

# Vote:142 National Agricultural Research Organisation

## Vote Summary

### VI: Vote Overview

This section sets out the Vote Mission, Strategic Objectives, and provides a description of the vote's services

#### (i) Snapshot of Medium Term Budget Allocations

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

	FY2015/16 Outturn	FY2016/17		MTEF Budget Projections				
		Approved Budget	Spent by End Q1	FY2017/18	FY2018/19	FY2019/20	FY2020/21	FY2021/22
Recurrent Wage	18.972	22.472	5.618	22.472	23.596	24.776	26.014	27.315
Non Wage	7.499	8.523	1.749	7.377	8.114	8.926	10.264	11.804
Devt. GoU	9.192	9.130	1.105	8.780	10.098	12.117	14.540	29.081
Ext. Fin.	30.257	67.739	10.152	29.331	0.000	0.000	0.000	0.000
<b>GoU Total</b>	<b>35.663</b>	<b>40.126</b>	<b>8.472</b>	<b>38.629</b>	<b>41.808</b>	<b>45.818</b>	<b>50.819</b>	<b>68.200</b>
<b>Total GoU+Ext Fin (MTEF)</b>	<b>65.920</b>	<b>107.865</b>	<b>18.624</b>	<b>67.960</b>	<b>41.808</b>	<b>45.818</b>	<b>50.819</b>	<b>68.200</b>
<i>A.I.A Total</i>	1.828	6.272	1.405	5.792	5.792	4.000	4.000	4.000
<b>Grand Total</b>	<b>67.748</b>	<b>114.137</b>	<b>20.029</b>	<b>73.752</b>	<b>47.599</b>	<b>49.818</b>	<b>54.819</b>	<b>72.200</b>

#### (ii) Vote Mission Statement

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

Table V1.2: Sector Outcomes and Key Output Indicators

<b>Programme :</b>	51 Agricultural Research			
<b>Programme Outcome:</b>	1. Adoption rate of research outputs increased; 2. The level of awareness of technologies generated in the NARS; 3. Farm households satisfied with improved technologies; 4. Farm households using improved agricultural technologies.			
<b>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 NARS 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 Performance Indicators (Output)</b>	<b>2016/17 Target</b>	<b>2017/18 Target</b>	<b>2018/19 Target</b>	<b>2019/20 Target</b>
<b>Sector Outcome : Increased production and productivity of priority and strategic commodities</b>				
• No. of improved productivity technologies generated	35	62	70	60
• No. of new varieties submitted to Variety Release Committee for release	15	12	15	15

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• No. of research studies under competitive grants scheme	41	25	30	40
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## V2: Past Vote Performance and Medium Term Plans

### Performance for Previous Year FY 2015/16

#### A. On Key Performance Indicators on Generation of Technologies

1. No. of improved productivity technologies generated - Targeted-60, Achieved-86.
2. No. of research studies under competitive grants scheme - Targeted-65, Achieved-66.
3. No. of new varieties submitted to Variety Release Committee - Targeted-20 Achieved-46.

#### B. On Key Performance Indicators on Research Extension Interface Promoted and Strengthened

1. No. of technological innovations delivered to uptake pathways - Targeted-5 Achieved-93.
2. No. of technological innovation platforms established - Targeted-5, Achieved-44.

### Performance as of BFP FY 2016/17 (Performance as of BFP)

#### A. On Key Performance Indicators on Generation of Technologies

1. No. of improved productivity technologies generated - Targeted-60, Achieved-20.
2. No. of research studies under competitive grants scheme - Targeted-45, Achieved-0.
3. No. of new varieties submitted to Variety Release Committee - Targeted-20 Achieved-3.

#### B. On Key Performance Indicators on Research Extension Interface Promoted and Strengthened.

1. No. of technological innovations delivered to uptake pathways - Targeted-0, Achieved-0.
2. No. of technological innovation platforms established - Targeted-0, Achieved-0.

**Table V2.1 Past and FY 2017/18 Key Outputs**

FY2016-2017		FY 2017-2018
Appr. Budget and Planned Outputs	Expenditures and Achievements by end Q1	Proposed Budget and Planned Outputs
<b>Vote: 142 National Agricultural Research Organisation</b>		
<i>Program :51 Agricultural Research</i>		
<b>Output : 01 Generation of agricultural technologies</b>		

