). 4. 6 technologies (Pure Mubende goat, NAROBAN 2 & 3, NAROCAS 1 & 2, and Maksoy 3N multiplied and delivered to uptake pathways in highland areas of West Nile).	Item 211103 Allowances (Inc. Casuals, Temporary) 221002 Workshops and Seminars 221008 Computer supplies and Information Technology (IT) 221009 Welfare and Entertainment 222001 Telecommunications 223004 Guard and Security services 223005 Electricity 223006 Water 224004 Cleaning and Sanitation 226001 Insurances 227001 Travel inland 227004 Fuel, Lubricants and Oils 228001 Maintenance - Civil 228002 Maintenance - Vehicles 228003 Maintenance – Machinery, Equipment & Furniture 273102 Incapacity, death benefits and funeral expenses	Spent 2,250 300 1,000 1,000 200 1,500 500 100 1,000 100 4,300 7,500 250 2,750 425 500

Reasons for Variation in performance

Total	23,675
Wage Recurrent	0
Non Wage Recurrent	23,675
AIA	0
Total For SubProgramme	70,800
Wage Recurrent	0
Non Wage Recurrent	70,800
AIA	0

Recurrent Programmes

Subprogram: 14 Bulindi ZARDI

Outputs Provided

Output: 01 Generation of agricultural technologies

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
- Industrial park sited and demarcated; - Assorted equipment acquired Goat feedlot unit managed; - Goat breeding unit managed; - Pasture unit maintained; - Goat diseases surveyed on and control; - Goat producers trained; - Appropriate technologies sourced. On-farm research activities monitored	- Architectural housing designs for goat breeding and feedlot ready. - And construction of housing for goat breeding and feedlot health. and for the fattening goats under the project for commercialization of goat value chain through industrial park approach. - Maintained 5 acres of demos for maize, soybean, millet and sorghum; Maintained 3 acres of demos of cassava (1 acre), Banana (1/2 acre), Pastures (1 acre) and coffee (1/4 acre); 1,056 students,	Item 211103 Allowances (Inc. Casuals, Temporary) 224001 Medical Supplies 227001 Travel inland	Spent 10,000 13,750 10,080

Reasons for Variation in performance

Total	33,830
Wage Recurrent	0
Non Wage Recurrent	33,830
AIA	0

Output: 02 Research extension interface promoted and strengthened

Bulindi ZARDI corporate image and new and improved technologies, innovations, information and management practices (TIMPS) for the zone promoted.	1) Baseline survey in 8 districts of LACZ conducted. Data collection concluded. Data analysis on going. (2) Acquired pasture germ plasma and established mother gardens. (3) Conserved 2.2 tones of silage. (Napier and lablab). - In the effort to increase technology uptake for increased production and productivity, Awareness campaigns were intensified through; , - One fam clinic conducted on station, - Two (2) radio talk shows on spice, Liberty and BBS radio stations were conducted.	Item 221001 Advertising and Public Relations	Spent 3,500
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Reasons for Variation in performance

Total	3,500
Wage Recurrent	0
Non Wage Recurrent	3,500
AIA	0

Output: 04 Agricultural research capacity strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
- Institute fleet & office equipment Managed and maintained ; - Utilities Managed and maintained ; - office space and infrastructure Managed and maintained; - Cleaning services Managed and maintained ; - Availing staff transport; - Security Managed and maintained. Provisions made to secure institute assets. Provisions made include fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals Governance committees, Management committees and Staff facilitated (Staff allowances, wages, welfare Lunch and break tea provided for staff; Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals	- Bulindi ZARDI physical resources (vehicle, office farm livestock and other asset) fully functional, enhanced, safe, secure and enabling workplace and research environment - - Bulindi research agenda for the Bunyoro sub region strengthened by facilitating a fully functional advisory committee and Institute work force.	Item 211103 Allowances (Inc. Casuals, Temporary) 221002 Workshops and Seminars 221003 Staff Training 221007 Books, Periodicals & Newspapers 221009 Welfare and Entertainment 221011 Printing, Stationery, Photocopying and Binding 222001 Telecommunications 222002 Postage and Courier 223004 Guard and Security services 223005 Electricity 224004 Cleaning and Sanitation 224005 Uniforms, Beddings and Protective Gear 225001 Consultancy Services- Short term 226001 Insurances 227001 Travel inland 227004 Fuel, Lubricants and Oils 228001 Maintenance - Civil 228002 Maintenance - Vehicles 228003 Maintenance – Machinery, Equipment & Furniture 228004 Maintenance – Other 273102 Incapacity, death benefits and funeral expenses	Spent 2,250 12,500 5,000 350 2,250 1,250 500 25 1,750 8,000 2,000 2,750 3,750 320 11,750 6,750 13,750 9,250 250 155 250
		Total	84,850
		Wage Recurrent	0
		Non Wage Recurrent	84,850
		AIA	0
		Total For SubProgramme	122,180
		Wage Recurrent	0
		Non Wage Recurrent	122,180
		AIA	0

Reasons for Variation in performance

Recurrent Programmes

Subprogram: 15 Kachwekano ZARDI

Outputs Provided

Output: 01 Generation of agricultural technologies

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
New and improved livestock technologies, innovations, information and management practices (TIMPS) for the zone identified	TIMPS for the southwestern highlands were generated:	Item	Spent
	1. Produce apple seedlings to supplement what is produced by private nursery operators. So far 700 grafted seedlings and 1000 rootstocks raised	223005 Electricity	1,375
	2. Modified structure for goat experiment	223006 Water	1,000
	3. 2 feed rations formulated & evaluations starting	224006 Agricultural Supplies	61,250
	4. Procured 45 experimental goats	227001 Travel inland	1,460
	5. 2 Acres of fodder gardens have been established and maintained at KaZARDI	227004 Fuel, Lubricants and Oils	1,002
	6. Maintained 100 breeding goats for evaluation on growth performance, Goat breeds de-wormed, control of ectoparasites & 12 new kids weaned.		
		Total	66,087
		Wage Recurrent	0
		Non Wage Recurrent	66,087
		<i>AIA</i>	0

Reasons for Variation in performance

Output: 04 Agricultural research capacity strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	US\$ Thousand
Institute assets and activity sites secure Governance committees, Management committees and Staff facilitated (Staff allowances, wages, welfare Lunch and break tea provided for staff; Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, JournalsProvisions made include fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals1. Vehicles serviced; Office buildings maintained; Compound maintained; Office, laboratory and field equipment maintained. 2. Maintain effective ICT facilities; Subscription for internet paid; 3. Utilities paid (water utility, electricity, telephone).Kachwekano ZARDI corporate image and new and improved technologies, innovations, information and management practices (TIMPS) for the zone promoted	Safe institute assets (offices, livestock and ponds) and research and experimental sites secure. - Kachwekano ZARDI research agenda for the southwestern zone strengthened by a functional advisory committees and research and non-research work force.. - Maintained a functional institute fleet. - Kachwekano ZARDI physical resources functional, safe and secure. - Office work space enabling workplace and research environment strengthened through maintenance of both research facilities and equipment and payment for utilities. 1. 5 Planting materials and animal breeds availed to 29 farmers (500 banana, 500 fruit tree seedlings, 1,750,000 cassava cuttings, 250 bags of forages, 2000 Nile tilapia fish seed, and 32 piglets) 2. 4 Climate smart technologies demonstrated (DT varieties, soil & water conservation & agroforestry) in 12 climate-smart model farms in Hoima. 3. 11 Production and value addition technologies (maize, rice, banana, cassava, fish, dairy, piggery, apiculture, aquaculture) disseminated at farm clinics, WFD2019 and other community trainings 4. 37 crop varieties & animal structures demonstrated On-station (4 Maize, 4 beans, 4 soybean, 3 finger millet, 3 sorghum, 3 cassava, 3 Sweet potato, 3 Napier, 3 brachiaria, 3 livestock handling structures and 2 animal houses) established and/or maintained 5. Distributed potato seedlings to screen-house operators(20,942), farmers (8,710), ZARDIs (2,770), private companies 2,000 and 6,800 mini-tubers 6. Provided support to CoU Diocese in Kigezi in form of seed for screen house & training 7. The institute has continued to produce apple seedlings to supplement what is produced by private nursery operators 8. Training manual - apple growing & management developed 9. 2 Acres of fodder gardens have been established and maintained at KaZARDI	Item 211103 Allowances (Inc. Casuals, Temporary) 221006 Commissions and related charges 221009 Welfare and Entertainment 221011 Printing, Stationery, Photocopying and Binding 222001 Telecommunications 222003 Information and communications technology (ICT) 223004 Guard and Security services 223005 Electricity 223006 Water 224004 Cleaning and Sanitation 226001 Insurances 227001 Travel inland 227004 Fuel, Lubricants and Oils 228001 Maintenance - Civil 228002 Maintenance - Vehicles 228003 Maintenance – Machinery, Equipment & Furniture	Spent 2,250 1,250 1,250 2,231 388 799 5,000 12,500 5,000 2,402 250 6,500 6,800 1,250 3,950 875

Reasons for Variation in performance

Total	52,695
Wage Recurrent	0
Non Wage Recurrent	52,695

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
		AIA	0
		Total For SubProgramme	118,782
		Wage Recurrent	0
		Non Wage Recurrent	118,782
		AIA	0

Recurrent Programmes

Subprogram: 16 Mukono ZARDI

Outputs Provided

Output: 01 Generation of agricultural technologies

Germ plasma for priority commodities collected, characterised and conserved.	Mukono ZARDI generated and promoted the following TIMPs"	Item	Spent
	1. Sweetpotato genotypes selected for on farm trials. Seven genotypes evaluated, three are promising.	221011 Printing, Stationery, Photocopying and Binding	1,000
	2. 3 bio-pesticides evaluated for tomato leaf miner management (Beauveria bassiana is most promising.	221012 Small Office Equipment	1,250
		222001 Telecommunications	1,500
	3. 20,000 high quality tilapia fingerlings were produced and distributed to farmers	223005 Electricity	3,500
		224001 Medical Supplies	18,375
		224006 Agricultural Supplies	42,875
	4. Solar system fixed at KMG at Kamenyamiggo station	227001 Travel inland	1,000
		227004 Fuel, Lubricants and Oils	1,000
	5. 4,913 KR, 190 old clonal and 4,605 elite coffee seedlings sold to farmers		
	6. Aailed 465 fruit tree seedlings, 736 vegetable seedlings and 10.75 kg of leafy vegetables		
	MUZARDI technologies promoted and show cased during NACORI exhibition and World Food Day at Bulindi ZARDI.		
	1).. Fish (acqulture management),		
	2). Banana (proper agronomic practices)		
	3) small gardening (food towers, box gardens, raised beds.		

