

VOTE: 125

National Animal Genetic Resource Centre and Data Bank (NAGRC&DB)

V1: VOTE OVERVIEW

i) Vote Strategic Objectives

Increase production, preservation, distribution and utilization of superior animal genetic resources. Enhance characterization, inventory and monitoring of animal genetic resources. Enhance development and conservation of indigenous animal genetic resources and biodiversity. Strengthen the Commercialization function of NAGRC&DB. Strengthen institutional capacity for efficient service delivery

ii) Snapshot of Medium Term Budget Allocations

Table V1.1 Overview of Vote Medium Term Allocations (Ush Billion)

Billion Uganda Shillings	FY2022/23		FY2023/24	MTEF Budget Projections			
	Approved Budget	Spent by End Sep	Proposed Budget	2024/25	2025/26	2026/27	2027/28
Recurrent Wage	5.736	1.370	5.736	6.023	6.625	7.288	7.288
Non Wage	5.462	0.060	7.860	8.017	9.621	12.988	12.988
Dev't. GoU	81.971	13.251	66.760	66.760	80.112	112.157	112.157
ExtFin	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GoU Total	93.169	14.681	80.356	80.800	96.358	132.432	132.432
Total GoU+Ext Fin (MTEF)	93.169	14.681	80.356	80.800	96.358	132.432	132.432
A.I.A Total	0.000	0	0	0.000	0.000	0.000	0.000
Grand Total	93.169	14.681	80.356	80.800	96.358	132.432	132.432

Table V1.2: Medium Term Projections by Programme and Sub-Subprogramme

Billion Uganda Shillings	FY2022/23		2023/24	MTEF Budget Projection			
	Approved Budget	Spent by End Sep	Proposed Budget	2024/25	2025/26	2026/27	2027/28
01 AGRO-INDUSTRIALIZATION							
01 Breeding and Genetic	93.169	14.681	80.356	80.800	96.358	132.432	132.432
Total for the Programme	93.169	14.681	80.356	80.800	96.358	132.432	132.432
Total for the Vote: 125	93.169	14.681	80.356	80.800	96.358	132.432	132.432

V2: MEDIUM TERM BUDGET ALLOCATIONS BY DEPARTMENT AND PROJECT

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Table V2.1: Medium Term Projections by Department and Project

Billion Uganda Shillings	FY2022/23		2023/24	MTEF Budget Projection			
	Approved Budget	Spent by End Sep	Proposed Budget	2024/25	2025/26	2026/27	2027/28
Programme: 01 AGRO-INDUSTRIALIZATION							
Sub-SubProgramme: 01 Breeding and Genetic Improvement							
Recurrent							
002 Finance and Administration	11.198	1.430	13.596	14.040	16.246	20.275	20.275
Development							
1325 NAGRC Strategic Intervention for Animal Genetics Improvement Project	81.336	39.752	66.340	65.660	79.112	110.157	110.157
1752 Retooling of the National Animal Genetic Resources Centre and Data Bank	0.635	0.000	0.420	1.100	1.000	2.000	2.000
Total for the Sub-SubProgramme	93.169	14.681	80.356	80.800	96.358	132.432	132.432
Total for the Programme	206.689	14.681	80.356	80.800	96.358	132.432	132.432
Total for the Vote: 125	93.169	14.681	80.356	80.800	96.358	132.432	132.432

V3: VOTE MEDIUM TERM PLANS

Planned Outputs for FY2023/24 and Medium Term Plans

FY2022/23	FY2023/24		
Plan	BFP Performance	Plan	MEDIUM TERM PLANS

Programme Intervention: 010101 Establish post-harvest handling, storage and processing infrastructure including silos, dryers, warehouses, and cold rooms of various scale and capacities at subcounty, district and zonal levels.

