

VOTE: 142 National Agricultural Research Organization (NARO)

I. VOTE MISSION STATEMENT

To innovate for sustainable agricultural transformation

II. STRATEGIC OBJECTIVE

Increase agricultural technologies and innovations for food and nutrition security

Increase research products and services for competitive markets and industry

Enhance access and sustainable utilization of improved agricultural technologies and innovations by agricultural value chain actors.

Strengthen institutional capacity of NARO to coordinate, undertake and deliver agricultural research products and services

III. MAJOR ACHIEVEMENTS IN 2022/23

In order to reduce the national tick burden that affects quality and quantity of beef and milk production and subsequently affects farm incomes NARO has embarked on tick vaccine research and production the initiated vaccine clinical trials are located in Kiburara Prisons farm in Ibanda Karamoja Nabuin in Nabilatuk MbaZARDI in Mbarara Maruzi in Apac and Isimba Prisons farm in Masindi The trials have so far taken 5 months and will be completed within 12 months

NARO validated updated and digitized the Masaka soil Sheet from a scale of 1 to 250000 to a scale of 1 to 50000

The major soil types and their spatial coverage were identified and documented This new scale of 1 to 50000 enabled identification of sixty six soil types as compared to 10 soil types under the old scale of 1 to 250000 Subsequently NARO has generated secondary products such as Land Capability Rating and spatial coverage of the different soils for the Masaka sheet It was discovered that 64 percent of the soils under Masaka Sheet fall under Land Capability Class 3 that has severe limitations on choice of plants or require special conservation practices or both 21percent of Masaka soil sheet fall under Land Capability Class 4 Very severe limitations that restrict the choice of plants or require very careful management or both Specific fertilizer recommendations guiding investments in irrigation and mechanisation are key areas that will be addressed under this analysis The digitizing of the six soil sheets is ongoing and updating the Kampala sheet is at 90 percent level of completion

NARO developed and submitted 8 crop varieties to the National Variety Release Committee for release These varieties include 2 sweet Potato 5 Maize and 1 Rice The varieties are better than the current existing varieties with special attributes for both women and youth production marketing and consumption needs Two of the five highland maize varieties are quality protein maize suitable for nutrition in children and the elderly and the three highland maize varieties are resistant to Maize Lethal Necrosis hence reducing costs of production including pests and diseases farmers are now able to grow these varieties and improve on their incomes and food security needs In addition two sweet potato varieties were submitted and released these are superior to the existing varieties high beta carotene which is a precursor for vit A important for improving eyesight 31 in children and elderly persons resistant to common pests and diseases high yielding 30MT per hectare also regular root shapes and smooth skin suitable for export and processing for industry NARO submitted one rice variety which is a highbreed drought tolerant aromatic and high yielding aimed at increasing production and productivity hence increasing incomes and food security among women and youth farmers

NARO has produced over 1826 MT of quality seed of beans 175MT of maize 1005MT of soya bean 493 MT of Sorghum 154MT These seeds shall be availed to farmers for increased food and pasture production and productivity in an effort to minimize hunger and promote food and nutritional security in all parts of the country

NARO made progress on development of requisite critical research and management infrastructure where vaccine research and production facility was at 80 percent completion aflatoxins research and production facility was at 95 percent complete livestock handling facility calf barn at 60 percent complete Agri engineering management research facility at Namalere at 90 percent completion paddocking Maruzi farm in Apac at 90 percent complete extension of power at Maruzi which has reached completion water extension at Maruzi at 40 percent complete among others

Prior to the development of the research facilities environmental impact assessments were conducted and Environmental management plans were developed to ensure compliance to environmental concerns

VOTE: 142 National Agricultural Research Organization (NARO)

The generation and commercialization of NARO technologies with special attributes that address production processing and marketing needs of different target groups including women and youth has resulted in increased value chain engagement of different commodities hence creating job opportunities for the vulnerable categories of people. The process has not only supported research for impact but so far fetched a sum of UGX 300 million in royalties to support research and innovations and is further expected to contribute substantially in financing research and development.

