

# Vote:142 National Agricultural Research Organisation

## V1: Vote Overview

### I. Vote Mission Statement

To generate and disseminate appropriate, safe and cost effective technologies.

### II. Strategic Objective

- a. Client and impact-oriented, market responsive agricultural sector research agenda developed and implemented
- b. Capacity and efficiency of public and private agricultural sector research service provider teams to respond to client needs and market opportunities improved.
- c. Infrastructural and financial sustainability capacities to support and facilitate agricultural research enhanced and strengthened
- d. Mechanisms for contributing to agricultural research sector policy formulation and development strengthened.
- e. Quality assurance procedures in the NARS established and implemented.

### III. Major Achievements in 2017/18

A. Summary of Physical performance Under Vote function Output: General of agricultural technologies. The following have been achieved:

- a) In crops, 13 varieties have been submitted to the variety Release committee. These include Four bean varieties, Three Banana, two Maize - high potential highland varieties, three Sorghum (Highland), one Finger millet.
- b) In Engineering, 14 engineering prototypes and protocepts have been developed. These include:
  - One Engineering prototypes (Dryer blower).
  - Two Engineering prototypes (500kg capacity of NARO PAH-safe fish smoking kiln).
  - One Engineering prototypes (2nd prototype of 100kg capacity of NARO PAH-safe fish smoking kiln).
  - One Engineering prototypes (2nd prototype of 200kg capacity of NARO PAH-safe fish smoking kiln).
  - One Engineering prototypes (NARO PAH-safe liquid smoke distillation kiln).
  - One Engineering prototypes (First prototype Food Grade Fish Hammer Mill ).
  - One Engineering prototypes (Improved rotor prototype fabricated).
  - One Engineering prototypes ( venturi-crib structure).
  - One Engineering prototypes (Information on 2nd prototype biomass gasifier).
  - Engineering prototypes (Information on Briquetting machine performance).
  - One Engineering prototypes (Precooked Bean).
  - One Gasifier stove prototype.
  - One Carboniser prototype developed.
  - One Briquetting machine prototype developed.
- c) In Fish - One Improved Nile Tilapia strain. A strain that is fast growing with good market value
- d) 40 other different production technologies have also been generated
- e) 47 research studies under competitive grants scheme have been supported.

B. Summary of Physical performance Under Vote function Output: Research extension interface promoted & strengthened. The following have been achieved:

- a) 3 technological innovation platforms established/supported
- b) 20 technological innovations delivered to uptake pathways

C. Summary of Physical performance Under Vote function Output: Agricultural research Capacity strengthening (Staff only):

- a) 18 staff have been supported on going long term training on PHD.

### IV. Medium Term Plans

- 1) Understanding of farming systems in the different AEZs and establishing the extent to which previously released and adopted technologies have improved the farming systems and impacted people lives.
- 2) Development of new or improvement of existing technologies with increased resilience to biotic and abiotic constraints.
- 3) Increased focus on bio/fortification through development of crop varieties with enhanced nutrition.
- 4) Development of durable technologies to boost production and productivity in different environments.
- 5) Improvement of pest and disease surveillance through development of integrated options including but not limited to use of computerized early warning systems.

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**Vote:142** National Agricultural Research Organisation

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- 6) Improvement of pathogen diagnostic capacity through development of NAROs laboratory capacity.
- 7) Urgently respond to the FAW by understanding its distribution, genetic diversity, effect on yield, response to selected pesticides, host plant resistance, developing a surveillance strategy and exploring bio-control strategies.
- 8) Development of more up-to-date and relevant Integrated Pest/Disease Management (IPDM) packages for the control of old and new pests and diseases.
- 9) Develop agro-engineering technologies that reduce drudgery, save power and increase productivity for resource poor farmers.
- 10) Increase the development and dissemination of sustainable land management (SLM) technologies and interventions for increased productivity.
- 11) Increase density and coverage of adaptive trials and demos for an increased promotion and diffusion of NARO technologies.
- 12) Develop capacity of NARO PARIs in production of early generation seed and conducting core field based research through installing of irrigation systems to enable all year round seed production and field trials.
- 13) Develop the capacity of NARO in seed postharvest handling through establishment of a seed processing facility.
- 14) Further development of NAROs research capacity in human resources and infrastructure.
- 15) Research leadership in gender and youth responsiveness to boost productivity while at the same time creating employment.
- 16) Responding to increasing political demand for tighter connections between agricultural research and industries.
- 17) Exploiting the potential of the youth and women as a trigger for accelerated agricultural research for people impact.