Reasons for Variation in performance

Total	70,500
Wage Recurrent	0
Non Wage Recurrent	70,500
AIA	0

Output: 04 Agricultural research capacity strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
Managing and facilitating Mukono ZARDI Human resource Institute assets and activity sites secure Provisions made include fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals1. Vehicles serviced; Office buildings maintained; Compound maintained; Office, laboratory and field equipment maintained.	- Mukono ZARDI research agenda for the lake Victoria crescent zone was strengthened by facilitating the fully functional advisory committee and the institute work force.	Item	Spent
2. Maintain effective ICT facilities; Subscription for internet paid;	-	211103 Allowances (Inc. Casuals, Temporary)	2,250
3. Utilities paid (water utility, electricity, telephone).	- Mukono ZARDI physical resources (offices, vehicles, motorcycles and ICTs) were maintained, safe and secure.	221001 Advertising and Public Relations	750
	- The institute has an enabling, safe and secure research environment.	221006 Commissions and related charges	2,500
		221007 Books, Periodicals & Newspapers	313
		221009 Welfare and Entertainment	938
		221011 Printing, Stationery, Photocopying and Binding	1,250
		222002 Postage and Courier	63
		223004 Guard and Security services	5,000
		223005 Electricity	12,500
		223006 Water	5,000
		224004 Cleaning and Sanitation	2,238
		226001 Insurances	225
		227001 Travel inland	5,000
		227004 Fuel, Lubricants and Oils	5,000
		228002 Maintenance - Vehicles	3,866
		228003 Maintenance – Machinery, Equipment & Furniture	250
		273102 Incapacity, death benefits and funeral expenses	1,109

Reasons for Variation in performance

Total	48,250
Wage Recurrent	0
Non Wage Recurrent	48,250
AIA	0
Total For SubProgramme	118,750
Wage Recurrent	0
Non Wage Recurrent	118,750
AIA	0

Recurrent Programmes

Subprogram: 17 Ngetta ZARDI

Outputs Provided

Output: 01 Generation of agricultural technologies

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
Effective management practices for livestock parasite and disease control developed - Survival and field establishment of the shea tree seedlings generated from cuttings, tissue culture and seed enhanced Local poultry research enhanced Cost effective Integrated disease and pest management technology for citrus and mango developed Appropriate SLM technologies adapted Fish farming technologies demonstrated Effective technologies for management of post harvest seed pests and diseases for QDS production developed Undertake technology identification and development in one sub zone	<p>- Tissue sample collection equipment delivered (1 assorted set of blood collection tubes, sample collection packs, sterile swabs, cold packs, coller boxes, syringes and needles, rotary shakers, latex glooves, vaccine carrier box, dissecting set, formaline). sample collection and analysis awaits.</p> <p>Procurement process initiated on-going</p> <p>Procuring nursery materials and an autoclave.</p> <p>Poultry experimental units and infrastructure rehabilitation initiated. Not fully functional.</p> <p>- Completed the procurement of assorted agricultural inputs were made (pesticides, lab agents and consumables).</p> <p>Four trials on integrated disease management options (Prunning+ fungicide application + field sanitation, and bark horning+ prunning+ fungicide+ sanitation) established on farm at Ngetta Sub county.</p> <p>-</p> <p>4 grow out ponds for evaluating the developed feed packages rehabilitated. Not full functional.</p> <p>-</p> <p>Ngetta ZARDI generated the following TIMPs:</p> <ol style="list-style-type: none"> 1. One solar hay drier for conservation of dairy forage feed resources validated. 2. One -(CGS on value addition of fruit pulp of shea submitted and funded) 3. Nine Enhancing yield using Rhizobium inoculant in new improved varieties of soybean and beans (5 sites) under trial. 4. Development and management of shea tree grafted seedlings-manual). 5. Information parks on Value addition for 8 priority crops in Northern Uganda compiled and awaiting peer reviews.. 6. 'Survey report produced .Maize and soybean were the most preferred commodities for intervention followed by cassava. Pest and diseases (Maize fall army worm and CBSD) management, access to seed (price and quality) and markets) topped community research agenda for intervention along the commodities prioritized. 	<p>Item</p> <p>227001 Travel inland</p> <p>227004 Fuel, Lubricants and Oils</p> <p>228002 Maintenance - Vehicles</p>	<p>Spent</p> <p>1,090</p> <p>1,000</p> <p>1,000</p>

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
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Reasons for Variation in performance

Total	3,090
Wage Recurrent	0
Non Wage Recurrent	3,090
<i>AIA</i>	0

Output: 02 Research extension interface promoted and strengthened

Stake holders made aware of the various agricultural technologies in quarter		Item	Spent
Enhanced corporate image, new and improved technologies, innovations, information and management practices (TIMPS) for the zone promoted	-		
	- To bridge the gap between research and extension, NARO disseminated research outputs to farming communities in lango and Acholi through exhibitions and radio talks hows. Ngetta TIMPS for the northern and mid northern Uganda sub zones were promoted.	221001 Advertising and Public Relations	690
		221007 Books, Periodicals & Newspapers	250
		221008 Computer supplies and Information Technology (IT)	438
	- Two radio talk shows (Unity FM-Lira) conducted to disseminate information on citrus disease and maize fall army worm management, and on aflatoxin contamination of crops and livestock products.		
	- Dissemination materials produced and distributed to visiting school teachers and World Food day celebrations.		

Reasons for Variation in performance

Total	1,378
Wage Recurrent	0
Non Wage Recurrent	1,378
<i>AIA</i>	0

Output: 04 Agricultural research capacity strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
Priority commodities collected , characterised and conserved.Preliminary report on Secondary health centres data on status of Brucellosis among health care seeking population in Karamoja region in PlaceSite selection, land clearing and preparation of 30 acres for planting	20 Sahiwal cattle, and 25 Friesian cattle maintained on-station. - 32 Mubende goats maintained on-station. - 25 Cambrough pigs maintained on-station. - Seroprevalence determined from Amudat District using Rose bengal test, in 322 cattle (13.04% positive equivalent of 42/322), 328 goats (0.9% positive equivalent of 3/328), 300 sheep (1% positive equivalent of 3/300), 46 camels (4.3% positive equivalent of 2/46) 3 acres of serenut 11 managed and harvested for seed production	Item 211103 Allowances (Inc. Casuals, Temporary) 221002 Workshops and Seminars 221011 Printing, Stationery, Photocopying and Binding 222001 Telecommunications 223004 Guard and Security services 223005 Electricity 224001 Medical Supplies 224006 Agricultural Supplies 227001 Travel inland 227004 Fuel, Lubricants and Oils	Spent 7,875 2,100 3,500 1,250 4,000 8,438 16,050 15,000 12,750 2,875

Reasons for Variation in performance

Total	73,838
Wage Recurrent	0
Non Wage Recurrent	73,838
AIA	0

Output: 02 Research extension interface promoted and strengthened

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Item	Spent
40 farmers trained on quality seed processing, storage and marketing	- - 20 farmers trained on quality seed production. - Developed network of over 120 host farmers working together to demonstrate and measure what is possible for the communities while taking care of the environment.	221001 Advertising and Public Relations 221002 Workshops and Seminars	1,000 3,000

Reasons for Variation in performance

Total	4,000
Wage Recurrent	0
Non Wage Recurrent	4,000
AIA	0

Output: 04 Agricultural research capacity strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
Institute assets and activity sites secured Governance committees, Management committees and Staff facilitated (Staff allowances, wages, welfare Lunch and break tea provided for staff; Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals 1. Vehicles serviced; Office buildings maintained; Compound maintained; Office, laboratory and field equipment maintained.	- Functional Nabuin work place, clean, safe, secure and enabling environment for research (3 office blocks, one laboratory). - Nabuin ZARDI strengthened research agenda for the northeastern dry lands agro ecologies. - Functional transport machinery maintained (3 vehicles, 2 tractors). - Nabuin ZARDI physical resources strengthened, safe, secure and fully functional. - Nabuin visibility enhanced as improved technologies are demonstrated at Bulindi in Hoima during World Food day	Item 211103 Allowances (Inc. Casuals, Temporary) 221001 Advertising and Public Relations 221006 Commissions and related charges 221007 Books, Periodicals & Newspapers 221009 Welfare and Entertainment 222002 Postage and Courier 224004 Cleaning and Sanitation 224005 Uniforms, Beddings and Protective Gear 226001 Insurances 227004 Fuel, Lubricants and Oils 228001 Maintenance - Civil 228002 Maintenance - Vehicles 228003 Maintenance – Machinery, Equipment & Furniture 273102 Incapacity, death benefits and funeral expenses	Spent 2,250 625 1,506 250 925 125 1,125 750 320 3,000 1,313 2,018 250 750

Reasons for Variation in performance

Total	15,207
Wage Recurrent	0
Non Wage Recurrent	15,207
AIA	0
Total For SubProgramme	93,044
Wage Recurrent	0
Non Wage Recurrent	93,044
AIA	0