Aflatoxin mitigation To strengthen food safety and increase resilience of Uganda's agricultural products competitiveness at National and local market significantly controlling aflatoxin levels is cardinal efficacy trials by NARO for Aflasafe biological control products showed promising results of more than 85 percent reduction in maize groundnuts and sorghum.

Instituted biological control measures for management of weeds both in submarine and terrestrial habitats 13000 cyrtobagous

VOTE: 142 National Agricultural Research Organization (NARO)

IV. MEDIUM TERM BUDGET ALLOCATIONS

Table 4.1: Overview of Vote Expenditure (Ushs Billion)

	2022/23		2023/24	MTEF Budget Projections				
	Approved Budget	Spent by End Dec	Budget Estimates	2024/25	2025/26	2026/27	2027/28	
Recurrent	Wage	38.811	19.903	43.462	45.635	50.199	55.219	60.740
	Non-Wage	29.397	13.007	42.055	34.155	32.986	53.601	55.654
Devt.	GoU	48.575	12.284	80.970	60.000	90.000	86.000	90.000
	Ext Fin.	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GoU Total	116.783	45.194	166.487	139.790	173.185	194.820	206.395	
Total GoU+Ext Fin (MTEF)	116.783	45.194	166.487	139.790	173.185	194.820	206.395	
Arrears	0.144	0.144	0.000	0.000	0.000	0.000	0.000	
Total Budget	116.927	45.338	166.487	139.790	173.185	194.820	206.395	
Total Vote Budget Excluding Arrears	116.783	45.194	166.487	139.790	173.185	194.820	206.395	

VOTE: 142 National Agricultural Research Organization (NARO)

Table 4.2: Budget Allocation by Department for Recurrent and Development (Ushs Billion)

<i>Billion Uganda Shillings</i>	Draft Budget Estimates FY 2023/24	
	Recurrent	Development
Programme:01 Agro-Industrialization	85.417	80.970
SubProgramme:01 Institutional Strengthening and Coordination	66.822	0.000
Sub SubProgramme:01 Agricultural Research	66.822	0.000
007 NARO-SECRETARIATE	66.822	0.000
SubProgramme:02 Agricultural Production and Productivity	18.595	80.970
Sub SubProgramme:01 Agricultural Research	18.595	80.970
001 Abi Zonal Agriculture Research Institute(ZARDI)	0.100	0.000
002 Buginyaya Zonal Agriculture Research Institute(ZARDI)	0.250	0.000
003 Bulindi Zonal Agriculture Research Institute(ZARDI)	0.100	0.000
004 Kachwekano Zonal Agriculture Research Institute(ZARDI)	0.175	0.000
005 Mbarara Zonal Agriculture Research Institute(ZARDI)	0.100	0.000
006 Nabuin Zonal Agriculture Research Institute(ZARDI)	0.100	0.000
007 NARO-SECRETARIATE	0.000	59.970
008 National Agricultural Research Laboratories	0.250	0.000
009 National Coffee Research Institute	0.175	0.000
010 National Crops Resources Research Institute	0.175	0.000
011 National Fisheries Resources Research Institute	0.175	0.000
012 National Forestry Resources Research Institute	0.100	0.000
013 Mukono Zonal Agriculture Research Institute (ZARDI)	0.175	0.000
014 National Livestock Resources Research Institute (NaLIRRI)	16.345	21.000
015 National Semi Arid Resources Research Institute (NaSARRI)	0.100	0.000
016 Ngetta ZARDI	0.100	0.000
017 Rwebitaba ZARDI	0.175	0.000
Programme:17 Regional Balanced Development	0.100	0.000
SubProgramme:01 Production and productivity	0.100	0.000
Sub SubProgramme:01 Agricultural Research	0.100	0.000
002 Buginyaya Zonal Agriculture Research Institute(ZARDI)	0.100	0.000
Total for the Vote	85.517	80.970

VOTE: 142 National Agricultural Research Organization (NARO)