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1. Operationalizing animal feed production, packaging and storage facilities on the NAGRC&DB farms.	The 5MT/hr feed mill at Kasolwe stock farm is already producing high quality and affordable animal feeds to address the issue of feed scarcity in the county.	<p>1. Construction and equipping of modern grain storage facilities to support food and animal feed security programme on government animal breeding ranches</p> <p>2. Establishing modern silage bunkers and hay barns to support animal feed production, storage and processing on all government animal breeding ranches</p> <p>3. Completion and equipping of grain storage facilities and floating fish feed production plant at Kasolwe animal breeding ranch</p> <p>4. Equipping and maintenance of the 5MT/hr feed mill at Kasolwe animal breeding ranch to operate at full capacity (processing of high quality and affordable animal feeds to meet both internal and external demand). Special consideration will be given to women and youth farmers</p>	<p>1. NAGRC&DB plans to have a mini animal feed processing plant on all animal breeding ranches to address animal feed scarcity countrywide.</p> <p>2. The plan is also to produce, process, package, market and avail differentiated animal feeds to local, regional and international markets</p>
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Programme Intervention: 010402 Improve skills and competencies of agricultural labour force at technical and managerial levels

<p>1. Training and skilling of farmers and other key stakeholders in various livestock management aspects e.g. Animal breeding, herd recording, Assisted Reproductive Technologies.</p> <p>2. Developing and equipping the youth with knowledge, skills and facilities for access and utilization of modern extension services.</p> <p>3. Retooling Animal Breeding Scientists.</p>	<p>A total of 10 (4 females and 6 males) animal breeding scientists have been supported in acquiring advanced skills in livestock breeding and production for improved genetics in the country</p> <p>2. A total of 1248 (495 females and 753 males) farmers and students have been equipped with modern livestock management practices on centre farms and ranches</p>	<p>1. Strengthening private breeding structures to produce and supply breeding stock. 48% of the beneficiaries will be women and youth</p> <p>2. Retool the NAGRC&DB community breeders to provide excellent extension services in the implementation of Parish Development Model</p>	<p>1. Establishing and equipping community-based breeding centres to provide animal breeding services up to the last mile.</p> <p>2. Establishing and equipping skilling centres on all NAGRC&DB centres farms to provide practical animal breeding and production skills to farmers and learners in science institutions.</p>
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Programme Intervention: 010406 Promote sustainable land and environment management practices in line with the agroecological needs:

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1.Establishing pasture gardens on Animal Genetic Resource Centers (AnGRCs) to supplement natural grazing. 2.Carrying out agroforestry to protect the environment on Animal Genetic Resource Centers (AnGRCs) and surrounding communities.	Following the Presidential directive to ensure food and animal feed security, the entity has bush cleared 8,386 acres of land and planted 7,057 acres of soya, maize and napier in Aswa, Maruzi, Nshaara, Rubona, Got Apwoyo, Ruhengere, Kasolwe and Lusenke. This constitutes season one of the food and animal feed security programme being implemented by NAGRC&DB and other selected Government agencies.	1. Establish and regularly maintain bio security systems on government animal breeding ranches to control infectious materials 2. Establishment of livestock paddocks on government animal breeding ranches to control overgrazing 3. Establishment of breeding paddocks for controlled mating 4. Plant fodder/ forage trees on government animal breeding ranches to protect the environment	1. Invest in biogas production on government animal breeding ranches 2. Mass investment in animal feed production (hay and silage) to minimize the effects of over grazing 3. Promote agro forestry on government animal breeding ranches to protect the environment
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Programme Intervention: 010407 Strengthen agricultural research and technology development