# Vote:142 National Agricultural Research Organisation

## V. Summary of Past Performance and Medium Term Budget Allocations

Table 5.1: Overview of Vote Expenditures (US\$ Billion)

	2016/17 Outturn	2017/18		2018/19	MTEF Budget Projections				
		Approved Budget	Expenditure by End Dec		2019/20	2020/21	2021/22	2022/23	
<b>Recurrent</b>									
Wage	22.472	22.472	11.232	22.472	24.719	25.955	27.253	28.616	
Non Wage	6.922	7.311	3.536	7.099	8.661	9.960	11.952	14.342	
<b>Devt.</b>									
GoU	5.983	8.780	2.243	32.783	39.995	47.994	47.994	47.994	
Ext. Fin.	49.894	45.540	27.149	0.000	0.000	0.000	0.000	0.000	
<b>GoU Total</b>	<b>35.376</b>	<b>38.564</b>	<b>17.011</b>	<b>62.354</b>	<b>73.375</b>	<b>83.910</b>	<b>87.199</b>	<b>90.952</b>	
<b>Total GoU+Ext Fin (MTEF)</b>	<b>85.270</b>	<b>84.104</b>	<b>44.161</b>	<b>62.354</b>	<b>73.375</b>	<b>83.910</b>	<b>87.199</b>	<b>90.952</b>	
Arrears	0.000	0.007	0.000	0.114	0.000	0.000	0.000	0.000	
<b>Total Budget</b>	<b>85.270</b>	<b>84.112</b>	<b>44.161</b>	<b>62.468</b>	<b>73.375</b>	<b>83.910</b>	<b>87.199</b>	<b>90.952</b>	
<b>A.I.A Total</b>	<b>2.920</b>	<b>5.792</b>	<b>2.901</b>	<b>7.146</b>	<b>7.175</b>	<b>7.189</b>	<b>7.548</b>	<b>7.737</b>	
<b>Grand Total</b>	<b>88.190</b>	<b>89.903</b>	<b>47.062</b>	<b>69.614</b>	<b>80.550</b>	<b>91.098</b>	<b>94.747</b>	<b>98.689</b>	
<b>Total Vote Budget Excluding Arrears</b>	<b>88.190</b>	<b>89.896</b>	<b>47.062</b>	<b>69.500</b>	<b>80.550</b>	<b>91.098</b>	<b>94.747</b>	<b>98.689</b>	

## VI. Budget By Economic Classification

Table V6.1 2017/18 and 2018/19 Budget Allocations by Item

<i>Billion Uganda Shillings</i>	2017/18 Approved Budget				2018/19 Draft Estimates			
	GoU	Ext. Fin	AIA	Total	GoU	Ext. Fin	AIA	Total
<b>Output Class : Outputs Provided</b>	<b>33.184</b>	<b>33.240</b>	<b>5.792</b>	<b>72.216</b>	<b>43.883</b>	<b>0.000</b>	<b>7.146</b>	<b>51.029</b>
211 Wages and Salaries	22.481	2.431	0.827	25.739	23.565	0.000	0.944	24.509
212 Social Contributions	2.292	0.000	0.000	2.292	2.230	0.000	0.000	2.230
213 Other Employee Costs	2.060	0.000	0.000	2.060	2.162	0.000	0.000	2.162
221 General Expenses	3.144	7.603	1.286	12.033	5.518	0.000	1.397	6.916
222 Communications	0.512	0.859	0.027	1.398	0.861	0.000	0.039	0.900
223 Utility and Property Expenses	0.561	0.000	0.367	0.929	0.602	0.000	0.451	1.053
224 Supplies and Services	0.527	12.392	1.953	14.873	2.135	0.000	1.601	3.736
225 Professional Services	0.120	0.670	0.004	0.794	1.049	0.000	0.004	1.053
226 Insurances and Licenses	0.119	0.000	0.003	0.122	0.317	0.000	0.004	0.321
227 Travel and Transport	0.979	8.147	0.577	9.702	3.416	0.000	0.680	4.096
228 Maintenance	0.295	1.138	0.744	2.178	1.965	0.000	2.015	3.980
273 Employer social benefits	0.094	0.000	0.004	0.098	0.061	0.000	0.010	0.071
<b>Output Class : Outputs Funded</b>	<b>1.780</b>	<b>0.000</b>	<b>0.000</b>	<b>1.780</b>	<b>0.780</b>	<b>0.000</b>	<b>0.000</b>	<b>0.780</b>
262 To international organisations	1.780	0.000	0.000	1.780	0.750	0.000	0.000	0.750