V. PERFORMANCE INDICATORS AND PLANNED OUTPUTS

Table 5.1: Performance Indicators

Programme: 01 Agro-Industrialization

SubProgramme: 01 Institutional Strengthening and Coordination

Sub SubProgramme: 01 Agricultural Research

Department: 007 NARO-SECRETARIATE

Budget Output: 000001 Audit and Risk Management

PIAP Output: Demand driven agriculture technologies developed

Programme Intervention: 010407 Strengthen agricultural research and technology development

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of market-oriented products generated	Number	2021-2022	2			4

PIAP Output: Audit and Risk Management coordinated

Programme Intervention: 019101 Strengthen government institutions for effective and efficient service delivery.

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
No. of audit reports produced and submitted	Number	2021-2022	4			4

Budget Output: 000013 HIV/AIDS Mainstreaming

PIAP Output: Demand driven agriculture technologies developed

Programme Intervention: 010407 Strengthen agricultural research and technology development

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of improved technologies and innovations adopted	Number	2021-2022	1			1
Number of research products and services for food and nutrition security generated	Number	2021-22	2			2

VOTE: 142 National Agricultural Research Organization (NARO)**Sub SubProgramme: 01 Agricultural Research****Department: 007 NARO-SECRETARIATE****Budget Output: 000014 Administrative and Support Services****PIAP Output: Demand driven agriculture technologies developed****Programme Intervention: 010407 Strengthen agricultural research and technology development**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of functional public-private partnerships established for technology development and promotion	Number	2021-2022	8	14	7	4

Budget Output: 000089 Climate Change Mitigation**PIAP Output: Demand driven agriculture technologies developed****Programme Intervention: 010407 Strengthen agricultural research and technology development**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of market-oriented products generated	Number	2021-22	6			6
Number of improved technologies and innovations adopted	Number	2021-22	6			6

Budget Output: 000090 Climate Change Adaptation**PIAP Output: Demand driven agriculture technologies developed****Programme Intervention: 010407 Strengthen agricultural research and technology development**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of improved technologies and innovations adopted	Number	2021-22	6			6

SubProgramme: 02 Agricultural Production and Productivity

VOTE: 142 National Agricultural Research Organization (NARO)**Sub SubProgramme: 01 Agricultural Research****Department: 001 Abi Zonal Agriculture Research Institute(ZARDI)****Budget Output: 010010 Technology Generation****PIAP Output: Demand driven agriculture technologies developed****Programme Intervention: 010407 Strengthen agricultural research and technology development**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of research products and services for food and nutrition security generated	Number	2020-2021	2			2
Number of research products and services suitable for industry developed	Number	2021-2022	1			1

PIAP Output: Research-extension farmer linkages developed and strengthened**Programme Intervention: 010407 Strengthen agricultural research and technology development**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of technologies adopted	Number	2021-2022	6			6

Budget Output: 010011 Technology Promotion**PIAP Output: Research-extension farmer linkages developed and strengthened****Programme Intervention: 010407 Strengthen agricultural research and technology development**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of technologies adopted	Number	2021-2022	8	8	4	8

Department: 004 Kachwekano Zonal Agriculture Research Institute(ZARDI)**Budget Output: 010010 Technology Generation****PIAP Output: Demand driven agriculture technologies developed****Programme Intervention: 010407 Strengthen agricultural research and technology development**

VOTE: 142 National Agricultural Research Organization (NARO)**Sub SubProgramme: 01 Agricultural Research****Department: 004 Kachwekano Zonal Agriculture Research Institute(ZARDI)****Budget Output: 010010 Technology Generation****PIAP Output: Demand driven agriculture technologies developed**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of improved technologies and innovations adopted	Number	2021-2022	2	7	0	4
Number of research products and services suitable for industry developed	Number	2021-2022	8	1	1	8

Budget Output: 010011 Technology Promotion**PIAP Output: Research-extension farmer linkages developed and strengthened****Programme Intervention: 010407 Strengthen agricultural research and technology development**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of technologies adopted	Number	2020-2021	4			4