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<p>- New varieties of priority commodities submitted for release; - 41 New CGS studies conducted Technologies for enhancing production and productivity of crops (new, intermediate), Livestock (new and intermediate), Forestry (new and intermediate) and natur</p>	<p>3 new varieties of priority commodities submitted for release (sweet potato); 29 Technologies for enhancing production and productivity of crops</p>	<p>- 25 New varieties of crops submitted for release; - 25 New CGS studies conducted; Technologies for enhancing production and productivity of crops, forestry, fisheries, livestock (interim and final)</p>	
<b>Total Output Cost(Ushs Bn):</b>	<b>16.737</b>	<b>2.663</b>	<b>12.691</b>
<b>Output : 02 Research extension interface promoted and strengthened</b>			
<p>- Scientific &amp; extension dissemination materials developed and published; - Design and development of Farming manuals;Multistakeholder innovation platforms established or supported; - Foundation and basic seed provided to farmers, farmer groups and seed</p>	<p>10 Scientific &amp; extension dissemination materials developed and published. Some where distributed during the agriculture show in Jinja. Published and distributed the Uganda Journal of Agricultural Sciences (UJAS). Foundation and basic seed provided to seed companies, farmers, farmer groups. Provided planting materials to OWC.</p>	<p>- Scientific &amp; extension dissemination materials developed and published; - Design and development of Farming manuals;Multistakeholder innovation platforms established or supported; - Foundation and basic seed provided to seed sub sector</p>	
<b>Total Output Cost(Ushs Bn):</b>	<b>13.507</b>	<b>2.135</b>	<b>10.114</b>
<b>Output : 05 Generation of technologies for priority commodities</b>			
<p>Technology demonstrations held on station and technology parks; - Capacity of farmers and farmer groups to make choices and implement decisions that affect their livelihoods enhanced;Technologies for enhancing productivity of Crops (cassava,maize,Rice,</p>		<p>New/intermediate/final technologies for enhancing productivity of priority Crops (cassava,maize,Rice, Horticultural crops, bananas),Livestock (dairy cattle,meats) and fisheries. - New varieties of submitted for release (for priority crops)</p>	
<b>Total Output Cost(Ushs Bn):</b>	<b>9.356</b>	<b>1.271</b>	<b>3.934</b>
<b>Total Program Cost (Ushs Bn):</b>	<b>39.600</b>	<b>6.069</b>	<b>26.739</b>
<b>Total Vote Cost (Ushs Bn):</b>	<b>39.600</b>	<b>6.069</b>	<b>26.739</b>

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## FY 2017/18 Planned Outputs

1. New varieties/prototypes submitted to variety Release Committee - Planned-25.
  2. Production technologies generated - Planned-60
  3. Research studies under competitive grants scheme - Planned-40
  4. Technological innovation platforms established/supported - Planned-16
- other Planned outputs
1. NARO strategy and mid-term plan (MTP) developed.
  2. NARO business plan developed.
  3. New Staff recruited.
  4. Staff training at PhD & MSc - supported under ATAAS.
  5. New research infrastructure -(new Office blocks, new Laboratories and laboratories rehabilitated, vehicles and assorted ICT equipment procured and delivered

## Medium Term Plans

To submit for release 120 new varieties, 200 new production technologies/ strategies. Offices and laboratories and rehabilitation of offices and laboratories (Rwebitaba ZARDI, NACORI); Training of at 20 new PhDs and 30 MScs, reviewing of the NAR Act, review and development of research standards and guidelines, initiation of the ISO certification of PARI laboratories. Strengthen research in MSIPs, value addition and market linkages. Strengthen the NARO-OWC-NAADS (NAROWide)linkages.

## Efficiency of Vote Budget Allocations

80

**Table V2.2 Allocations to Key Sector and Service Delivery Outputs Over the Medium Term**

<i>Billion Uganda Shillings</i>	<b>(i) Allocation</b>				<b>(ii) % Vote Budget</b>			
	<b>2016/17</b>	<b>2017/18</b>	<b>2018/19</b>	<b>2019/20</b>	<b>2016/17</b>	<b>2017/18</b>	<b>2018/19</b>	<b>2019/20</b>
Key Sector	39.600	26.739	5.800	6.800	100.0%	100.0%	100.0%	100.0%
Service Delivery	0.000	0.000	0.000	0.000	0.0%	0.0%	0.0%	0.0%

**Table V2.3 Key Unit Costs of Services Provided and Services Funded (Shs '000)**

N / A

## Vote Investment Plans

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1. At the National Livestock Resources Research Institute (NALIRRI) Relocation FROM Tororo to Mazuri. Involves the construction of Office buildings, Laboratory and farm and field infrastructures, Residential buildings.
2. At National Coffee Resources Research Institute - Construction of Office buildings, Laboratory and farm and field infrastructures.
3. At National Serere National Semi Arid Resources Research Institute (NASAARI) rehabilitation of Office buildings, Laboratory and farm and field infrastructures,
4. Rwebitaba Zonal Agricultural Research and Development Institute - construction and rehabilitation of Office buildings, Laboratory and farm and field infrastructures,
5. National Agricultural Laboratories, Kawanda - construction and rehabilitation of Office buildings, Laboratory and farm and field infrastructures,