# Vote:142 National Agricultural Research Organisation

264 To Resident Non-government units	0.000	0.000	0.000	0.000	0.030	0.000	0.000	0.030
<b>Output Class : Capital Purchases</b>	<b>3.600</b>	<b>12.300</b>	<b>0.000</b>	<b>15.900</b>	<b>17.691</b>	<b>0.000</b>	<b>0.000</b>	<b>17.691</b>
312 FIXED ASSETS	3.600	12.300	0.000	15.900	17.691	0.000	0.000	17.691
<b>Output Class : Arrears</b>	<b>0.007</b>	<b>0.000</b>	<b>0.000</b>	<b>0.007</b>	<b>0.114</b>	<b>0.000</b>	<b>0.000</b>	<b>0.114</b>
321 DOMESTIC	0.007	0.000	0.000	0.007	0.114	0.000	0.000	0.114
<b>Grand Total :</b>	<b>38.572</b>	<b>45.540</b>	<b>5.792</b>	<b>89.903</b>	<b>62.468</b>	<b>0.000</b>	<b>7.146</b>	<b>69.614</b>
<b>Total excluding Arrears</b>	<b>38.564</b>	<b>45.540</b>	<b>5.792</b>	<b>89.896</b>	<b>62.354</b>	<b>0.000</b>	<b>7.146</b>	<b>69.500</b>

## VII. Budget By Programme And Subprogramme

Table V7.1: Past Expenditure Outturns and Medium Term Projections by Programme and SubProgramme

<i>Billion Uganda shillings</i>	FY 2016/17 Outturn	FY 2017/18		2018-19 Proposed Budget	Medium Term Projections			
		Approved Budget	Spent By End Dec		2019-20	2020-21	2021-22	2022-23
<b>51 Agricultural Research</b>	<b>85.964</b>	<b>89.903</b>	<b>44.289</b>	<b>69.614</b>	<b>80.550</b>	<b>91.098</b>	<b>94.747</b>	<b>98.689</b>
01 Headquarters	27.911	34.058	14.035	35.239	38.978	41.181	44.830	48.400
0382 Support for NARO	5.983	8.780	2.243	32.783	39.995	47.994	47.994	47.994
07 National Crops Resources Research Institute	0.130	0.092	0.043	0.201	0.096	0.120	0.120	0.155
08 National Fisheries Resources Research Institute	0.115	0.096	0.045	0.092	0.098	0.115	0.115	0.145
09 National Forestry Resources Research Institute	0.111	0.094	0.045	0.077	0.084	0.115	0.115	0.145
10 National Livestock Resources Research	0.115	0.099	0.047	0.092	0.098	0.115	0.115	0.145
11 National Semi arid Resources Research	0.115	0.099	0.047	0.078	0.084	0.115	0.115	0.145
1139 ATAAS (Grant) EU, WB and DANIDA Funded	50.588	45.540	27.278	0.000	0.000	0.000	0.000	0.000
12 National Laboratories Research	0.130	0.110	0.051	0.106	0.110	0.120	0.120	0.155
13 Abi ZARDI	0.064	0.090	0.043	0.075	0.083	0.112	0.112	0.140
14 Bulindi ZARDI	0.075	0.086	0.038	0.083	0.083	0.112	0.112	0.140
15 Kachwekano ZARDI	0.071	0.090	0.043	0.090	0.097	0.112	0.112	0.140
16 Mukono ZARDI	0.069	0.082	0.042	0.086	0.097	0.112	0.112	0.140
17 Ngetta ZARDI	0.066	0.094	0.045	0.090	0.097	0.112	0.112	0.140
18 Nabium ZARDI	0.071	0.081	0.041	0.076	0.083	0.112	0.112	0.140
19 Mbarara ZARDI	0.060	0.090	0.043	0.079	0.083	0.112	0.112	0.140
20 Buginyaya ZARDI	0.067	0.094	0.045	0.105	0.111	0.112	0.112	0.140
21 Rwebitaba ZARDI	0.068	0.093	0.045	0.091	0.097	0.112	0.112	0.140
26 NARO Internal Audit	0.059	0.050	0.027	0.080	0.080	0.100	0.100	0.000
27 National Coffee Research Institute	0.095	0.086	0.042	0.091	0.098	0.115	0.115	0.145
<b>Total for the Vote</b>	<b>85.964</b>	<b>89.903</b>	<b>44.289</b>	<b>69.614</b>	<b>80.550</b>	<b>91.098</b>	<b>94.747</b>	<b>98.689</b>

# Vote:142 National Agricultural Research Organisation

Total Excluding Arrears	85.964	89.896	44.289	69.500	80.550	91.098	94.747	98.689
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## VIII. Programme Performance and Medium Term Plans

Table V8.1: Programme Outcome and Outcome Indicators ( Only applicable for FY 2018/19)