Department: 005 Mbarara Zonal Agriculture Research Institute(ZARDI)**Budget Output: 010010 Technology Generation****PIAP Output: Demand driven agriculture technologies developed****Programme Intervention: 010407 Strengthen agricultural research and technology development**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of markets created along product lines	Number	2021-2022	2			4
Number of research products and services for food and nutrition security generated	Number	2021-2022	13			13

Budget Output: 010011 Technology Promotion**PIAP Output: Research-extension farmer linkages developed and strengthened****Programme Intervention: 010407 Strengthen agricultural research and technology development**

VOTE: 142 National Agricultural Research Organization (NARO)**Sub SubProgramme: 01 Agricultural Research****Department: 005 Mbarara Zonal Agriculture Research Institute(ZARDI)****Budget Output: 010011 Technology Promotion****PIAP Output: Research-extension farmer linkages developed and strengthened**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of technologies adopted	Number	2021-2022	13			13

Department: 008 National Agricultural Research Laboratories**Budget Output: 010010 Technology Generation****PIAP Output: Demand driven agriculture technologies developed****Programme Intervention: 010407 Strengthen agricultural research and technology development**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of research products and services suitable for industry developed	Number	2021-2022	10			10

Budget Output: 010011 Technology promotion**PIAP Output: Demand driven agriculture technologies developed****Programme Intervention: 010407 Strengthen agricultural research and technology development**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of market-oriented products generated	Number	2021-2022	2			4

Department: 009 National Coffee Research Institute**Budget Output: 010010 Technology Generation****PIAP Output: Demand driven agriculture technologies developed****Programme Intervention: 010407 Strengthen agricultural research and technology development**

VOTE: 142 National Agricultural Research Organization (NARO)**Sub SubProgramme: 01 Agricultural Research****Department: 009 National Coffee Research Institute****Budget Output: 010010 Technology Generation****PIAP Output: Demand driven agriculture technologies developed**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of functional public-private partnerships established for technology development and promotion	Number	2021-2022	2			2
Number of improved technologies and innovations adopted	Number	2021-2022	2			2
Number of research products and services for food and nutrition security generated	Number	2021-2022	5			5

Budget Output: 010011 Technology Promotion**PIAP Output: Demand driven agriculture technologies developed****Programme Intervention: 010407 Strengthen agricultural research and technology development**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of functional public-private partnerships established for technology development and promotion	Number	2021-2022	2			2
Number of improved technologies and innovations adopted	Number	2021-2022	2			2
Number of research products and services for food and nutrition security generated	Number	2021-2022	5			5

Department: 010 National Crops Resources Research Institute**Budget Output: 010010 Technology Generation****PIAP Output: Demand driven agriculture technologies developed****Programme Intervention: 010407 Strengthen agricultural research and technology development**

VOTE: 142 National Agricultural Research Organization (NARO)**Sub SubProgramme: 01 Agricultural Research****Department: 010 National Crops Resources Research Institute****Budget Output: 010010 Technology Generation****PIAP Output: Demand driven agriculture technologies developed**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of research products and services for food and nutrition security generated	Number	2021-2022	4			4

Department: 011 National Fisheries Resources Research Institute**Budget Output: 010010 Technology Generation****PIAP Output: Demand driven agriculture technologies developed****Programme Intervention: 010407 Strengthen agricultural research and technology development**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of market-oriented products generated	Number	2021-2022	4	5	1	4
Number of research products and services for food and nutrition security generated	Number	2021-2022	8	3	2	8
Number of research products and services suitable for industry developed	Number	2021-2022	2	3	3	2

Department: 012 National Forestry Resources Research Institute**Budget Output: 010011 Technology Promotion****PIAP Output: Demand driven agriculture technologies developed****Programme Intervention: 010407 Strengthen agricultural research and technology development**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of research products and services suitable for industry developed	Number	2021-2022	2			2