### V2.4 Allocations by Class of Output Over the Medium Term

Billion Uganda Shillings	(i) Allocation				(i) % Vote Budget			
	2016/17	2017/18	2018/19	2019/20	2016/17	2017/18	2018/19	2019/20
Consumption Expenditure (Outputs Provided)	88.160	62.027	39.572	43.950	81.7%	89.3%	91.0%	92.2%
Grants and Subsidies (Outputs Funded)	1.705	1.780	1.800	1.800	1.6%	2.6%	4.1%	3.8%
Investment (Capital Purchases)	18.000	5.650	2.100	1.939	16.7%	8.1%	4.8%	4.1%
<b>Total</b>	<b>107.865</b>	<b>69.457</b>	<b>43.472</b>	<b>47.689</b>				

Table V2.5: Major Capital Investment (Capital Purchases outputs over 0.5Billion)

FY 2016/17		FY 2017/18	
Appr. Budget and Planned Outputs	Expenditures and Achievements by end Q1	Proposed Budget and Planned Outputs	
<b>Vote 142 National Agricultural Research Organisation</b>			
Programme : 51 Agricultural Research			
Development Project : 0382 Support for NARO			
<b>Output: 72 Government Buildings and Administrative Infrastructure</b>			
Agric Laboratory at NARL Kawanda and Rwebitaba ZARDI		Enhance coffee research operational at NACORI	
Abi ZARDI, Arua: Functional pit latrine for farm workers		Functional and operational NALIRRI	
Kachwenkano ZARDI, Kabale: 2 staff houses, 1 guest house and 2 underground water tank renovated; Repair of seed stores at Kalengyere; A housing u		Enhance research operational at Rwebitaba ZARDI	
		Enhanced office and laboratory space at NARL	
<b>Total Output Cost(Ushs Thousand):</b>	<b>0.500</b>	<b>0.000</b>	<b>1.200</b>
Gou Dev't:	0.500	0.000	1.200
Ext Fin:	0.000	0.000	0.000

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A.I.A:	0.000	0.000	0.000
<b>Output: 76 Purchase of Office and ICT Equipment, including Software</b>			
			An assortment of Office and ICT equipment .
<b>Total Output Cost(Ushs Thousand):</b>	<b>0.000</b>	<b>0.000</b>	<b>0.950</b>
Gou Dev't:	0.000	0.000	0.950
Ext Fin:	0.000	0.000	0.000
A.I.A:	0.000	0.000	0.000
<b>Output: 77 Purchase of Specialised Machinery &amp; Equipment</b>			
Imported machinery paid			An assortment of office, laboratory, workshop and field machinery
<b>Total Output Cost(Ushs Thousand):</b>	<b>0.500</b>	<b>0.000</b>	<b>0.850</b>
Gou Dev't:	0.500	0.000	0.850
Ext Fin:	0.000	0.000	0.000
A.I.A:	0.000	0.000	0.000
Development Project : 1139 ATAAS (Grant) EU, WB and DANIDA Funded			
<b>Output: 72 Government Buildings and Administrative Infrastructure</b>			
Mukono ZARDI, Mukono: Construction of 3 concrete tanks for aquaculture research;			Functional milk parlour
<b>Total Output Cost(Ushs Thousand):</b>	<b>7.700</b>	<b>1.155</b>	<b>1.700</b>
Gou Dev't:	0.000	0.000	0.000
Ext Fin:	7.700	1.155	1.700
A.I.A:	0.000	0.000	0.000

### V3: Proposed Budget Allocations for 2017/18 and the Medium Term Projections

Table V3.1: Past Expenditure Outturns and Medium Term Projections by Programme\*

Billion Uganda shillings	FY 2015/16 Outturn	FY 2016/17		Medium Term Projections				
		Approved Budget	Actual Releases by End Q1	2017-18	2018-19	2019-20	2020-21	2021-22
<b>Vote :142 National Agricultural Research Organisation</b>								
Programme: 51 Agricultural Research	65.920	107.865	18.624	67.960	41.808	45.818	50.819	68.200
<b>Total for the Vote</b>	<b>65.920</b>	<b>107.865</b>	<b>18.624</b>	<b>67.960</b>	<b>41.808</b>	<b>45.818</b>	<b>50.819</b>	<b>68.200</b>