<b>Programme :</b>	51 Agricultural Research		
<b>Programme Objective :</b>	1. Develop and disseminate appropriate technologies, knowledge and information that meet client needs and respond to market opportunities 2. Develop the human and infrastructural capacity of National Agricultural Research System constituents to meet the dynamics of the demand for research products and services; 3. Empower and enhance participation of stakeholders in agricultural research demand articulation, output delivery and governance.		
<b>Responsible Officer:</b>	Director General		
<b>Programme Outcome:</b>	Increased production and productivity of priority and strategic commodities		
<i>Sector Outcomes contributed to by the Programme Outcome</i>			
<b>1. Increased production and productivity of priority and strategic commodities</b>			
<b>Outcome Indicators</b>	<b>Performance Targets</b>		
	<b>2018/19</b>	<b>2019/20</b>	<b>2020/21</b>
	<b>Target</b>	<b>Projection</b>	<b>Projection</b>
• Increased production and productivity at some level resulting from utilization of improved technologies	1.2%	1.5%	1.7%
<b>SubProgramme: 01 Headquarters</b>			
<i>Output: 01 Generation of agricultural technologies</i>			
No. of improved productivity technologies generated	5	5	5
No. of research studies under competitive grants scheme	20	30	40
<i>Output: 02 Research extension interface promoted and strengthened</i>			
No. of technological innovation platforms established/supported	5	5	5
No. of technological innovations delivered to uptake pathways	2	2	2
<b>SubProgramme: 0382 Support for NARO</b>			
<i>Output: 01 Generation of agricultural technologies</i>			
No. of improved productivity technologies generated	5	5	5
No. of new varieties submitted to Variety Release Committee for release	5	5	5
<i>Output: 02 Research extension interface promoted and strengthened</i>			
No. of technological innovation platforms established/supported	5	5	5
No. of technological innovations delivered to uptake pathways	5	5	5
<b>SubProgramme: 07 National Crops Resources Research Institute</b>			
<i>Output: 01 Generation of agricultural technologies</i>			
No. of improved productivity technologies generated	20	20	
	12	12	

# Vote:142 National Agricultural Research Organisation

No. of new varieties submitted to Variety Release Committee for release			
<b>SubProgramme: 08 National Fisheries Resources Research Institute</b>			
<i>Output: 01 Generation of agricultural technologies</i>			
No. of improved productivity technologies generated	12	12	
No. of new varieties submitted to Variety Release Committee for release	0	1	
<b>SubProgramme: 09 National Forestry Resources Research Institute</b>			
<i>Output: 01 Generation of agricultural technologies</i>			
No. of improved productivity technologies generated	10	10	15
<i>Output: 02 Research extension interface promoted and strengthened</i>			
No. of technological innovation platforms established/supported	1	1	1
No. of technological innovations delivered to uptake pathways	1	1	1
<b>SubProgramme: 10 National Livestock Resources Research</b>			
<i>Output: 01 Generation of agricultural technologies</i>			
No. of improved productivity technologies generated	10	15	15
<b>SubProgramme: 11 National Semi arid Resources Research</b>			
<i>Output: 01 Generation of agricultural technologies</i>			
No. of improved productivity technologies generated	15	15	15
No. of new varieties submitted to Variety Release Committee for release	5	5	5
<b>SubProgramme: 12 National Laboratories Research</b>			
<i>Output: 01 Generation of agricultural technologies</i>			
No. of improved productivity technologies generated	10	10	10
No. of new varieties submitted to Variety Release Committee for release	6	10	5
<b>SubProgramme: 13 Abi ZARDI</b>			
<i>Output: 02 Research extension interface promoted and strengthened</i>			
No. of technological innovation platforms established/supported	3	3	3
No. of technological innovations delivered to uptake pathways	10	10	10
<b>SubProgramme: 14 Bulindi ZARDI</b>			
<i>Output: 01 Generation of agricultural technologies</i>			
No. of improved productivity technologies generated	4	4	4
No. of new varieties submitted to Variety Release Committee for release	1	1	1
<b>SubProgramme: 15 Kachwekano ZARDI</b>			
<i>Output: 01 Generation of agricultural technologies</i>			
No. of improved productivity technologies generated	3	3	3
No. of new varieties submitted to Variety Release Committee for release	3	3	3

# Vote:142 National Agricultural Research Organisation

<b>SubProgramme: 16 Mukono ZARDI</b>			
<i>Output: 01 Generation of agricultural technologies</i>			
No. of improved productivity technologies generated	3	3	3
<i>Output: 02 Research extension interface promoted and strengthened</i>			
No. of technological innovation platforms established/supported	2	2	2
No. of technological innovations delivered to uptake pathways	3	3	3
<b>SubProgramme: 17 Ngetta ZARDI</b>			
<i>Output: 01 Generation of agricultural technologies</i>			
No. of improved productivity technologies generated	3	3	3
<i>Output: 02 Research extension interface promoted and strengthened</i>			
No. of technological innovation platforms established/supported	2	2	2
No. of technological innovations delivered to uptake pathways	3	3	3
<b>SubProgramme: 18 Nabium ZARDI</b>			
<i>Output: 01 Generation of agricultural technologies</i>			
No. of improved productivity technologies generated	3	3	3
<i>Output: 02 Research extension interface promoted and strengthened</i>			
No. of technological innovation platforms established/supported	1	1	1
No. of technological innovations delivered to uptake pathways	3	3	3
<b>SubProgramme: 19 Mbarara ZARDI</b>			
<i>Output: 01 Generation of agricultural technologies</i>			
No. of improved productivity technologies generated	3	3	3
<b>SubProgramme: 20 Buginyaya ZARDI</b>			
<i>Output: 01 Generation of agricultural technologies</i>			
No. of improved productivity technologies generated	10	5	5
No. of new varieties submitted to Variety Release Committee for release	2	2	2
<b>SubProgramme: 27 National Coffee Research Institute</b>			
<i>Output: 01 Generation of agricultural technologies</i>			
No. of improved productivity technologies generated	7	7	7
No. of new varieties submitted to Variety Release Committee for release	3	0	0