VOTE: 142 National Agricultural Research Organization (NARO)**Sub SubProgramme: 01 Agricultural Research****Department: 013 Mukono Zonal Agriculture Research Institute (ZARDI)****Budget Output: 010011 Technology Promotion****PIAP Output: Demand driven agriculture technologies developed****Programme Intervention: 010407 Strengthen agricultural research and technology development**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of market-oriented products generated	Number	2021-2022	2			4

Department: 014 National Livestock Resources Research Institute (NaLIRRI)**Budget Output: 010011 Technology Promotion****PIAP Output: Research-extension farmer linkages developed and strengthened****Programme Intervention: 010407 Strengthen agricultural research and technology development**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of technologies adopted	Number	2021-2022	6			6

Department: 016 Ngetta ZARDI**Budget Output: 010011 Technology Promotion****PIAP Output: Demand driven agriculture technologies developed****Programme Intervention: 010407 Strengthen agricultural research and technology development**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of market-oriented products generated	Number	2021-22	2			4
Number of research products and services suitable for industry developed	Number	2021-2022	1			1

VOTE: 142 National Agricultural Research Organization (NARO)**Sub SubProgramme: 01 Agricultural Research****Project: 1560 Relocation and Operationalisation of the National Livestock Resources Research Institute(NALIRRI)****Budget Output: 000017 Infrastructure Development and Management****PIAP Output: Demand driven agriculture technologies developed****Programme Intervention: 010407 Strengthen agricultural research and technology development**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of research products and services for food and nutrition security generated	Number	2021-22	15			15
Number of research products and services suitable for industry developed	Number	2021-2022	3	13	3	3

Budget Output: 010010 Technology Generation**PIAP Output: Demand driven agriculture technologies developed****Programme Intervention: 010407 Strengthen agricultural research and technology development**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of research products and services suitable for industry developed	Number	2021-2022	8	13	3	5

Project: 1619 Retooling of National Agricultural Research Organization**Budget Output: 000003 Facilities and Equipment Management****PIAP Output: Demand driven agriculture technologies developed****Programme Intervention: 010407 Strengthen agricultural research and technology development**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of research products and services suitable for industry developed	Number	2021-2022	8			8

Budget Output: 000017 Infrastructure Development and Management**PIAP Output: Demand driven agriculture technologies developed****Programme Intervention: 010407 Strengthen agricultural research and technology development**

VOTE: 142 National Agricultural Research Organization (NARO)**Sub SubProgramme: 01 Agricultural Research****Project: 1619 Retooling of National Agricultural Research Organization****Budget Output: 000017 Infrastructure Development and Management****PIAP Output: Demand driven agriculture technologies developed**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of research products and services suitable for industry developed	Number	2021-2022	8			8

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

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of research products and services for food and nutrition security generated	Number	2021-2022	4			4

Budget Output: 010009 Research Partnerships**PIAP Output: Demand driven agriculture technologies developed****Programme Intervention: 010407 Strengthen agricultural research and technology development**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of functional public-private partnerships established for technology development and promotion	Number	2021-2022	6	12	5	5

Budget Output: 010010 Technology Generation**PIAP Output: Demand driven agriculture technologies developed****Programme Intervention: 010407 Strengthen agricultural research and technology development**

VOTE: 142 National Agricultural Research Organization (NARO)**Sub SubProgramme: 01 Agricultural Research****Project: 1619 Retooling of National Agricultural Research Organization****Budget Output: 010010 Technology Generation****PIAP Output: Demand driven agriculture technologies developed**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of research products and services for food and nutrition security generated	Number	2021-2022	15			15

Budget Output: 010011 Technology Promotion**PIAP Output: Demand driven agriculture technologies developed****Programme Intervention: 010407 Strengthen agricultural research and technology development**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
Number of improved technologies and innovations adopted	Number	2021-2022	68	36	5	68
Number of research products and services for food and nutrition security generated	Number	2021-2022	8			8

Programme: 17 Regional Balanced Development**SubProgramme: 01 Production and productivity****Sub SubProgramme: 01 Agricultural Research****Department: 002 Buginyaya Zonal Agriculture Research Institute(ZARDI)****Budget Output: 010011 Technology Promotion****PIAP Output: Youth and Women cooperatives supported****Programme Intervention: 170209 Organize farmers into cooperatives at district level**

Indicator Name	Indicator Measure	Base Year	Base Level	2022/23		Performance Targets
				Target	Q2 Performance	2023/24
No. of Youth and Women cooperatives supported	Number	2021-2022	0			20

VOTE: 142 National Agricultural Research Organization (NARO)

VI. VOTE NARRATIVE

Vote Challenges

Inadequate funding for research and development against the African Union Research Agenda 2060 that requires African countries to commit 1% of their GDP to research. In this line, NARO requires UGX 300 billion to run research annually.