#### Major Expenditure Allocations in the Vote for FY 2017/18

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1. Research, Infrastructure, training, CGS, and operational costs - Approx.50%
2. Salary & Wages for Core and other contract staff at institutes. - Approx.30%
3. Administrative costs - - Approx.20%

**Table V3.2: Key Changes in Vote Resource Allocation**

Major changes in resource allocation over and above the previous financial year	Justification for proposed Changes in Expenditure and Outputs
<i>Vote :142 National Agricultural Research Organisation</i>	
<i>Programme : 51 National Agricultural Research Organisation</i>	
<b>Output: 01 Generation of agricultural technologies</b>	
Change in Allocation (US\$ Bn) : (4.046)	scientific and non scientific personnel
<b>Output: 02 Research extension interface promoted and strengthened</b>	
Change in Allocation (US\$ Bn) : (3.393)	The external funding is for half year for 2017/18
<b>Output: 04 Agricultural research capacity strengthened</b>	
Change in Allocation (US\$ Bn) : (13.272)	The external funding is for half year for 2017/18
<b>Output: 05 Generation of technologies for priority commodities</b>	
Change in Allocation (US\$ Bn) : (5.422)	The external funding is for half year for 2017/18
<b>Output: 72 Government Buildings and Administrative Infrastructure</b>	
Change in Allocation (US\$ Bn) : (5.300)	The external funding is for half year for 2017/18
<b>Output: 76 Purchase of Office and ICT Equipment, including Software</b>	
Change in Allocation (US\$ Bn) : (1.750)	The external funding is for half year for 2017/18
<b>Output: 77 Purchase of Specialised Machinery &amp; Equipment</b>	
Change in Allocation (US\$ Bn) : (4.650)	The external funding is for half year for 2017/18
<b>Output: 78 Purchase of Office and Residential Furniture and Fittings</b>	
Change in Allocation (US\$ Bn) : (0.650)	The external funding is for half year for 2017/18

### V4: Vote Challenges for 2017/18 and the Medium Term

#### Vote Challenges for FY 2017/18

1. 1.Deteriorating infrastructure: Low quality of laboratories in Rwebitaba and NaCORI
2. 2.Low staff salaries
3. 3.NARO land encroachment
4. 4.Delay in enactment of Biotechnology and Biosafety Bill
5. 5.Unpredictable and/or limited funding of agricultural research for development.
6. 6.Weak dissemination of research findings, up-scaling on farm and on-station research demonstrations

**Table V4.1: Additional Output Funding Requests**

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Additional requirements for funding and outputs in 2017/18	Justification of requirement for additional outputs and funding
<b>Vote 142 -- National Agricultural Research Organisation</b>	
Programme : 51 -- Agricultural Research	
<b>Output : 01 Generation of agricultural technologies</b>	
Funding requirement US\$ Bn : <b>66.400</b>	<p>(1) Vaccine development for ticks and tick borne diseases Ticks and tick borne diseases are one of the major constraints affecting local and improved cattle breeds and human.</p> <p>(2) Kariba weed control Kariba weed is an aquatic fern which is a free floating plant that does not attach to the soil, but remains buoyant on the surface of a body of water. It is now invasive on Lake Kyoga.</p>
<b>Output : 72 Government Buildings and Administrative Infrastructure</b>	
Funding requirement US\$ Bn : <b>160.700</b>	<p>Relocation of the National Livestock Resources Research Institute, (NALIRRI) (ugx. 100 bn) NARO is relocating Livestock Research activities from Tororo district in Eastern Uganda to Maruzi in Northern Uganda. This is to give room enough for Sukulu Phosphates project in Tororo district in Eastern Uganda.</p> <p>Research infrastructure at NACORI, Rwebitaba ZARDI, and NASARRI (16.7 bn) NARO is enhancing the research capacity at these Research Institute to enable them deliver on their mandates.</p>
<b>Output : 04 Agricultural research capacity strengthened</b>	
Funding requirement US\$ Bn : <b>20.200</b>	<p>(1) Inadequate Human Resource capacity (ugx.15.1 bn) NARO employs high caliber scientific and non scientific personnel. It is the intention of NARO management to continue attracting, rewarding and retaining scientific and non scientific personnel. NARO therefore seeks to maintain a realistic salary structure that attracts, rewards and retains that nations critical human resource in agricultural research.</p> <p>(2) NARO land registration/Titling (ugx.5.1 bn)</p>
<b>Output : 77 Purchase of Specialised Machinery &amp; Equipment</b>	
Funding requirement US\$ Bn : <b>12.300</b>	NARO is shifting rain fed agriculture to integrate irrigation in research activities. Coping with drought and the adverse effects of climatic change will require a dual approach in providing water for agricultural production on research stations.