## IX. Major Capital Investments And Changes In Resource Allocation

Table 9.1: Major Capital Investment (Capital Purchases outputs over 0.5Billion)

# Vote:142 National Agricultural Research Organisation

FY 2017/18		FY 2018/19	
Appr. Budget and Planned Outputs	Expenditures and Achievements by end Dec	Proposed Budget and Planned Outputs	
<b>Vote 142 National Agricultural Research Organisation</b>			
<i>Program : 01 51 Agricultural Research</i>			
Development Project : 0382 Support for NARO			
<b>Output: 01 51 72 Government Buildings and Administrative Infrastructure</b>			
Enhance research operational at Rwebitaba ZARDI Enhanced office and laboratory space at NARL Functional and operational NALIRRI Enhance coffee research operational at NACORI Enhanced power supply for lighting and office equipment	Differed to next FY 2018-2019 - Differed to next FY 2018-2019 Clearance for Contracts committee for use of direct procurement got. Solar System for PGRC - Solicitation documents Cleared by Contracts committee and sent out.	Fully functional plant genetic resources Lab. Research facilities (including staff housing) at NaSARRI for enhanced technology generation rehabilitated Functional Biotechnology and Food and Agribusiness laboratories at National Agricultural Research Laboratories (NARL). Habitable accommodation for staff. Habitable staff accommodation Research facilities (including staff housing) at Rwebitaba ZARDI for enhanced technology generation rehabilitated Fully functional offices and farm infrastructure at Kiige. Habitable accommodation for guests. Infrastructure for livestock vaccine research and production developed and established Livestock research facilities relocated to Maruzi ranch, Apac district	
<b>Total Output Cost(Ushs Thousand)</b>	<b>1,200,000</b>	<b>504,300</b>	<b>10,507,615</b>
Gou Dev't:	1,200,000	504,300	10,507,615
Ext Fin:	0	0	0
A.I.A:	0	0	0
<b>Output: 01 51 75 Purchase of Motor Vehicles and Other Transport Equipment</b>			
one high range Pick-up	Procurement on going Specifications cleared by the Chief Mechanical engineer of works and Public service minister.	Four(4) motor vehicles procured. This will facilitate operations at the livestock research institute at Maruzi, and activities at the vaccine production facility at Nakyesasa- NaLIRRI.	
<b>Total Output Cost(Ushs Thousand)</b>	<b>350,000</b>	<b>4,300</b>	<b>1,460,000</b>
Gou Dev't:	350,000	4,300	1,460,000
Ext Fin:	0	0	0
A.I.A:	0	0	0
<b>Output: 01 51 76 Purchase of Office and ICT Equipment, including Software</b>			