Inadequate transport equipment to effectively undertake research The existing transport equipment is beyond five years old and above 250,000KM and the maintenance cost is very high The existing transport equipment poses the following risks a loss of life due to accidents b failure to implement most research activities and c financial loss due to exorbitant repair and maintenance costs. NARO needs at least 51 new service delivery vehicles for 16 public research institutes and the secretariat to support research across the country

Inadequate research facilities to support research for products and service delivery to support agro-industrialization

Emerging pests and re-emerging pests and diseases that undermine sustainable incremental genetic gains

Changing demands from increasing population and population structure and stakeholders amidst limited resources

Climate change and its impact that require innovative research approaches

Inadequate salaries and wages for agriculture research scientists to attract and retain high quality staff This is against the set government target pay which undermines stability in agriculture research

Inadequate laws and policies to aid research and innovation, promotion and utilization of technology

Plans to improve Vote Performance

NARO has diversified strategies for resource mobilization to ensure self-reliance in the next 5 to 10 years

NARO will develop profitable NTR business plans and implement them in a private mode through the commercial arm of NARO the NARO Holdings Limited

Scale-up the NARO Holdings LTD activities

NARO holdings LTD will roll out its activities to all PARIs and beyond to increase revenue generation which in turn will increase the remittances to support NARO

Commercialising NARO technologies to exploit royalties and intellectual property rights

NARO shall intensify commercialisation of her technologies to broaden her income through collection royalties and Intellectual Property rights to increase revenue generation

Strengthening NARO grants office NARO will establish a think tank under the grants office to generate ideas that reflect global trends and opportunities; and constitute them into negotiable proposals

NARO will intensify establishment of centers of excellence African Union of Excellence in for Research in Aquaculture East African Innovation Center for Millet and Sorghum ICFMS Cassava Regional Center of Excellence groundnuts and hubs for Excellence in Breeding To emerge as a research leader at regional and global level NARO will position herself to build networks and capacity for resource mobilisation and management for the greater region

NARO will develop a roadmap to become self reliant to create stability in agricultural research The road map will layout an action towards investment in development of flagship products and services for the industry and market to generate revenue to support Agricultural research

VII. Off Budget Support and NTR Projections

Table 7.1: Off Budget Support by Project and Department

VOTE: 142 National Agricultural Research Organization (NARO)

<i>Billion Uganda Shillings</i>	2023/24 Draft Estimates
Programme : 01 Agro-Industrialization	31,080,000
SubProgramme: 02 Agricultural Production and Productivity	31,080,000
Sub SubProgramme : 01 Agricultural Research	31,080,000
Department: 001 Abi Zonal Agriculture Research Institute(ZARDI)	294,000
Department: 003 Bulindi Zonal Agriculture Research Institute(ZARDI)	131,000
Department: 004 Kachwekano Zonal Agriculture Research Institute(ZARDI)	382,000
Department: 005 Mbarara Zonal Agriculture Research Institute(ZARDI)	673,000
Department: 006 Nabuin Zonal Agriculture Research Institute(ZARDI)	2,151,000
Department: 008 National Agricultural Research Laboratories	11,638,000
Department: 009 National Coffee Research Institute	2,715,000
Department: 010 National Crops Resources Research Institute	7,082,000
Department: 011 National Fisheries Resources Research Institute	1,100,000
Department: 012 National Forestry Resources Research Institute	1,671,000
Department: 014 National Livestock Resources Research Institute (NaLIRRI)	1,507,000
Department: 015 National Semi Arid Resources Research Institute (NaSARRI)	861,000
Department: 017 Rwebitaba ZARDI	875,000
Total For The Vote	31,080,000