Recurrent Programmes

Subprogram: 19 Mbarara ZARDI

Outputs Provided

Output: 01 Generation of agricultural technologies

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
Germ plasma for Priority commodity for southern range lands collected , characterised, conserved and demonstrated	Mbarara ZARDI generated and promoted the following TIMPS (a) Demonstrated thirteen (13) new improved crop varieties i.e.: (a) 2 bean varieties including NARO Bean 1 and 3; (b)2 cassava (NAROCAS 1 & 2); and (c) 5 improved pasture varieties including NARO Napier 1, 2, 3 and Kakamega and Brachiaria mulato (d) 2 technologies for improved dry season feeding (hay and silage making) (e) 1 innovation: improved pasture utilization (paddock design and management guidelines) (f). 8 MSIPs supported; (f1) 1 banana MSIP (now a National-based banana Cooperative Union). (f2) West Ankole Dairy Forum was supported (f3) 4 District-based Bean Seed MSIPs (Ntungamo (g) - Institute experimental animals (30 cows), 2 fish ponds maintained and managed. 2 (h) Banana demonstration gardens maintained and managed.	Item 221011 Printing, Stationery, Photocopying and Binding 222001 Telecommunications 223004 Guard and Security services 223006 Water 224001 Medical Supplies 224006 Agricultural Supplies 227001 Travel inland 227004 Fuel, Lubricants and Oils	Spent 600 400 4,500 2,000 36,750 24,500 3,250 1,500

Reasons for Variation in performance

Total	73,500
Wage Recurrent	0
Non Wage Recurrent	73,500
AIA	0

Output: 04 Agricultural research capacity strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
Institute assets and activity sites secure Governance committees, Management committees and Staff facilitated (Staff allowances, wages, welfare Lunch and break tea provided for staff; Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals 1. Vehicles serviced; Office buildings maintained; Compound maintained; Office, laboratory and field equipment maintained.	- Mbarara ZARDI managed, maintained and monitored the research agenda for the southern ranged lands by facilitating the one advisory committee, two management committees and a work force of 40 Staff.	Item 211103 Allowances (Inc. Casuals, Temporary) 221001 Advertising and Public Relations 221006 Commissions and related charges 221011 Printing, Stationery, Photocopying and Binding 223004 Guard and Security services 223005 Electricity 223006 Water 224004 Cleaning and Sanitation 226001 Insurances 227001 Travel inland 227004 Fuel, Lubricants and Oils 228002 Maintenance - Vehicles	Spent 2,250 323 2,750 1,500 5,000 12,500 5,000 2,250 320 5,000 6,000 3,358
2. Maintain effective ICT facilities; Subscription for internet paid; 3. Utilities paid (water utility, electricity, telephone). 1. Exhibitions participated 2. Staff & stakeholder meetings held 3. Technologies disseminated and people reached.	- Mbarara ZARDI managed, maintained and monitored the physical resources/assets of the institute Functional Mbarara ZARDI fleet.(vehicles and 1 tractor) - The physical resources/assets, are clean, safe and enabling workplace and research environment strengthened. Mbarara ZARDI technologies were promoted. - 100 brochures detailing the work done at Mbazardi produced for dissemination to teachers of secondary schools and tertiary institutions. - Over 100 people reached with exhibition of aflatoxin free fish feed and Dairy meal in The Source of the Nile Jinja Agricultural Show.		

Reasons for Variation in performance

Total	46,250
Wage Recurrent	0
Non Wage Recurrent	46,250
AIA	0
Total For SubProgramme	119,750
Wage Recurrent	0
Non Wage Recurrent	119,750
AIA	0

Recurrent Programmes

Subprogram: 20 Buginyaya ZARDI

Outputs Provided

Output: 01 Generation of agricultural technologies

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Item	Spent
Germplasm for Priority commodity for eastern lowlands and highlands collected , characterized, conserved and demonstrated	Buginyanya ZARDI undertook and promoted the following: 1) Rehabilitating of 10 breeding and nursery ponds in Mbale fry centre. Now partially functional. 2) 5 QPM (Quality Protein Maize) hybrids with highland adaptability ascertained. One MLN PYT at grain hardening stage at Ikulwe, Mayuge	221011 Printing, Stationery, Photocopying and Binding 222001 Telecommunications 223004 Guard and Security services 223005 Electricity 223006 Water 224001 Medical Supplies	1,000 1,000 2,750 2,000 1,000 18,375

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

	224006 Agricultural Supplies	42,875
3) Demo on best performing NERICA upland rice cultivars at harvesting stage.	227001 Travel inland	1,125
	227004 Fuel, Lubricants and Oils	1,000
4) 2.5 tons of beans foundation seed produced	228002 Maintenance - Vehicles	1,000
5) Procured 1 kg of Eucalyptus grandis to be sown at Buginyanya station.		
6) Maintained the apple orchards and carried out training of the plants.		
7) More 7 ha of assorted tree species planted at Buginyanya and Bulegeni		
8) Maintained the 5 ha of Murlbury trees in collaboration with MoSTI for sericulture production.		
9) Established and maintained 0.5 ha of seed plots which is at flowering stage.		
10) 100 bags of sweet potato vines distributed to Swisscontact farmers in Mayuge. 120 bags of cassava distributed to farmers in Iganga, Jinja and Luuka.		
11) 0.2 Ha of Chloris gayana maintained and seed ready for harvesting at Bulegeni satellite station		
12) 76 Farmers (68 female and 8 male) from Nabugimbi Yetana Women's group in Bulambuli district trained on seed management.		
13) Six pasture production fields established in Bukwo, Kapchorwa, Kween, Bulambuli and Sironko districts		
14) 32 field pea germplasm were planted for characterisation. Materials are being harvested and full information for next quarter		
15) 5 farmer groups identified and worked with for both characterisation and seed increment		
16) 12 wheat lines selected at AYT and being advanced to NPT		
17) Use of rooted apical cuttings has been recommended for uptake by potato farmers; and preliminary information on management of Philaris minor generated		
18) 5 LSBs were supported during the quarter through trainings, field monitoring, farm clinic and marketing of their seeds; one MSIP was also supported.		

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

19) a total of 4 technologies and management practices delivered to uptake pathways

Reasons for Variation in performance

	Total	72,125
Wage Recurrent		0
Non Wage Recurrent		72,125
	<i>AIA</i>	0

Output: 04 Agricultural research capacity strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
Institute assets and activity sites secure Governance committees, Management committees and Staff facilitated (Staff allowances, wages, welfare Lunch and break tea provided for staff; Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals Fuel and oils for vehicles and motorcycles procured; stationery, books, newspapers, Journals 1. Vehicles serviced; Office buildings maintained; Compound maintained; Office, laboratory and field equipment maintained. 2. Maintain effective ICT facilities; Subscription for internet paid; 3. Utilities paid (water utility, electricity, telephone). 1. Exhibitions participated 2. Staff & stakeholder meetings held 3. Technologies disseminated and people reached.	- Buginyanya managed, maintained and monitored the research agenda for the eastern agro-ecologies by facilitating one advisory and consultative meeting . - Buginyanya physical resources fully functional, safe, secure. and clean and providing an enabling environment for institute offices, and farm machinery, transport and research research sites 1) 2.5 tons of beans foundation seed produced 2) Maintained the 5 ha of Murlbury trees in collaboration with MoSTI for sericulture production 3) 100 bags of sweet potato vines distributed to Swisscontact farmers in Mayuge. 120 bags of cassava distributed to farmers in Iganga, Jinja and Luuka 4) 76 Farmers (68 female and 8 male) from Nabugimbi Yetana Women's group in Bulambuli district trained on seed management. 5) Six pasture production fields established in Bukwo, Kapchorwa, Kween, Bulambuli and Sironko districts 6) 5 farmer groups identified and worked with for both characterisation and seed increment 7) Use of rooted apical cuttings has been recommended for uptake by potato farmers; and preliminary information on management of <i>Phalaris minor</i> generated 8) 5 LSBs were supported during the quarter through trainings, field monitoring, farm clinic and marketing of their seeds; one MSIP was also supported. 9) a total of 4 technologies and management practices delivered to uptake pathways	Item 211103 Allowances (Inc. Casuals, Temporary) 221001 Advertising and Public Relations 221006 Commissions and related charges 221007 Books, Periodicals & Newspapers 221009 Welfare and Entertainment 221011 Printing, Stationery, Photocopying and Binding 223004 Guard and Security services 223005 Electricity 223006 Water 224004 Cleaning and Sanitation 225001 Consultancy Services- Short term 226001 Insurances 227001 Travel inland 227004 Fuel, Lubricants and Oils 228002 Maintenance - Vehicles 228003 Maintenance – Machinery, Equipment & Furniture 273102 Incapacity, death benefits and funeral expenses	Spent 2,250 500 2,750 375 750 1,250 5,000 5,000 2,000 2,325 2,500 425 5,000 6,000 6,625 500 625

Reasons for Variation in performance

Total	43,875
Wage Recurrent	0
Non Wage Recurrent	43,875

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
		AIA	0
		Total For SubProgramme	116,000
		Wage Recurrent	0
		Non Wage Recurrent	116,000
		AIA	0

Recurrent Programmes

Subprogram: 21 Rwebitaba ZARDI

Outputs Provided

Output: 01 Generation of agricultural technologies

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
		Item	Spent
- Information on station apple performance evaluation trial documented - On-station and farm trials information generated on Catfish propagation, productivity and survival.	4 potato Seed and 4 biofortified bean foundation seed multiplication sites established	221006 Commissions and related charges	1,250
- On-station and farm trials information generated on Catfish propagation, productivity and survival.	1000 pots raised for raising coffee seedlings	221011 Printing, Stationery, Photocopying and Binding	1,250
- On-station and farm trials information generated - Improved capacity of quality coffee seedling production facilities and supply at Rwebitaba ZARDI and Seven (7) community-based seedling systems	- 3 maintained acres of Chloris gayana planted on station.	223004 Guard and Security services	5,000
- 40 nursery operators trained on germplasm improvement technologies for coffee in the zone- Generating information improved pasture trials on farm & on station.	- Maintained 3 acres with maize for silage.	223005 Electricity	8,750
- Quality pasture seed produced & pasture samples analysed and demonstrated.	Maintained experiments on determining growth and yield performance on farm in Kyegegwa . Data collection initiated for Maintained trial fields on determining growth and yield performance on farm in Kasese	223006 Water	5,000
- Quality seed bed prepared for pure pasture seed produced		224001 Medical Supplies	25,230
- Pasture equipment and tools demonstrated.- Generating information from on farm and onstation trials on bee colony and queen development in the Zone.		224004 Cleaning and Sanitation	1,250
- Maintanance of Apiaries for trainings on queen rearing on station and on farm.		227001 Travel inland	5,000
- Generating information on farm & onstation trials on colonies Genomic Characterization of Xylaria Pathogen infecting tea in Uganda.		227004 Fuel, Lubricants and Oils	6,000
- 100 tea accessions profiled biochemically & later documented		228002 Maintenance - Vehicles	6,250
- 100 tea accessions profiled biochemically & later documented.			
- On farm trials information generated on growth - information on agronomic performance of 14 matooke varieties generated.			
- Information on suitable decapitation heights in banana generated.			
- Suitable pasture legumes for intercropping in bananas determined. Water used paid.			
- 100,000 banana plantlets			
Reasons for Variation in performance			
		Total	64,980
		Wage Recurrent	0
		Non Wage Recurrent	64,980
		AIA	0