# Vote:142 National Agricultural Research Organisation

An assortment of Office and ICT equipment .	-			<p>NASARRI (15 Desktop computers, 3 Laptops, 2 Scanners). Abi (1 Desktop computers, 1 Laptops, 1 Scanners). Buginyanya ( LCD Projector, Generator 15KVA, Deep Freezer, Photocopier (3), Water Dispenser (1) Lawn Mowers (3). Mukono ZARDI (3 Desktop computers, 1 PC. and Lab machinery.</p> <p>- 15 Desktop computers, 3 Laptops, 2 Scanners and 1 Digital Camera, 1 Heavy duty photocopier, 1 Generator, 2 Lawn mowers, 1 Carpet cleaner &amp; 1 Paper Shredder procured.</p> <p>- ICT Equipment for enhanced Internet connectivity.</p> <p>- Heavy duty photocopying machine procured</p> <p>- Solar lighting on Institute premises installed</p> <p>Nabuin (Desk Top Computers core i7 , Printers, Uninterruptible Power supply(UPS), Staff clock in machine,</p> <p>- Ngetta (computers, printers, laptop computers,photocopiers, scanners, lawn mowers and generator)</p> <p>- Rwebitaba (External Hard disc, intern A Local Area Network (LAN), Internet connectivity and ICT harmonisation set up, maintained and secured.</p> <p>Laptops, printers and generator for Bugusege, Lawn mower procure</p>
<b>Total Output Cost(Ushs Thousand)</b>	<b>950,000</b>	<b>524,533</b>		<b>1,312,490</b>
Gou Dev't:	950,000	524,533		1,312,490
Ext Fin:	0	0		0
A.I.A:	0	0		0
<b>Output: 01 51 77 Purchase of Specialised Machinery &amp; Equipment</b>				
An assortment of office, laboratory, workshop and field machinery	- Contracts for the Supply of Assorted ICT Hardware and Integrated Systems were prioritised according to the available funds and the following was considered: 1. Contract signed with M/S Tinosoft for the Supply of twenty (20) additional computers 2. Contract to be signed with M/S MFI for the Supply of Assorted Printers and Photocopiers after confirmation of disbursement of funds by Ministry of Finance on NAROSEC Account. 3. Contract signed with M/S Service and Computer Industries for the Supply of Uninterruptable Power Supplies'. Items delivered, tested and accepted. Payments to be effected within the month of November 2017 - Procurement for Supply of an Identity Card System was initiated, Shortlist of firms, Evaluation team and Procurement method approved by Contracts Committee, firms invited, bids evaluated and evaluation report considered by contracts committee. Best Evaluated Bid Notice published and Contract to be submitted to both parties for signature. - Procurement for Supply of a Mobile Filling System under Registry was initiated, Shortlist of firms, Evaluation team and Procurement method approved by Contracts Committee, firms invited, bids evaluated and evaluation report to be considered by contracts committee.			<p>Tanganyika Jack, Grease gun machine , Laboratory oven and Lawn mowers/machines procured.</p> <p>Assortment of fisheries research equipment procured.</p> <p>The wheel loader and grader procured</p> <p>Assortment of research equipment procured.</p>
<b>Total Output Cost(Ushs Thousand)</b>	<b>850,000</b>	<b>44,300</b>		<b>4,155,894</b>
Gou Dev't:	850,000	44,300		4,155,894

# Vote:142 National Agricultural Research Organisation

Ext Fin:	0	0	0
A.I.A:	0	0	0
Development Project : 1139 ATAAS (Grant) EU, WB and DANIDA Funded			
<b>Output: 01 51 72 Government Buildings and Administrative Infrastructure</b>			
Functional milking parlour, and a Cattle shed at Nakyesasa-Namulonge		- Construction of a Milking Parlour at Nakyesasa - WB cleared Proposed Firm. - Re-tender for the Construc of a Milking Parlor under Direct Sourcing.	
<b>Total Output Cost(Ushs Thousand)</b>	<b>2,900,000</b>	<b>1,882,129</b>	<b>0</b>
Gou Dev't:	0	0	0
Ext Fin:	2,900,000	1,882,129	0
A.I.A:	0	0	0
<b>Output: 01 51 77 Purchase of Specialised Machinery &amp; Equipment</b>			

# Vote:142 National Agricultural Research Organisation

Assortment of laboratory equipment for the constructed laboratories

- Assorted Laboratory equipments (All ZARDIs, NASARRI, NaCORRI, NaCRRI, NaLIRRI) - Equip delivered Lot.2.
- Assorted Laboratory Equipments (NARL, NaFIRRI, NaFORRI, NASARRI, NaCORI) - Lot.1. WB Cleared LIB
- Specialised equipment with Accessories. Installation Concluded. Payments effected. File Closed.
- Soil analysis equipment - 1st consignment delivered to end user. 2nd consignment shipped.
- Assorted ICT Equipment for SLM - Evaluations concluded and Evaluation Report prepared.
- Microbiology Equipment for SLM Laboratory - Evaluations concluded and Contracts signed with respective parties.
- Assorted Office/Field Materials - Contracts signed with respective parties. Items delivered to end users. CM submitted documentation for payment. File to be Closed.
- Assorted ICT Hardware Equip and Assorted Integrated Systems - Contracts signed. (LAN, Computers). Computers delivered and payment effected
- Assorted Liquid Nitrogen Tanks - Contract signed. All Tanks delivered to end user and payment effected. File Closed.
- Three (3) Lots- Assorted Milking Equipment and Water analyser / purifier equipment - Contracts signed with three providers.
- Artificial Insemination equipment and Kits - Contract signed and items delivered to end users.
- Supply of One (1) Double Cabin Pick Up, Liquid Nitrogen Truck - Tendering concluded. Evaluation Report cleared by CC.
- Supply of Assorted Office Furniture - Tendering concluded.
- 10,000 Doses of Semen - No OB from WB. Tendering concluded.
- Assorted Tractor with Implements - Tendering/ Evaluation concluded, Evaluation Report cleared by CC.
- Assorted Dairy, Feed, Milk Quality Equip - WB provided a No Objection. Firms invited to submit their bids.
- Engraving Project Assets - Evaluations concluded. Contracts signed with respective parties.
- Agricultural Inputs - Evaluation Report cleared by CC. Contracts signed with respective parties