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<p>1. Equipping and maintaining the national and regional Gene banks.</p> <p>2. Introduction of superior breeding stock on NAGRC&DB Animal Genetic Resource Centers (AnGRCs).</p> <p>3. Production and availing of litres of liquid nitrogen for semen, ova and embryos cryopreservation for onward distribution and for freeze-branding.</p> <p>4. Conservation of indigenous animal genetic resources biodiversity for present and future breed improvement.</p> <p>5. Multiplication and availing of tropicalized livestock breeds through various uptake pathways up to parish level.</p> <p>6. Conserving, breeding, multiplying and availing fish seed from NAGRC&DB Animal Genetic Resource Centers (AnGRCs).</p> <p>7. Production and availing of doses of semen to support dairy, beef, pig and goat farmers countrywide.</p> <p>8. Establishment and equipping of the National Piggery Resources Centre at Njeru Stock Farm - Buikwe District.</p>	<p>1. The gene bank has been sufficiently maintained and it has been upgraded to African seed centre of excellence by AU-IBAR</p> <p>2. Maintained the bulls (feeding, health, housing and hygiene) and semen production laboratory. A total of 10,772 doses of semen were produced at the National Bull stud and genetic evaluation center and availed to actors along the ART value chain</p> <p>3. Maintained the liquid nitrogen plants in Buikwe, Entebbe and Mbarara. A total of 19,490 litres of liquid nitrogen were produced and availed for use at Entebbe, Mbarara and Buikwe liquid nitrogen plants</p>	<p>1. Restocking and management of superior breeding stock on government animal breeding ranches for breeding, multiplication and availing to farmers countrywide.</p> <p>2. Maintenance of the National Bull Stud and Semen Evaluation Centre at Entebbe, boar stud at Kasolwe, buck stud at Lusenke (Feeding, drugs, laboratory reagents, semen collection and laboratory equipment, routine maintenance of bull pens etc)</p> <p>3. Constructing, equipping and maintenance of all-inclusive animal breeding and production support facilities e.g. Biosecurity infrastructure, poultry rearing structures, dip tanks, spray races etc</p> <p>4. Production and availing of doses of semen to support dairy, beef, pig and goat farmers. 48% will go to women led enterprises</p> <p>5. Production and availing of litres of liquid nitrogen for semen, ova and embryos cryopreservation for onward distribution and for freeze-branding</p> <p>6. Production, multiplication and availing of poultry genetic resources (indigenous and multipurpose breeds)</p> <p>7. Support Embryo Transfer Services Unit for pure breed multiplication and availing to farming households across the country at parish level.</p> <p>8. Conservation of indigenous and tropicalized animal genetic resources biodiversity for present and future breed improvement programs</p>	<p>1. Establish parish-based semen banks to support the implementation of the Parish Development Model</p> <p>2. Establish, equip and maintain Satellite Assisted Reproductive Technology laboratories and breeding soundness evaluation centres in different sub regions across Uganda</p> <p>3. Stocking all government animal breeding ranches with sufficient superior breeding stock</p> <p>4. Establish and equip a liquid nitrogen plant in Northern Region</p> <p>5. Establish, equip and maintain poultry hatcheries in at least five (5) subregions of the country</p> <p>6. Production of semen and embryos for local and external markets</p> <p>7. Strengthening participatory community-based conservation of indigenous animal breeds</p>
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Programme Intervention: 010411 Strengthen the agricultural extension system			
1.Upscaling Community Breeding Outreach Programme by skilling more Artificial Insemination (AI) technicians and expand Artificial Insemination (AI) sub centres and bulking centres to improve livestock breeds with in the farming communities.	In an effort to promote community breeding under the Parish Development Model, a total of 1,423 cows were synchronized and inseminated country wide. These interventions are meant to improve the animal breeds country wide and access to improved germplasm in general.	1. NAGRC&DB will organize refresher courses for Artificial Insemination (AI) technicians, train and equip more animal scientists to bridge the animal breeding and production gaps in communities countrywide. This will be done in collaboration with local governments 2. Utilizing the Mobile Assisted Reproductive Technology Laboratories for embryo transfer, field semen collection and evaluation of semen dispatched up to Parish level	1. Establishing, equipping and maintaining regional livestock improvement demonstration sites to enhance animal breeding at parish level 2. Strengthening systems and mechanisms for distribution of animal genetic Resources
Programme Intervention: 010602 Strengthen linkages between public and private sector in agro-industry			
1.Establishing functional public-private-community partnerships for technology development & promotion of differentiated products for niche markets e.g. Ankole milk cheese, ghee, goat milk, etc	The entity signed a memorandum of cooperation with IOWA University of science and technology and URUS to collaborate in training, research and germplasm distribution in the country.	1. Establish partnerships with private breeders to sufficiently supply high quality breeding stock for the Parish Development Model 2. Establish partnerships with other science-oriented institutions to promote and apply animal breeding and production technology for increased production and productivity	1. Establish partnerships with private breeders to sufficiently supply high quality breeding stock in the Parish Development Model 2. Establish partnerships with other science-oriented institutions to promote and apply animal breeding and production technology for increased production and productivity 3. Increasing access to animal seed through acquisition and availing of superior semen, embryos, oocytes etc under the proposed Uganda seed company