Output: 04 Agricultural research capacity strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
- Effective, facilitated and motivated human resources.- Institute property and assets secureRwebitaba ZARDI corporate image and new and improved technologies, innovations, information and management practices (TIMPS) for the zone promoted- Fleet, machinery & office equipment managed; - Utilities (telephone, water, electricity) managed; - Institute space and infrastructure (office, laboratory, residence, farm and field) managed; - Cleaning services managed; - Availing staff transport	- Rwebitaba ZARDI technologies disseminated to stakeholders Exhibition at Jinja show and world food & other regional shows. - Capacity of 4 groups (40 farmers)in Kyegegwa, Kabarole, Kyenjojo and kamwenge have been strengthened in bean and potato seed production. - Rwebitaba physical resources (office and farm, laboratory, staff residence) managed and fully functional, clean, safe and secure.	Item 211103 Allowances (Inc. Casuals, Temporary) 221001 Advertising and Public Relations 221006 Commissions and related charges 221007 Books, Periodicals & Newspapers 221009 Welfare and Entertainment 221011 Printing, Stationery, Photocopying and Binding 222001 Telecommunications 223004 Guard and Security services 223005 Electricity 223006 Water 224004 Cleaning and Sanitation 224005 Uniforms, Beddings and Protective Gear 226001 Insurances 227001 Travel inland 227004 Fuel, Lubricants and Oils 228001 Maintenance - Civil 228002 Maintenance - Vehicles 273102 Incapacity, death benefits and funeral expenses	Spent 2,250 375 1,063 375 850 750 375 2,625 2,000 500 1,055 500 133 1,875 1,500 1,000 1,025 500

Reasons for Variation in performance

Total	18,750
Wage Recurrent	0
Non Wage Recurrent	18,750
AIA	0
Total For SubProgramme	83,730
Wage Recurrent	0
Non Wage Recurrent	83,730
AIA	0

Recurrent Programmes

Subprogram: 26 NARO Internal Audit

Outputs Provided

Output: 03 Internal Audit

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
- 1 report on Internal Audit value-added services to management and the organization as a whole produced Investigation reports produced.	- One report on Investigation produced. - One report on Governance, risk and control produced - One reports on compliance with applicable laws, rules and regulations produced. - Minutes & report on the functional monitoring and evaluation plus follow up of audit recommendations. - One report on policy gaps analysis produced. - Two review routine meetings and report on Risks and mitigation controls at 4 PARI's held - Two Audit staff Re-tooled on Risk management and reporting . - One review report on Risks and mitigation controls at PARI's produced.	Item 227001 Travel inland	Spent 13,306

Reasons for Variation in performance

Total	13,306
Wage Recurrent	0
Non Wage Recurrent	13,306
AIA	0
Total For SubProgramme	13,306
Wage Recurrent	0
Non Wage Recurrent	13,306
AIA	0

Recurrent Programmes

Subprogram: 27 National Coffee Research Institute

Outputs Provided

Output: 01 Generation of agricultural technologies

- Coffee wilt disease incidence and distribution in S.W Uganda; - Protein sequence data, specific primer designed; - RNA sequence data; - At least four markers designed and synthesized.	Tool for collecting business information on CWD-r ready for validation	Item 211103 Allowances (Inc. Casuals, Temporary) 221007 Books, Periodicals & Newspapers 224006 Agricultural Supplies 227001 Travel inland 227004 Fuel, Lubricants and Oils	Spent 1,650 1,375 2,710 5,274 1,000
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Reasons for Variation in performance

Total 12,009

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
		Wage Recurrent	0
		Non Wage Recurrent	12,009
		AIA	0

Output: 02 Research extension interface promoted and strengthened

50% ICT assets fully functional.

Item	Spent
221008 Computer supplies and Information Technology (IT)	600
221011 Printing, Stationery, Photocopying and Binding	80

Reasons for Variation in performance

Total	680
Wage Recurrent	0
Non Wage Recurrent	680
AIA	0

Output: 04 Agricultural research capacity strengthened

Institute assets and activity sites secure
Governance committees facilitated,
Management committees facilitated and
Staff facilitated (Staff allowances, wages,
welfare Lunch and break tea provided for
staff; Fuel and oils for vehicles and
motorcycles procured; stationery, books,
newspapers, Journals Provisions made
include fuel and oils for vehicles and
motorcycles procured; stationery, books,
newspapers, Journals). 1. Vehicles serviced;
Office buildings maintained; Compound
maintained; Office, laboratory and field
equipment maintained.

2. Maintain effective ICT facilities;
Subscription for internet paid;
3. Utilities paid (water utility, electricity,
telephone). 1. Exhibitions attended;
2. Staff & stakeholder meetings held;
3. Technologies disseminated and people
reached.

NACORI infrastructure clean, safe and
secure.
- Fully functional advisory and contracts
committees.
- NACORI work force of 43 facilitated.
- NACORI fleet of five vehicles and one
tractor maintained.
- 1000 coffee and cocoa farmers accessing
NACORI technologies during Daily
Monitor farm clinic in Kituza.

Item	Spent
221103 Allowances (Inc. Casuals, Temporary)	2,750
221001 Advertising and Public Relations	625
221006 Commissions and related charges	900
221007 Books, Periodicals & Newspapers	600
221009 Welfare and Entertainment	1,138
221011 Printing, Stationery, Photocopying and Binding	750
222001 Telecommunications	750
222002 Postage and Courier	250
223004 Guard and Security services	2,375
223005 Electricity	3,000
224004 Cleaning and Sanitation	1,000
225001 Consultancy Services- Short term	14,230
226001 Insurances	500
227004 Fuel, Lubricants and Oils	875
228002 Maintenance - Vehicles	1,500
228003 Maintenance – Machinery, Equipment & Furniture	500
273102 Incapacity, death benefits and funeral expenses	638

Reasons for Variation in performance

Total	32,380
Wage Recurrent	0
Non Wage Recurrent	32,380
AIA	0

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
		Total For SubProgramme	45,069
		Wage Recurrent	0
		Non Wage Recurrent	45,069
		AIA	0

Development Projects

Project: 0382 Support for NARO

Outputs Provided

Output: 01 Generation of agricultural technologies

		Item	Spent
1. Nutrient enhanced maize product commercialized;	At NARL,		
2. Maize based product industrial platform and products based enterprises and maize supply chain;	1. A nutrient profile of 5 snack formulations.	211103 Allowances (Inc. Casuals, Temporary)	473,168
3. Efficiency and timeliness of aflatoxin detection and monitoring;	2. Analytical and processing skills in instant Maize products.	221002 Workshops and Seminars	524,231
4. Linked circuit;	3. Optimal processing conditions and snack properties.	223005 Electricity	111,148
5. Capacities enhan		224001 Medical Supplies	351,557
Periodic status and performance reports, briefs, bulletins and news letters		224006 Agricultural Supplies	632,494
Follow-on Project, NARO MTP, Tools, methodologies RMIS developed	4. Instant Maize snack package developed.	227001 Travel inland	262,154
Performance of Beneficiaries and technologies documented	- At NAOSEC, RMI system specifications developed.	227004 Fuel, Lubricants and Oils	159,457
NARO PMER capacity Enhanced Membership to Uganda Eval. A	At NALIRRI,		
1. Climate-smart Lablab and brachiaria varieties with Information and agronomic packages.	(1) Identified 14 lablab lines with high crude protein content (above 24%) and limited levels of anti-nutritional compounds selected for DUS and multi-locational trials.		
2. Dairy and poultry feed formulations	(2) Information on lablab research for development disseminated to over 50 decision makers .		
3. Historical phenotypic data and NIRS calibrations	- At NAFIRRI, Four protocepts of low-cost high value Nile perch oil products developed.		
4. Institutional and research capacity.	- At NAFORRI,		
1. Low-cost high value Nile perch oil products	(1) 1,800 Bronze bug eggs produced for rearing C.nockae egg parasitoid .1200 Red gum lerp psyllids trapped and sexed for rearing P.bliteus bio-agents		
2. Linkages between fish processors and researchers	(2) 1,600 C.nockae and 1500 P.bliteus reared for release.		
3. Marketing strategies for Nile perch oil,	(3) 700 C.nockae and 1200 P.bliteus released agaisnt bronzebug and Red Lerp Psyllid in the field respectively; field monitoring revealed low recoveries (10%)of C.nockae but high recoveries for P.bliteus bio-agents(87%) in the field established		
4. Publications and information dissemination (scientific manuscripts, policy briefs, and posters):	(4) MSc student of Entomology completed course work and her research proposal approved.		
Technologies for control of red gum Lerp Psyllid and bronze bug in eucalyptus plantations			
1. High yielding, early maturing and late blight resistant potato varieties;			
2. Propagation system for rapid multiplication of elite potato clones;			
3. Potato genotypes with heat and drought tolerance.			
- Highland maize varieties improved for resistance to MLN/common diseases;			
- Bio-fortified maize varieties for highland areas advanced and released;			
- Sustainable maize intensification technologies adopted;			
- Highland maize seed.	- At Kachwekano 15,000 plantlets generated from lab for planting.		