<b>Total Output Cost(Usht Thousand)</b>	<b>9,400,000</b>	<b>4,015,210</b>	<b>0</b>
Gou Dev't:	0	0	0
Ext Fin:	9,400,000	4,015,210	0
A.I.A:	0	0	0

## X. Vote Challenges and Plans To Improve Performance

### Vote Challenges

## Vote:142 National Agricultural Research Organisation

- 1) The performance target for increased production and productivity from utilization of improved technologies are premised on the non-project budget support for NARO during the periods. The targets shall however change significantly once a predictable committed and sustainable funding source is obtained. The current ATAAS project expires on 25 June 2018. Currently NARO is writing a project proposal seeking for funding.
- 2) Livestock research has no committee for release of technologies or practices.
- 3) The recurring disease and pests epidemics.
- 4) High pest incidence and damage especially for stem maggot, defoliation beetles, flower beetles and storage weevils.
- 5) Poor soils and the need to Strengthen soil management development frameworks
- 6) Low funding (characterized by unsustainable investment for science and technology, Delayed release of funds, budget inadequacy, Non-sustainable and unpredictable funding, occasional budget short falls)..
- 7) Weak research-extension farmer linkages (characterized by Weak dissemination of research findings (first causality for every budget shortfall), weak up-scaling on farm and on-station research demonstrations, Low technology uptake, Low self-motivation (negative mindset) on the part of farmers to embrace opportunities, weak gender and youth engagement).
- 8) Climate change and Prolonged dry spell and intermittent rainfall in nearly all production agro-ecologies
- 9) Low participation and investment by the private sector in research.
- 10) Inadequate human resources and equipment for research.
- 11) Inadequate basic/foundation seed.
- 12) Conflict with community over grazing areas – Nabuin.

### Plans to improve Vote Performance

#### Product development

- 1) NARO will continue work in product development, value addition and commercialization. NARO will continue work in establishing and supporting MSIPs. NARO will continue supporting technology incubation in value addition.

#### Sustainable Land Management.

- 2) NARO is will continue conducting work in water, soil and Land management; promoting and demonstrating SLM technologies and Integrated Nutrient Management.

#### Livestock

- 3) NARO will continue to invest livestock research to include advancing the work on vaccine development; drugs for control of internal and external parasites in ruminants and non-ruminants; research to reduce and or eliminate the incidence of Foot and Mouth Disease (FMD) and African Swine Fever (ASF), manage the emerging challenge of tick resistance to available acaricides. NARO will promote initiatives to increase the availability of forages, feed. and feed technologies.

#### Fisheries

- 4) NARO will continue efforts to improve performance of strains of Nile tilapia and the African Catfish of selected lines in Lake Albert Victoria Crescent and Kyoga Lakes. An assessment of commercial fish stocks and determination of appropriate harvesting technologies will be conducted. Fish breeding and nursery areas will continue to monitored. The spread and abundance of *Salvinia molesta* will monitored. At the appropriate time Weevils for biological control of *Salvinia molesta* will be deployed. NARO will continue efforts to monitor the Lake environments and resources of the big and minor lakes

#### Forestry

- 5) NARO will continue efforts to monitor the performance and environments of forests, forest products and tree products.

#### Research infrastructure

- 6) NARO is will continue to strengthen the agricultural research capacity (offices, laboratories, land and human resources) to ensure more quality and world class outputs are developed and promoted.

#### Managing Invasive Species

- 7) NARO is will continue to conducted nation-wide work to manage plant and animal invasive species. Uganda has been invaded by animal invasive species largely by fall army worm, and plant invasive species mainly *Salvinia molesta* and others.

#### Engagement of Agriculture Research Service Providers.

- 8) NARO is will continue to engage agriculture Research Service Providers to increase Uganda capacity to respond to demands for improved technologies, methods and practices through collaborative and competitive projects with agricultural research providers in the value chains.

- 9) NARO will continue to strengthen the existing human resources and physical resources (offices, and farm buildings). In Human resources, NARO will recruit to reduce the existing staffing gaps in the establishment. NARO will utilize available financial resources and prioritize the rehabilitation of existing infrastructure, or construction of new when the resource envelop allows.