VOTE: 142 National Agricultural Research Organization (NARO)**Table 7.2: NTR Collections (Uganda Shillings Billions)**

Revenue Code	Revenue Name	FY2022/23	Projection FY2023/24
141131	Interest from other government units	0.000	0.010
141501	Rent & Rates - Non-Produced Assets – from private entities	0.000	0.786
141541	Rent & Rates - Non-Produced Assets – from Gov't units	261,943,000.000	0.000
142119	Sale of bid documents-From Private Entities	25,000,000.000	0.000
142120	Sale of Agricultural products and services.-From Private Entities	891,063,000.000	0.000
142159	Sale of bid documents-From Government Units	0.000	0.000
142160	Sale of Agricultural products and services-From Government Units	0.000	2.769
142225	Other Licence fees	0.000	0.085
Total		1,178,006,000.000	3.650

VOTE: 142 National Agricultural Research Organization (NARO)

VIII. VOTE CROSS CUTTING POLICY AND OTHER BUDGETARY ISSUES

Table 8.1: Cross- Cutting Policy Issues

i) Gender and Equity

OBJECTIVE	To develop and disseminate technologies which promote equity among Ugandans across all regions.
Issue of Concern	Low levels of adoption for improved technologies among the regions for food, nutrition security, and industry
Planned Interventions	Establish demonstrations for various technologies in different Agro ecological zones to increase adoption levels for impact
Budget Allocation (Billion)	3.100
Performance Indicators	Number of technologies to support regional development developed and disseminated

ii) HIV/AIDS

OBJECTIVE	To minimize levels of new infections among the youth and the married
Issue of Concern	Increasing number of new HI/AIDs infections among the youth
Planned Interventions	Develop market led technologies to create business enterprises for the youth through incubation.
Budget Allocation (Billion)	0.100
Performance Indicators	Number of Market led technologies adopted among the youth

iii) Environment

OBJECTIVE	Develop technological solutions for emerging environmental concerns
Issue of Concern	High level of hidden hunger among the children, elderly and expecting mothers.
Planned Interventions	Develop technologies for management of deficiencies in trace mineral elements such as zinc, iron, vitamin A and Proteins
Budget Allocation (Billion)	0.100
Performance Indicators	Number of biofortified products developed and delivered to uptake pathways

iv) Covid

OBJECTIVE	Develop Sustainable solutions that respond to emerging and re-emerging pandemics in Uganda.
Issue of Concern	High level of emerging and reemerging pests and diseases which has resulted into interceptions of Ugandan products from local, regional, and international markets
Planned Interventions	Develop Bio-control solutions for management of pests and diseases; and engineering solutions for post harvest handling for food and feed safety to minimizes the levels of dangerous chemical residues in Agricultural products.

VOTE: 142 National Agricultural Research Organization (NARO)

Budget Allocation (Billion)	1.000
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Performance Indicators	Number of Bio-control and engineering products developed for food and feed safety.
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VOTE: 142 National Agricultural Research Organization (NARO)**IX. PERSONNEL INFORMATION****Table 9.1: Staff Establishment Analysis**

Title	Salary Scale	Number of Approved Positions	Number of filled Positions
Research Officer	UR 5(i)	140	133
Security Guard	UR 8	31	30

VOTE: 142 National Agricultural Research Organization (NARO)**Table 9.2: Staff Recruitment Plan**

Post Title	Salary Scale	No. Of Approved Posts	No. Of Filled Posts	No. Of Vacant Posts	No. Of Posts Cleared for Filling FY2023/24	Gross Salary Per Month (UGX)	Total Annual Salary (UGX)
Research Officer	UR 5(i)	140	133	7	7	4,800,000	403,200,000
Security Guard	UR 8	31	30	1	1	1,200,000	14,400,000
Total					8	6,000,000	417,600,000