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Information and technologies of stingless beekeeping generated, packaged and disseminated. (socio-economics, stingless bee species, stingless bee products, bee hive types designed, Performance of stingless bee species)

1. Yeast starter culture and protocols.

2. Method for extraction of cocoa pulp from fresh cocoa beans;

3. Innovative method for cocoa fermentation and utility model;

4. 2 value added products from cocoa pulp;

5. Cocoa manuals developed and demos.

1) Genetic diversity of tea germplasm compared and determined;

2) Biochemical characteristics and cup quality of selected clones compared and determined;

3) Production of specialty teas (green, white, silver, purple, yellow) enhanced;

4) Dissemination

1. High yielding, resilient and low-tannin coloured sorghum varieties developed and promoted in food and feed value chains;

2. Training packages, modules and approaches for effective sorghum production technologies developed and disseminated.

1. Current status of farmer's knowledge, perceptions and practices on the production of management of Tomato and passion fruit fields understood.

2. Improved Tomato lines with multiple resistances to major diseases in Uganda

3. Improved Passion fruit

1. Screen house;

2. Germplasm characterized;

3. Seed multiplication on station.

1. Occurrence/infestation levels mapped

2. Communities integrated in biological control

3. Biological control agents and Socio-economic impacts established

4. Extent of spread reduced to manageable levels

5. Economic functionality of the infested water b

Strategic Fisheries plans, developments shared and effectively reviewed and framework implementation plans generated. Clientele oriented aquaculture development plans implemented.

1. Two sorghum varieties with farmer preferred attributes released;

2. 9 farmer groups empowered

3. Agronomic and soil management packages

4. Two Publications in scientific journals

1. Milk based products with potential for clinical improvement of exacerbated cases of stomach ulcers and low body anti-

- Testing has reached sub-culture level six.

No differences observed yet .

- At Buginyanya

(1) 5 QPM (Quality Protein Maize)

hybrids with highland adaptability

ascertained. One MLN PYT at grain

hardening stage at Ikulwe, Mayuge.

At NALIRRI,

1) Colony performance data of sting-less

bees reared under two different hive

design prototypes determined .

2) Two dissemination materials developed

- 1 brochure titled "domestication of sting-

less bees in Uganda and 1 pull up banner

for the project"

3) Disseminated information on sting-less

bee research at the WFD celebrations and

to over 50 key decision makers at

Nakyasasa..

- Prototype available for evaluation.

- A fabricated stainless cocoa juice extraction press of 15 kg capacity to hygienically extract 20% cocoa juice.

- At NACORI 25 Extension officers and

model cocoa farmers trained in

Bundibugyo, Kasawo and Buikwe.

Wine and brandy developed from the

juice, currently under maturation at

Makerere University incubation center.

At Rwebitaba,

(1) Established and maintained an on

station nursery of 20,000 clones of

specialty tea.

(2) Survey carried in Bushenyi, and

kanungu factories, no factory found

producing specialty tea.

(3) 20 samples of tea clones collected and

taken to NaCRRI for DNA analysis.

- At NaCRRI, Selection of the 12

promising tomato varieties : AVTO1315,

AVTO0301, AVTO1701, AVTO1424,

AVTO1219, AVTO1429, AVTO0102,

ADV1287A, MT56, Pruna and Vega has

been conducted.

National Fisheries research and development agenda strengthened.

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

oxidant capacities; - At Abi, 84 lines evaluated for height and maturity period.

2. Develop products using targeted isotope labelled analytical procedures and sensory analyses; 1) One milk product fortified with plant-based pharmaceutical compounds against cancer constituted and nutritionally profiled.

3. New strategies 5,000 assorted horticultural seedlings maintained.

At least, 2,000kgs of maize, 1,000kgs of Beans, 1,000bags of Cassava and 5,000 assorted horticultural seedlings produced.

NARO tick vaccine commercialised - At NALIRRI, At Efficacy of four candidate anti-tick vaccine molecules against brown ear tick, blue tick and bont legged tick validated through on-station clinical trial at Nakyesasa.

Increased fish production in cages and ponds. Information dissemination using on-station demonstrations like the live fish aquarium, crocodile pen fish museum and fish ponds. - One Ph.D student on vaccinomics supported.

1. Low-cost diagnostic kit (prototype) that detects TiLV in the field.

2. Geospatial map and risk factors indicating. (i) Participated in several information dissemination platforms including: The Agricultural show, the World Food Day at Bulindi ZARDI (16th October 2019), 2nd Fish festival at Jinja (1st December 2019), World Fisheries day at Kiyindi landing site (21st November 2019), A talk show held on NTV to raise awareness about fisheries, 13 bibliographic records of grey fisheries literature prepared for inclusion in Aquatic Sciences and Fisheries information system (ASFA database), transmitted electronic fisheries information to and data to databases, outreach and stakeholders in need of information, Fisheries information disseminated to over 2000 school children.

3. Socio-economic impact.

4. Capacity of actors strengthened.

Fruit tree seedling and product value chains supported

Rice technologies developed, disseminated and accessed

Diversity of algae species that are efficient in bio filtration determined;

Efficacy of different algae strains in effluent bio-filtration;

Protocol for propagating the most suitable strains;

Potential of identified algae for biofuel production

Tree seedling platform supported

At NAFIRRI,

(1) Pocket Kit for Nucleic Acid Co-prep Kit and the TiLV reagent Set for 500 samples procured;

(2) Occurrence of Tilapia Lake Virus (TiLV) on 40 fish farms in the Central and Eastern AEZs established. Results indicated 18 farms tested negative for TiLV, with parasite prevalence as follows:

PARASITE	Prevalence (%)
NUMBER OF CASES	
Trichodina sp.	26.2
152	
Myxobolus sp..	7.93
46	
Clinostomum sp.	4.48
26	
Dactylogyrus sp.	14.48
84	
Neascus	10.86
63	
Acanthocentis sp.	1.9
11	

(from 582 fish samples examined)
At NAROSEC, Contract for supply of

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

tissue culture laboratory awarded to service provider in December 2019 - , At Buginyanya, Demo on best performing NERICA upland rice cultivars at harvesting stage. Rice nutrient management trial also at harvesting stage at Ikulwe.

1) Identified and nutritionally characterised two strains of micro-algae including *Spirulina platensis* & *Spirulina lonar* as potential low-cost and high value protein sources in dairy and fish feeds.

2) Designed and constructed one race way pond for massive production of micro-algae at Nakyesasa.

Contract for supply of Tissue culture laboratory awarded to service provider in December

Reasons for Variation in performance

Total	2,514,209
GoU Development	2,514,209
External Financing	0
AIA	0

Output: 02 Research extension interface promoted and strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
		Item	Spent
1. Factors influencing adoption of technologies	At Bulindi,	211103 Allowances (Inc. Casuals, Temporary)	200
2. Factors that affect farmers' ability to learn	(1) Online data collection tool developed, 21 enumerators from different institutes were trained in real time data collection application, questionnaire for the quantitative survey developed.	221001 Advertising and Public Relations	188,220
3. Farm typologies and characteristics of adopters and non-adopters		221002 Workshops and Seminars	279,776
4. Model to enhance the efficiency of the domino effect		221007 Books, Periodicals & Newspapers	3,758
5. Capacity of farmer developed	(2) Baseline survey in 8 districts of LACZ conducted.	221008 Computer supplies and Information Technology (IT)	60,762
1. 2nd generation NARO PAH-Safe technologies adapted		221011 Printing, Stationery, Photocopying and Binding	50,929
2. Information on the acceptability of smoked fish processed	(3) Construction of the goat feedlot and breeding unit ongoing.	222001 Telecommunications	280
3. Fish Enterprises engaged in processing/marketing of smoked fish product		222003 Information and communications technology (ICT)	8,607
4. Fish entrepreneurs with knowledge on processing and marketing	(4) Designed feedlot units.	227001 Travel inland	129,337
Corporate image enhanced	(5) Acquired pasture germ plasm and established mother gardens.	227004 Fuel, Lubricants and Oils	335
- Knowledge and informations products produced and distributed;	(6) Conserved 2.2 tones of silage. (Napier and lablab).		
- Patents and Patentable information produced and distributed;	At NARL,		
- Corporate, Scientific, Media and Extension information products produced and distributed.	(1) Tools for data collection Data on economic viability collected from from 2 fish landing sites (Katosi and Kiyindi). - At NALIRRI, Radio and Television talk shows organised, Design brochures for livestock and fish technologies. At DATP, 1. CKM Strategy popularized to 53 stakeholders including members of the user committee, NARO top management, reps of CGIARs, Makerere University, NGOs and CSOs. 2. During the stakeholder engagement, a structure of the implementation plan was developed.		