V4: Highlights of Vote Projected Performance

Table V4.1: Budget Outputs and Indicators

Programme:	01 AGRO-INDUSTRIALIZATION
Sub SubProgramme:	01 Breeding and Genetic Improvement
Department:	002 Finance and Administration
Budget Output:	000005 Human Resource Management

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Sub SubProgramme:	01 Breeding and Genetic Improvement					
PIAP Output:	Animal breeding stock multiplied and distributed to farmers country wide for cattle, poultry, goats, pigs, fish etc.					
Programme Intervention:	010601 Strengthen coordination of public institutions in design and implementation of policies including access to quality food and food security					
Indicator Name	Indicator Measure	Base Year	Base Level	FY2022/23		FY2023/24
				Target	Q1 Performance	Proposed
Number of regional community breeding satellite centers established and maintained	Number	2021/22	4	4	4	4
Project:	1325 NAGRC Strategic Intervention for Animal Genetics Improvement Project					
Budget Output:	000002 Construction management					
PIAP Output:	Animal breeding, production, administrative units and research facilities constructed and equipped					
Programme Intervention:	010407 Strengthen agricultural research and technology development					
Indicator Name	Indicator Measure	Base Year	Base Level	FY2022/23		FY2023/24
				Target	Q1 Performance	Proposed
Animal breeding and production support facilities constructed	List	2021/22	32	38	0	29
Budget Output:	000014 Administrative and Support Services					
PIAP Output:	Animal breeding stock multiplied and distributed to farmers country wide for cattle, poultry, goats, pigs, fish etc.					
Programme Intervention:	010601 Strengthen coordination of public institutions in design and implementation of policies including access to quality food and food security					
Indicator Name	Indicator Measure	Base Year	Base Level	FY2022/23		FY2023/24
				Target	Q1 Performance	Proposed
Number of regional community breeding satellite centers established and maintained	Number	2021/22	3	4	4	3
Budget Output:	010004 Animal Feeds Production					
PIAP Output:	Cooperative societies, communities supported with cleaning, drying, grading and processing equipment					
Programme Intervention:	010101 Establish post-harvest handling, storage and processing infrastructure including silos, dryers, warehouses, and cold rooms of various scale and capacities at subcounty, district and zonal levels.					

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Sub SubProgramme:	01 Breeding and Genetic Improvement					
PIAP Output:	Cooperative societies, communities supported with cleaning, drying, grading and processing equipment					
Indicator Name	Indicator Measure	Base Year	Base Level	FY2022/23		FY2023/24
				Target	Q1 Performance	Proposed
Number of animal feed production, packaging, and storage facilities on 7 NAGRC&DB centre farms	Number	2021/22	0	1	0	3
Budget Output:	010005 Animal Genetic Resources Databank strengthened and maintained					
PIAP Output:	Animal breeding stock multiplied and distributed to farmers country wide for cattle, poultry, goats, pigs, fish					
Programme Intervention:	010407 Strengthen agricultural research and technology development					
Indicator Name	Indicator Measure	Base Year	Base Level	FY2022/23		FY2023/24
				Target	Q1 Performance	Proposed
Number of regional community breeding satellite centers established and maintained	Number	2021/22	1			1
Budget Output:	010006 Breeding, production and multiplication of fish and livestock					
PIAP Output:	Demand driven agriculture technologies developed					
Programme Intervention:	010407 Strengthen agricultural research and technology development					
Indicator Name	Indicator Measure	Base Year	Base Level	FY2022/23		FY2023/24
				Target	Q1 Performance	Proposed
Doses of semen produced and extended to farmers	Number	2021/22	135584	102439	10772	142906
Litres of Nitrogen produced	Number	2021/22	103619	99685	19490	112307
Budget Output:	010007 Conservation and utilization of indigenous Animal Genetic resources					
PIAP Output:	Animal breeding stock multiplied and distributed to farmers country wide for cattle, poultry, goats, pigs, fish					
Programme Intervention:	010407 Strengthen agricultural research and technology development					