### XI. Vote Cross Cutting Policy And Other Budgetary Issues

# Vote:142 National Agricultural Research Organisation

**Table 11.1: Cross- Cutting Policy Issues**

<b>Issue Type:</b>	<b>HIV/AIDS</b>
<b>Objective :</b>	The NARO work plan 2018/2019 recognises the adverse effects of HIV and AIDS on agriculture including loss of persons in their most economically productive years which affects both the quality and quantity of agricultural labor. AIDS related illnesses and deaths result in loss of assets, income, technical skills, knowledge and practices thereby negatively affecting agriculture production and productivity.
<b>Issue of Concern :</b>	Mainstreaming HIV AID in NARO and agricultural research
<b>Planned Interventions :</b>	Develop improved agricultural technologies that are client and impact-oriented, market responsive to farming community, but also to households and farmers that have been affected by are HIV and AIDS. ramps in civil works, high mineral foods
<b>Budget Allocation (Billion) :</b>	12.500
<b>Performance Indicators:</b>	Number of agricultural technologies generated. 10 Number and type of interventions in place.5
<b>Issue Type:</b>	<b>Gender</b>
<b>Objective :</b>	NARO will endeavor to guide and guard the mainstream of gender in the routine processes of agricultural research services delivery, project development, implementation, monitoring, evaluation and reporting processes. The public research institutes and registered private researchers will be equipped with skills for gender analysis and participatory research. To achieve and develop appropriate technologies for the different social groups, NARO will establish mechanisms for needs assessment for gender responsive technologies. Other key interventions for ensuring gender responsiveness are defined institutional arrangements for allowing stakeholder participation in demand articulation and priority setting. Capacity development programmes for gender analysis are already underway for scientists and research managers in the public institutes and will be extended to registered private researchers.
<b>Issue of Concern :</b>	Gender mainstreaming in agricultural research service delivery
<b>Planned Interventions :</b>	- Develop a gender responsive research agenda. - Develop improved agricultural technologies that are gender responsive
<b>Budget Allocation (Billion) :</b>	1.000
<b>Performance Indicators:</b>	Number of technologies delivered to uptake pathways. 20. - Gender mainstreaming interventions in agricultural research. 10.
<b>Issue Type:</b>	<b>Enviroment</b>
<b>Objective :</b>	Environmental sustainability is a key pillar in the agricultural research policy of Uganda. Natural resource management is one of the five themes in the organisation's research and development continuum.  There are number of on going research and development projects in fisheries, forestry, land, climate, soil and water and plant biodiversity have been developed for implementation in the short and medium-term.  NARO will always ensure that as part and parcel of the agricultural research agenda, there are proposed research and development projects in fisheries, forestry, land, climate, soil and water and plant biodiversity.
<b>Issue of Concern :</b>	Agricultural technologies which are environmentally friendly
<b>Planned Interventions :</b>	Conduct, promote, undertake research in forestry, fisheries, soil and water and plant biodiversity.
<b>Budget Allocation (Billion) :</b>	1.500

# Vote:142 National Agricultural Research Organisation

**Performance Indicators:**

Number of agricultural technologies generated, 40

**Table 11.2: AIA Collections**

Source of AIA(Ush Bn)	2017/18 Budget	2017/18 Actual by Dec	2018/19 Projected
Interest from private entities - Foreign	0.000	0.000	0.002
Rent & Rates - Non-Produced Assets – from private entities	0.000	0.000	0.106
Sale of (Produced) Government Properties/Assets	1.800	0.507	3.384
Sale of non-produced Government Properties/assets	0.000	0.000	0.288
Rent & rates – produced assets – from private entities	0.604	0.271	1.586
Market /Gate Charges	0.100	0.049	0.234
Miscellaneous receipts/income	3.288	1.622	1.547
<b>Total</b>	<b>5.792</b>	<b>2.449</b>	<b>7.146</b>

## XII. Personnel Information

**Table 12.1 Staff Recruitment Plan**

Post Title	Salary Scale	No. Of Approved Posts	No Of Filled Posts	Vacant Posts	No. of Posts Cleared for Filling FY2018/19	Gross Salary Per Month (UGX)	Total Annual Salary (UGX)
Accounts Assistant	UR 6	45	40	5	2	2,340,946	28,091,352
Administrative Assistant	UR 6	5	2	3	2	2,414,098	28,969,176
Assistant Systems Administrator	UR 5(ii)	6	3	3	3	4,745,619	56,947,428
Driver	UR7	98	87	11	3	2,604,936	31,259,232
Electrician	UR 7	17	15	2	1	937,777	11,253,324
Finance Officer	UR 5(i)	10	7	3	1	2,365,246	28,382,952
Human Resource & Administrative Officer	UR 5(i)	19	12	7	1	2,242,705	26,912,460
Internal Auditor	UR 5(i)	19	11	8	1	2,242,705	26,912,460
Procurement Officer	UR 5(ii)	18	16	2	1	2,138,823	25,665,876
Research Officer	UR 5(i)	45	25	20	15	32,082,345	384,988,140
Security Guard	UR 8	48	27	21	3	2,411,433	28,937,196
Stores Assistant	UR 6	18	8	10	2	2,414,098	28,969,176
Technician	UR6	103	93	10	10	11,704,730	140,456,760
<b>Total</b>		<b>451</b>	<b>346</b>	<b>105</b>	<b>45</b>	<b>70,645,461</b>	<b>847,745,532</b>