Reasons for Variation in performance

Total	722,204
GoU Development	722,204
External Financing	0
AIA	0

Output: 04 Agricultural research capacity strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	US\$ Thousand
NARO staff supported to enhance competencies		Item	Spent
Marine vessel CORMORANT insured	- Procurement process on-going for purchase of insurance for .marine vessel Hamerkop and MV Ibis.	221002 Workshops and Seminars	38,139
1. Laboratory block refurbishment and/or construction	- Marine vessel cormorant needs complete overhaul.	221003 Staff Training	231,820
1. Laboratory block refurbishment and/or construction	- Procurement process ongoing for purchase of assortment of supplies and small office and laboratory equipment	221004 Recruitment Expenses	99,217
2. Establishment of laboratories - Consultancies (technical backstopping)	- NARO physical resources functional, clean, secure, safe and maintained an enabling office environment.	221006 Commissions and related charges	128,337
3. Equipment and Tools	- Framework Contract signed running for a period of One (1) Year.	221009 Welfare and Entertainment	41,150
4. Furniture and supplies	- Fencing of surveyed NARO land - Tender concluded. Framework contracts signed with various Service providers. Call off orders to be placed as and when need arises.	221012 Small Office Equipment	912
5. Training of staff	- Surveyed NARO Land in Tororo (Usukulu).	221016 IFMS Recurrent costs	17,420
NARO physical resources maintained		221017 Subscriptions	31,460
NARO land surveyed, secured and titled		222003 Information and communications technology (ICT)	5,800
		223005 Electricity	9,211
		225001 Consultancy Services- Short term	264,533
		226001 Insurances	100,000
		226002 Licenses	39,054
		227001 Travel inland	194,959
		227002 Travel abroad	171,112
		227004 Fuel, Lubricants and Oils	92,334
		228001 Maintenance - Civil	10,488
		228002 Maintenance - Vehicles	172,742
		228003 Maintenance – Machinery, Equipment & Furniture	7,637
		228004 Maintenance – Other	1,250

Reasons for Variation in performance

Total	1,657,575
GoU Development	1,657,575
External Financing	0
AIA	0

Outputs Funded

Output: 51 Payments to International Organisations (CGIAR, ASARECA, WARDA)

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Item	Spent
International subscription and obligations settled for ASARECA, AFRICARICE, CAB International, International Plant Genetics Research Institute (PGRC), Biodiversity International, GENOMIC (COFFEE), Biosciences eastern and central Africa (BecA) .	- Subscription made (part-2) for International subscription (Biodiversity International, ILRI).	262201 Contributions to International Organisations (Capital)	361,397
		264101 Contributions to Autonomous Institutions	1,500

Reasons for Variation in performance

Total	362,897
GoU Development	362,897
External Financing	0
AIA	0

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
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Capital Purchases

Output: 72 Government Buildings and Administrative Infrastructure

		Item	Spent
Functional and rejuvenated PARIs	At NAROSEC		
- Procurement process initiated	- Tender concluded.	281502 Feasibility Studies for Capital Works	2,206
- Procurement process initiated	- Contract signed with Sion Hardware Ltd.	281504 Monitoring, Supervision & Appraisal of capital works	42,930
Improved Infrastructure at Kajansi	Awaiting completion of civil Works for asbestos removal and roofing.	312101 Non-Residential Buildings	1,606,857
Improved value addition Infrastructure at Nabuin	Tendering completed. Contracts signed with various contractors. Works completed and awaiting payment.		
Contract awarded for value addition Infrastructure at Bulindi ZARDI	Tendering completed. Contracts signed with various contractors. Works completed and awaiting payment.		
Contract awarded	- Tendering concluded. Contracts awarded to various firms. Contracts signed with only two firms due to Insufficient funds on Vote. Awaiting signature of other Contracts		
1. RWEBITABA ZARDI staff houses rehabilitated and habitable;			
2. Office blocks rehabilitated;			
3. Drying yards/floors rehabilitated;			
4. Vehicle/equipment workshop rehabilitated.			
1. NASARRI staff houses rehabilitated and habitable;			
2. NASARRI office blocks rehabilitated and functional;			
3. NASARRI drying yards/floors rehabilitated and functional;			
4. NASARRI vehicle/equipment workshop rehabilitated and functional.			
	At NAROSEC		
	- Contractor on Board. Work In Progress at 50% (NASARRI office blocks).		

Reasons for Variation in performance

Total	1,651,993
GoU Development	1,651,993
External Financing	0
AIA	0

Output: 76 Purchase of Office and ICT Equipment, including Software

	Item	Spent
3 Laptops, 4 computers and accessories, Upgrade Server and LAN, 2 Photocopiers, Upgrade Ms Dynamics,		
- Ponar Grab, Van Dorn Water Sampler, Cadmium copper column, Hand held portable pump, Portable multi probe purchased	312202 Machinery and Equipment	19,238
Enhanced and unified NaFIRRI communication infrastructure (Internet, website, email, portals, Active directory, file services, replication and recovery services). NaFIRRI research developments shared on the different communication networks.	Tendering completed. Contracts signed with various contractors. Works completed and awaiting payment.	

Reasons for Variation in performance

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
		Total	19,238
		GoU Development	19,238
		External Financing	0
		AIA	0

Output: 77 Purchase of Specialised Machinery & Equipment

Functional Marine vessel CORMORANT overhauled New one tractor with implements - Initiate procurement process - Award contract Cage equipments and installation, tractor implements like Loader, Slasher, echo sounder ,radar, fire extinguishers, public address system,money counting machine and other water vessel purchased equipments Assortment of value addition equipment for NACRRI Assortment of value addition equipment for Abi ZARDI Assortment of value addition equipment for Bulindi ZARDI Assortment of value addition equipment for Nabuin ZARDI Assortment of value addition equipment for NAFIRRI Assortment of value addition equipment for NAFORRI Assortment of value addition equipment for NARL-Kawanda	Procurement still in Pipeline. Advert placed in the New vision Newspaper. Bid Closure/Opening is 8th January 2020. Tender concluded. Contract signed awaiting delivery and Installation of the equipment M/S Vitro Cow-Kenya identified to supply equipment. Bid amount is UGX 1,469,691,800. Prioritisation of equipment with end users to fit within budget. Insufficient funds. Awaiting submission of Bills of Quantities by the end user. Procurement handled at Nabuin. Still awaiting for submission of BOQs by the user department. Tender concluded. Contract signed. Works completed awaiting payment.	Item 312202 Machinery and Equipment	Spent 54,188
		Total	54,188
		GoU Development	54,188
		External Financing	0
		AIA	0

Reasons for Variation in performance

Output: 78 Purchase of Office and Residential Furniture and Fittings

An assortment of new furniture and laboratory fittings for NACRRI offices and laboratory New furniture and assorted laboratory fittings for new offices and laboratory	Procurement in advanced stages awaiting contract signature Contracts were signed with M/S Pinnacle Concepts and M/S Nina Interiors. Items delivered and assembled at National Secretariat.	Item 312203 Furniture & Fixtures	Spent 150,748
		Total	150,748
		GoU Development	150,748
		External Financing	0

Reasons for Variation in performance

		Total	150,748
		GoU Development	150,748
		External Financing	0

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
		AIA	0
		Total For SubProgramme	7,133,053
		GoU Development	7,133,053
		External Financing	0
		AIA	0

Development Projects

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

Outputs Provided

Output: 01 Generation of agricultural technologies

		Item	Spent
1. Atleast 640 acres of land planted for production of soya and maize grain; hay and silage; bee forage	Established livestock feed at Maruzi:		
2. 4200 tons of maize silage produced, 120 tons of hay and grass silage produced	1) 377 tones of conserved feed (320 tones of maize silage, 15, tones of maize seed, 42 tones of hay (round bales)	211103 Allowances (Inc. Casuals, Temporary)	78,185
		221002 Workshops and Seminars	26,500
		224001 Medical Supplies	30,000
		224006 Agricultural Supplies	120,000
	2) 1064 kgs forgae seed p(Chloris) produced at Maruzi	227001 Travel inland	19,750
		227004 Fuel, Lubricants and Oils	67,500
	3) 232.6 acres of forage production fields mainatined at nakyesasa (140 acres of chloris, 70 acres of maize, 9 acres of stylo, 1.6 acres of habarium, 10 acres of experimental feilds and 2 acres of caliandra)		
	4) 100 acres of forage seed (50 acres of chloris fields & 50 acres of soya bean sead) maintained at maruzi.		

Reasons for Variation in performance

Total	341,935
GoU Development	341,935
External Financing	0
AIA	0

Output: 02 Research extension interface promoted and strengthened

		Item	Spent
Internet bill for quarter 2 paid	- Functional internet system at Nakyesasa.		
		222003 Information and communications technology (ICT)	30,000

Reasons for Variation in performance

Total	30,000
GoU Development	30,000
External Financing	0
AIA	0

Output: 04 Agricultural research capacity strengthened

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
Silage bunk renovated at Nakyesasa and office block connected to the existing solar system	1) Five staff office blocks connected to solar system	Item	Spent
	2) One bore hole and four stance latrine renovated at Maruzi	223005 Electricity	10,000
Institute vehicles maintained	3) Five staff office blocks connected to RAN internet system	228001 Maintenance - Civil	75,000
Pay electricity bills		228002 Maintenance - Vehicles	50,000
Institute assets relocated from Tororo to Nakyesasa and Maruzi	4) One bore hole and four stance latrine renovated at Maruzi		
	5) Ten fire extinguishers installed at nakyesasa;		
	6) small scale power-driven mobile Milking system in place		
	7) CCTV camera system installed at nakyesasa to boost security and research monitoring		
	8) one Calf weighing scale equipment for growth monitoring of calves		
	9) one concrete slab and accompanying water system composed of 2 1000liter-water tanks for hydroponic feed production system installed at nakyesasa		
	- Fully functional transport assets (3 vehicles).		
	- Fully functional institute assets including liquid nitrogen production, cold room storage of forage germplasm and sample preservation.		