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Sub SubProgramme:	01 Breeding and Genetic Improvement					
PIAP Output:	Animal breeding stock multiplied and distributed to farmers country wide for cattle, poultry, goats, pigs, fish					
Indicator Name	Indicator Measure	Base Year	Base Level	FY2022/23		FY2023/24
				Target	Q1 Performance	Proposed
Number of poultry varieties developed, multiplied and promoted	Number	2021/22	974219	1369284	209346	1500000
Number of tropicalised superior breeding stock introduced	Number	2021/22	487	400	0	994
Project:	1752 Retooling of the National Animal Genetic Resources Centre and Data Bank					
Budget Output:	000003 Facilities and Equipment Management					
PIAP Output:	Animal breeding,production, administrative units and research facilities constructed and equipped					
Programme Intervention:	010602 Strengthen linkages between public and private sector in agro-industry					
Indicator Name	Indicator Measure	Base Year	Base Level	FY2022/23		FY2023/24
				Target	Q1 Performance	Proposed
Animal breeding and production support facilities constructed	List	2021/22	0	1	0	0
Number of farmer animal genetic learning centres established	Number	2021/22	0			1

V5: VOTE CROSS CUTTING ISSUES

i) Gender and Equity

OBJECTIVE	Promote gender and equity in livestock breeding and production interventions
Issue of Concern	1. Majority of the rural women, youth and PWDs face accessibility and affordability challenges when it gets to improved livestock enterprises for income and wealth generation. 2. Limited skills for rural livestock breeding and production.
Planned Interventions	1. Intensify community breeding outreach activities(skilling farmers and AI technicians) with an intension of improving rural livestock breeds. 2. Breeding, multiplication and availing of high quality breeding stock to farmers countrywide
Budget Allocation (Billion)	20

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Performance Indicators	<ol style="list-style-type: none"> 1. Number of improved livestock and poultry numbers extended to farmers countrywide. 2. Number of farmers (men, women, youth, PWDs) skilled during community breeding outreach activities.
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ii) HIV/AIDS

OBJECTIVE	Create HIV/AIDS awareness among stakeholders and employees
Issue of Concern	HIV/AIDS negatively affects agriculture labor force and employees in terms production and productivity respectively.
Planned Interventions	<ol style="list-style-type: none"> 1. Working with Uganda AIDS Commission and other relevant stakeholders to promote protective measures 2. Operationalization of the HIV/AIDS committee at the workplace 3. Mass sensitization of the farmers during community breeding activities
Budget Allocation (Billion)	0.3
Performance Indicators	<ol style="list-style-type: none"> 1. Number of condom dispensers installed at the centre farms, ranches and headquarters. 2. No. of farmers sensitized during community breeding activities. 3. A functional HIV/AIDS committee at the workplace.

iii) Environment

OBJECTIVE	To protect the environment in the grazing and surrounding areas
Issue of Concern	Over grazing can easily cause climate change through land degradation. Most researchers argue that a decline in the vegetation covers leads to a reduction in evapotranspiration and this later causes an increase in the temperature levels.
Planned Interventions	<ol style="list-style-type: none"> 1. Establishment of paddocks to control over grazing 2. Promote agro forestry on NAGRC&DB centre farms
Budget Allocation (Billion)	3
Performance Indicators	<ol style="list-style-type: none"> 1. Number of farms and ranches equipped with grazing paddocks 2. Number of trees planted on centre farms and ranches

iv) Covid

OBJECTIVE	To promote economic recovery following the adverse impact of COVID-19 on farming households
Issue of Concern	Covid-19 paralyzed economic activities and agriculture was not spared. Farming households are still recovering from the adverse effects of this global pandemic.
Planned Interventions	Multiplication and availing of poultry genetic resources that have proved to bring quick returns to farmers countrywide
Budget Allocation (Billion)	4.5
Performance Indicators	No. of chicks multiplied and availed to farming communities countrywide