Reasons for Variation in performance

Total	135,000
GoU Development	135,000
External Financing	0
AIA	0

Capital Purchases

Output: 72 Government Buildings and Administrative Infrastructure

Vote:142 National Agricultural Research Organisation

QUARTER 2: Outputs and Expenditure in Quarter

Outputs Planned in Quarter	Actual Outputs Achieved in Quarter	Expenditures incurred in the Quarter to deliver outputs	UShs Thousand
Experimental fields attendant office space established at Maruzi Silage bunk renovated at Nakyesasa and office block connected to the existing solar system	1) Five staff office blocks connected to solar system. 2) One bore hole and four stance latrine renovated at Maruzi. 3) Five staff office blocks connected to RAN internet system. 4) Ten fire extinguishers installed at nakyesasa; 5) one concrete slab and accompanying water system composed of two 1000 liter-water tanks for hydroponic feed production system installed at nakyesasa.	Item	Spent
	1) Five staff office blocks connected to solar system 2) One bore hole and four stance latrine renovated at Maruzi 3) Five staff office blocks connected to RAN internet system 4) One bore hole and four stance latrine renovated at Maruzi 5) Ten fire extinguishers installed at nakyesasa; 6) small scale power-driven mobile Milking system in place 7) CCTV camera system installed at nakyesasa to boost security and research monitoring 8) one Calf weighing scale equipment for growth monitoring of calves 9) one concrete slab and accompanying water system composed of 2 1000liter-water tanks for hydroponic feed production system installed at nakyesasa		

Reasons for Variation in performance

Total	0
GoU Development	0
External Financing	0
AIA	0

Output: 77 Purchase of Specialised Machinery & Equipment

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<i>US\$ Thousands</i>	Planned Outputs for the Quarter	Estimated Funds Available in Quarter (from balance brought forward and actual/expected releases)
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Program: 51 Agricultural Research

Recurrent Programmes

Subprogram: 01 Headquarters

Outputs Provided

Output: 01 Generation of agricultural technologies

	Item	Balance b/f	New Funds	Total
1. Prepare, Print and submit the NARO Annual Work Plan);				
2. Conduct Budget/Contracts committee meeting;				
3. Support PARIs during the QRPM;	211103 Allowances (Inc. Casuals, Temporary)	3,610	0	3,610
4. Conduct NAROSEC and NARO Wide ARPM and other stakeholder engagements;	221002 Workshops and Seminars	6,250	0	6,250
5. Status report on the work plan implementation.	221006 Commissions and related charges	62,158	0	62,158
	223006 Water	3,200	0	3,200
	227001 Travel inland	10,270	0	10,270
	Total	85,488	0	85,488
	<i>Wage Recurrent</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Non Wage Recurrent</i>	<i>85,488</i>	<i>0</i>	<i>85,488</i>
	<i>AIA</i>	<i>0</i>	<i>0</i>	<i>0</i>

Output: 02 Research extension interface promoted and strengthened

	Item	Balance b/f	New Funds	Total
- NARO visibility in public events and Agricultural shows enhanced;	221001 Advertising and Public Relations	76,156	0	76,156
- Improved technologies, planting materials and agricultural Information materials generated, promoted and availed to stakeholders;	221002 Workshops and Seminars	91,029	0	91,029
- Strengthen processes for linking research products industry.	227001 Travel inland	90,246	0	90,246
	Total	257,431	0	257,431
	<i>Wage Recurrent</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Non Wage Recurrent</i>	<i>257,431</i>	<i>0</i>	<i>257,431</i>
	<i>AIA</i>	<i>0</i>	<i>0</i>	<i>0</i>

Output: 04 Agricultural research capacity strengthened

	Item	Balance b/f	New Funds	Total
- Pay staff salaries, allowances, staff welfare, staff facilitation and staff retirement and medical benefit	211103 Allowances (Inc. Casuals, Temporary)	8,616	0	8,616
	221001 Advertising and Public Relations	152,289	0	152,289
- Staff facilitated to undertake/complete post graduate studies (PhD, MSc, Professional certifications)	221002 Workshops and Seminars	11	0	11
- Students supported to carry out research;	221003 Staff Training	1,735	0	1,735
- Short term skills improvement programs undertaken;	221006 Commissions and related charges	2,681	0	2,681
- Travel support for International engagements.	221007 Books, Periodicals & Newspapers	1,543	0	1,543
- Financial Management compliance status of 16 PARIs established on quarterly basis;	221008 Computer supplies and Information Technology (IT)	9,457	0	9,457
- Documenting NARO financial transactions into financial statements quarterly, half year and annual accounts achieved;	221009 Welfare and Entertainment	6,746	0	6,746
- Internal and External audit exercise conducted.	221011 Printing, Stationery, Photocopying and Binding	39,164	0	39,164
- NARO financial information prepared consolidate/communicate/submitted (NARO financial year budget, Quarterly warranties; NARO wide budgets; Quarterly/Annual financial and supervision reports.	221012 Small Office Equipment	2,166	0	2,166
- Budget monitored	221016 IFMS Recurrent costs	48,510	0	48,510
	222001 Telecommunications	5,640	0	5,640

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<i>US\$ Thousand</i>	Planned Outputs for the Quarter	Estimated Funds Available in Quarter (from balance brought forward and actual/expected releases)			
- NARO financial payments concluded.	222002 Postage and Courier	1,355	0	1,355	
- Managing and maintaining fleet & office equipment;	222003 Information and communications technology (ICT)	284	0	284	
- Managing utilities;	223004 Guard and Security services	263	0	263	
- Maintaining office space and infrastructure;	223005 Electricity	39,649	0	39,649	
- Managing cleaning services;	223006 Water	9,130	0	9,130	
- Availing staff transport	224004 Cleaning and Sanitation	4,582	0	4,582	
- Managing security	224005 Uniforms, Beddings and Protective Gear	24,008	0	24,008	
NARO land assets titled, monitored and secured;	224006 Agricultural Supplies	945	0	945	
-NARO Land issues attended to;	225001 Consultancy Services- Short term	10,965	0	10,965	
- NARO Infrastructure (office, laboratory, residence, farm and field) facilities monitored and maintained.	226001 Insurances	49,077	0	49,077	
- MoUs, contracts and SMTAs drafted, reviewed and signed and legal advisory rendered.	227001 Travel inland	65,901	0	65,901	
- NARO represented in courts of judicature, in liaison with external legal counsel,	227002 Travel abroad	49,371	0	49,371	
- Legal advice and guidance to the NARO Governing Council and Management;	227004 Fuel, Lubricants and Oils	34,982	0	34,982	
- Assessment report of PARI levels of Compliance;	228001 Maintenance - Civil	69,407	0	69,407	
- Annual workshop for NARO Procurement Officers and committees	228002 Maintenance - Vehicles	66,250	0	66,250	
- NARO Procurement Plan;	228003 Maintenance – Machinery, Equipment & Furniture	31,212	0	31,212	
- report on Board of Survey for Disposal/ Evaluation of NARO Assets.	228004 Maintenance – Other	19,678	0	19,678	
- Top Management (TPM) meetings and other committees activities facilitate;	273102 Incapacity, death benefits and funeral expenses	20,955	0	20,955	
- Coordination, lobbying and supervision of research and development conducted;	Total	776,571	0	776,571	
- Undertake and participate in engagement with stakeholders, collaborators and dev. partners.	Wage Recurrent	0	0	0	
	Non Wage Recurrent	776,571	0	776,571	
	AIA	0	0	0	

Subprogram: 26 NARO Internal Audit

Outputs Provided

Output: 03 Internal Audit

	Item	Balance b/f	New Funds	Total
Investigation reports produced	221002 Workshops and Seminars	7,801	0	7,801
- 1 report on Governance, risk and control produced.	221003 Staff Training	1,400	0	1,400
- 1 report on compliance with applicable laws, rules and regulations produced.	227001 Travel inland	10,694	0	10,694
	Total	19,895	0	19,895
	Wage Recurrent	0	0	0
	Non Wage Recurrent	19,895	0	19,895
	AIA	0	0	0

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<i>US\$ Thousands</i>	Planned Outputs for the Quarter	Estimated Funds Available in Quarter (from balance brought forward and actual/expected releases)
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Development Projects

Project: 0382 Support for NARO

Outputs Provided

Output: 01 Generation of agricultural technologies

	Item	Balance b/f	New Funds	Total
1. Yeast starter culture and protocols.				
2. Method for extraction of cocoa pulp from fresh cocoa beans;	211103 Allowances (Inc. Casuals, Temporary)	31,018	0	31,018
3. Innovative method for cocoa fermentation and utility model;	221002 Workshops and Seminars	158,197	0	158,197
4. 2 value added products from cocoa pulp;	223001 Property Expenses	2,775	0	2,775
5. Cocoa manuals developed and demos.	223005 Electricity	15,387	0	15,387
1. Two sorghum varieties with farmer preferred attributes released;	224001 Medical Supplies	661	0	661
2. 9 farmer groups empowered	224006 Agricultural Supplies	4	0	4
3. Agronomic and soil management packages	227001 Travel inland	44,968	0	44,968
4. Two Publications in scientific journals	227004 Fuel, Lubricants and Oils	4,928	0	4,928
1. Current status of farmer's knowledge, perceptions and practices on the production of management of Tomato and passion fruit fields understood.		Total	257,938	0
2. Improved Tomato lines with multiple resistances to major diseases in Uganda		GoU Development	257,938	0
3. Improved Passion fruit		External Financing	0	0
		AIA	0	0

Periodic status and performance reports, briefs, bulletins and news letters

Follow-on Project, NARO MTP, Tools, methodologies

RMIS developed

Performance of Beneficiaries and technologies documented

NARO PMER capacity Enhanced

Membership to Uganda Eval. A

NARO tick vaccine commercialised

Rice technologies developed, disseminated and accessed

1. Climate-smart Lablab and brachiaria varieties with Information and agronomic packages.

2. Dairy and poultry feed formulations

3. Historical phenotypic data and NIRS calibrations

4. Institutional and research capacity.

1. Occurrence/infestation levels mapped

2. Communities integrated in biological control

3. Biological control agents and Socio-economic impacts established

4. Extent of spread reduced to manageable levels

5. Economic functionality of the infested water b

1. Low-cost diagnostic kit (prototype) that detects TILV in the field.

2. Geospatial map and risk factors indicating.

3. Socio-economic impact.

4. Capacity of actors strengthened.

- Highland maize varieties improved for resistance to MLN/common diseases;

- Bio-fortified maize varieties for highland areas advanced and released;

- Sustainable maize intensification technologies adopted;

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- Highland maize seed.

1. Nutrient enhanced maize product commercialized;
2. Maize based product industrial platform and products based enterprises and maize supply chain;
3. Efficiency and timeliness of aflatoxin detection and monitoring;
4. Linked circuit;
5. Capacities enhan

1. High yielding, resilient and low-tannin coloured sorghum varieties developed and promoted in food and feed value chains;
2. Training packages, modules and approaches for effective sorghum production technologies developed and disseminated.

Diversity of algae species that are efficient in bio filtration determined;
Efficacy of different algae strains in effluent bio-filtration;
Protocol for propagating the most suitable strains;
Potential of identified algae for biofuel production

Information and technologies of stingless beekeeping generated, packaged and disseminated. (socio-economics, stingless bee species, stingless bee products, bee hive types designed, Performance of stingless bee species)

Technologies for control of red gum Lerp Psyllid and bronze bug in eucalyptus plantations

1. High yielding, early maturing and late blight resistant potato varieties;
2. Propagation system for rapid multiplication of elite potato clones;
3. Potato genotypes with heat and drought tolerance.

- 1) Genetic diversity of tea germplasm compared and determined;
- 2) Biochemical characteristics and cup quality of selected clones compared and determined;
- 3) Production of specialty teas (green, white, silver, purple, yellow) enhanced;
- 4) Dissemination

1. Milk based products with potential for clinical improvement of exacerbated cases of stomach ulcers and low body anti-oxidant capacities;
2. Develop products using targeted isotope labelled analytical procedures and sensory analyses;
3. New strategies

1. Screen house;
2. Germplasm characterized;
3. Seed multiplication on station.

1. Low-cost high value Nile perch oil products
2. Linkages between fish processors and researchers
3. Marketing strategies for Nile perch oil,
4. Publications and information dissemination (scientific manuscripts, policy briefs, and posters):

At least, 2,000kgs of maize, 1,000kgs of Beans, 1,000bags of Cassava and 5,000 assorted horticultural seedlings produced.

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<i>US\$ Thousands</i>	Planned Outputs for the Quarter	Estimated Funds Available in Quarter (from balance brought forward and actual/expected releases)
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Increased fish production in cages and ponds. Information dissemination using on-station demonstrations like the live fish aquarium, crocodile pen fish museum and fish ponds.

Strategic Fisheries plans, developments shared and effectively reviewed and framework implementation plans generated. Clientele oriented aquaculture development plans implemented.

Tree seedling platform supported

Fruit tree seedling and product value chains supported

Output: 02 Research extension interface promoted and strengthened

	Item	Balance b/f	New Funds	Total
1. 2nd generation NARO PAH-Safe technologies adapted				
2. Information on the acceptability of smoked fish processed	221001 Advertising and Public Relations	352,692	0	352,692
3. Fish Enterprises engaged in processing/marketing of smoked fish product	221002 Workshops and Seminars	437,641	0	437,641
4. Fish entrepreneurs with knowledge on processing and marketing	221007 Books, Periodicals & Newspapers	48,388	0	48,388
	221008 Computer supplies and Information Technology (IT)	35,474	0	35,474
1. Factors influencing adoption of technologies	221011 Printing, Stationery, Photocopying and Binding	172,254	0	172,254
2. Factors that affect farmers' ability to learn	222003 Information and communications technology (ICT)	208,543	0	208,543
3. Farm typologies and characteristics of adopters and non-adopters				
4. Model to enhance the efficiency of the domino effect	227001 Travel inland	64,800	0	64,800
5. Capacity of farmer developed				
	Total	1,319,791	0	1,319,791
	GoU Development	1,319,791	0	1,319,791
	External Financing	0	0	0
	AIA	0	0	0

Corporate image enhanced

- Knowledge and information products produced and distributed;
 - Patents and Patentable information produced and distributed;
 - Corporate, Scientific, Media and Extension information products produced and distributed.

Output: 04 Agricultural research capacity strengthened

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<i>US\$ Thousand</i>	Planned Outputs for the Quarter	Estimated Funds Available in Quarter (from balance brought forward and actual/expected releases)		
	Item	Balance b/f	New Funds	Total
1. Laboratory block refurbishment and/or construction				
1. Laboratory block refurbishment and/or construction	221002 Workshops and Seminars	107,180	0	107,180
2. Establishment of laboratories - Consultancies (technical backstopping)	221003 Staff Training	97,713	0	97,713
3. Equipment and Tools	221004 Recruitment Expenses	60,703	0	60,703
4. Furniture and supplies	221006 Commissions and related charges	93,839	0	93,839
5. Training of staff	221009 Welfare and Entertainment	33,850	0	33,850
NARO staff supported to enhance competencies	221016 IFMS Recurrent costs	23,970	0	23,970
NARO land surveyed, secured and titled	221017 Subscriptions	43,540	0	43,540
NARO physical resources maintained	223002 Rates	100,000	0	100,000
Marine vessel CORMORANT insured	225001 Consultancy Services- Short term	519,489	0	519,489
	226002 Licenses	53,316	0	53,316
	227001 Travel inland	178,719	0	178,719
	227002 Travel abroad	3,207	0	3,207
	227004 Fuel, Lubricants and Oils	43,141	0	43,141
	228002 Maintenance - Vehicles	56,002	0	56,002
	228003 Maintenance – Machinery, Equipment & Furniture	54,707	0	54,707
	228004 Maintenance – Other	4,000	0	4,000
	Total	1,473,378	0	1,473,378
	GoU Development	1,473,378	0	1,473,378
	External Financing	0	0	0
	AIA	0	0	0

Outputs Funded

Output: 51 Payments to International Organisations (CGIAR, ASARECA, WARDA)

	Item	Balance b/f	New Funds	Total
International subscription and obligations settled for ASARECA, AFRICARICE, CAB International, International Plant Genetics Research Institute (PGRC), Biodiversity International, GENOMIC (COFFEE), Biosciences eastern and central Africa (BeCA).	262201 Contributions to International Organisations (Capital)	29,400	0	29,400
	264101 Contributions to Autonomous Institutions	16,816	0	16,816
	Total	46,216	0	46,216
	GoU Development	46,216	0	46,216
	External Financing	0	0	0
	AIA	0	0	0

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Capital Purchases

Output: 72 Government Buildings and Administrative Infrastructure

Functional and rejuvenated PARIs	Item	Balance b/f	New Funds	Total
1. RWEBITABA ZARDI staff houses rehabilitated and habitable;	281501 Environment Impact Assessment for Capital Works	30,000	0	30,000
2. Office blocks rehabilitated;	281502 Feasibility Studies for Capital Works	127,794	0	127,794
3. Drying yards/floors rehabilitated;	281503 Engineering and Design Studies & Plans for capital works	200,000	0	200,000
4. Vehicle/equipment workshop rehabilitated.				
1. NASARRI staff houses rehabilitated and habitable;	281504 Monitoring, Supervision & Appraisal of capital works	70,421	0	70,421
2. NASARRI office blocks rehabilitated and functional;				
3. NASARRI drying yards/floors rehabilitated and functional;	312101 Non-Residential Buildings	593,481	0	593,481
4. NASARRI vehicle/equipment workshop rehabilitated and functional.	312104 Other Structures	30,000	0	30,000
	Total	1,051,695	0	1,051,695
Construction works near (50%) completion for Infrastructure for fish feeds at Kajansi		<i>GoU Development</i>	<i>1,051,695</i>	<i>0</i>
		<i>External Financing</i>	<i>0</i>	<i>0</i>
Construction works near (70%) completion for value addition Infrastructure at Nabuin		<i>AIA</i>	<i>0</i>	<i>0</i>
Construction works near (79.9%) completion for value addition Infrastructure at Bulindi ZARDI				
Construction works near (75%) completion for Nabuin ZARDI perimeter fence				
Contract awarded				
- Contract awarded				

Output: 76 Purchase of Office and ICT Equipment, including Software

	Item	Balance b/f	New Funds	Total
	312202 Machinery and Equipment	248,455	0	248,455
	Total	248,455	0	248,455
Computers (workstations), Firewall, UPSes, patchcodes, External Hard disc, internet data for ISP internet, modems, flash discs, external hard disks soft and hard ware		<i>GoU Development</i>	<i>248,455</i>	<i>0</i>
		<i>External Financing</i>	<i>0</i>	<i>0</i>
		<i>AIA</i>	<i>0</i>	<i>0</i>

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Output: 77 Purchase of Specialised Machinery & Equipment

	Item	Balance b/f	New Funds	Total
Irrigation equipment for one PARI	312202 Machinery and Equipment	371,688	0	371,688
Cage equipments and installation, tractor implements like Loader, Slasher, echo sounder ,radar, fire extinguishers, public address system,money counting machine and other water vessel purchased equipments		Total 371,688	0	371,688
		<i>GoU Development</i> 371,688	0	<i>371,688</i>
		<i>External Financing</i> 0	0	0
Functional Marine vessel CORMORANT overhauled		<i>AIA</i> 0	0	0

Assortment of value addition equipment for Abi ZARDI

- Pre-inspection and Delivery of equipment

Output: 78 Purchase of Office and Residential Furniture and Fittings

	Item	Balance b/f	New Funds	Total
New furniture and assorted laboratory fittings for new offices and laboratory	312203 Furniture & Fixtures	92,752	0	92,752
An assortment of new furniture and laboratory fittings for NACRRI offices and laboratory		Total 92,752	0	92,752
		<i>GoU Development</i> 92,752	0	<i>92,752</i>
		<i>External Financing</i> 0	0	0
		<i>AIA</i> 0	0	0

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

Capital Purchases

Output: 77 Purchase of Specialised Machinery & Equipment

	Item	Balance b/f	New Funds	Total
	312202 Machinery and Equipment	125,000	0	125,000
		Total 125,000	0	125,000
		<i>GoU Development</i> 125,000	0	<i>125,000</i>
		<i>External Financing</i> 0	0	0
		<i>AIA</i> 0	0	0
		GRAND TOTAL 6,126,298	0	6,126,298
		<i>Wage Recurrent</i> 0	0	0
		<i>Non Wage Recurrent</i> 1,139,384	0	<i>1,139,384</i>
		<i>GoU Development</i> 4,986,914	0	<i>4,986,914</i>

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<i>UShs Thousand</i>	Planned Outputs for the Quarter	Estimated Funds Available in Quarter (from balance brought forward and actual/expected releases)
		<i>External Financing</i> 0 0 0
		<i>AIA</i> 0 0 0