

Vote: 125 National Animal Genetic Res. Centre and Data Bank

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 below summarises the Medium Term Budget allocations for the Vote:

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

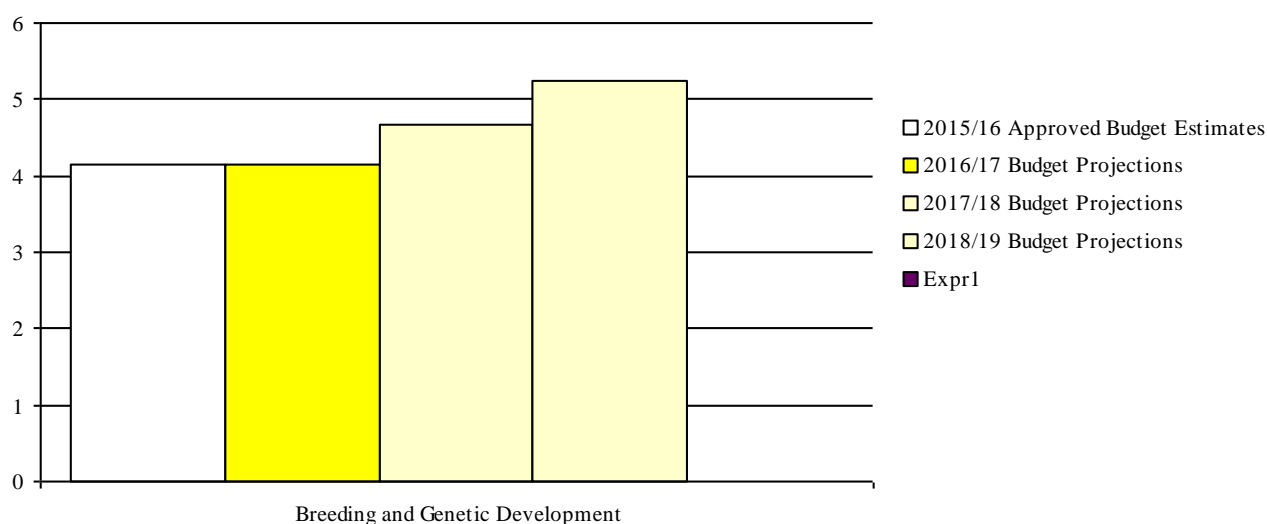
	2014/15 Outturn	2015/16		MTEF Budget Projections		
		Approved Budget	Spent by End Sept	2016/17	2017/18	2018/19
<i>(i) Excluding Arrears, Taxes</i>						
Recurrent Wage	0.000	1.900	0.327	1.900	1.995	2.095
Recurrent Non Wage	4.953	2.250	0.414	2.250	2.678	3.159
Development GoU	0.000	0.000	0.000	0.000	0.000	0.000
Development Ext.Fin	0.000	0.000	0.000	0.000	0.000	0.000
GoU Total	4.953	4.150	0.741	4.150	4.673	5.254
Total GoU+Donor (MTEF)	4.953	4.150	0.741	4.150	4.673	5.254
<i>(ii) Arrears and Taxes</i>						
Arrears	0.000	0.000	0.000	0.000	N/A	N/A
Taxes**	0.000	0.000	0.000	0.000	N/A	N/A
Total Budget	4.953	4.150	0.741	4.150	N/A	N/A
<i>(iii) Non Tax Revenue</i>						
	0.000	0.800	0.055	1.000	2.000	0.000
Grand Total	4.953	4.950	0.796	5.150	N/A	N/A
Excluding Taxes, Arrears	4.953	4.950	0.796	5.150	6.673	5.254

* Donor expenditure data unavailable

** Non VAT taxes on capital expenditure

The chart below shows total funding allocations to the Vote by Vote Function over the medium term:

Chart V1.1: Medium Term Budget Projections by Vote Function (UShs Bn, Excluding Taxes, Arrears)



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(ii) Vote Mission Statement

The Vote's Mission Statement is:

To play a leading role in establishing a comprehensive and Sustainable National Animal Breeding Programme in Uganda.

(iii) Vote Outputs which Contribute to Priority Sector Outcomes

The table below sets out the vote functions and outputs delivered by the vote which the sector considers as contributing most to priority sector outcomes.

Table V1.2: Sector Outcomes, Vote Functions and Key Outputs

Sector Outcome 1:	Sector Outcome 2:	Sector Outcome 3:
<i>Agricultural Production and Productivity</i>	<i>Improved markets and increase in value addition</i>	<i>Improvement in the enabling environment & Institutional strengthening</i>
Vote Function: 01 56 Breeding and Genetic Development		
<i>Outputs Contributing to Outcome 1:</i>	<i>Outputs Contributing to Outcome 2:</i>	<i>Outputs Contributing to Outcome 3:</i>
<i>Outputs Provided</i>	None	None
015609 Multiplication of pure Dairy breeds & appropriate crosses		

V2: Past Vote Performance and Medium Term Plans

This section describes past and future vote performance, in terms of key vote outputs and plans to address sector policy implementation issues.

(i) Past and Future Planned Vote Outputs

2014/15 Performance

1) Multiplication of pure Dairy animals

One hundred forty six (146) pure dairy animals were born representing 97.33% of the annual set target.

2) Multiplication of dairy & beef breeds & appropriate crosses

Nine hundred and seventy five (975), calves were produced representing 97.5% of the annual set target.

3) Conservation and utilization of indigenous Animal Genetic resources.

Seven hundred and seventy (770) calves of local herd were born, representing 128.33% of the annual set target.

4) Production and distribution of chicks

Two hundred ninety thousand, two hundred twelve (290,212) kuroiler chicks were produced and were distributed to 53 districts of Uganda including Kenya, representing 34.5% of the annual set target.

5) Breeding & multiplication of meat goats

Eight hundred five (805) were produced representing 80.5% of the annual planned total contributing to the breeding function of breeding and genetic development.

6) Breeding & multiplication of pigs

Two hundred and eleven (211) piglets of Camborough breed were born and extended to 50, farmers in 15 districts. This represents 105.5% of the annual planned total.

7) Evaluation and multiplication of improved pasture and fodder germ-plasm

Maize Silage 526 acres, High breed 79 Elephant grass 36 acres, Lablab 6.25 acres, Green leaf Desmodium 1 acre, Panicum maxima 1 acre, Centrosema 5 acres, Rhodes Grass 20 acres, Brachiaria Brithantha 2 acres, Wagabolige Potato vines 2 acres, Mukuna 3 acres, Forage sorghum 1 acre, Caliantra 3000 seedlings and Soya bean 4 acres. This represents 105.2% of the annual plans.

8) Production of animal feeds.

Three hundred sixty (360) tons of silage and 15 tons of concentrates.

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Seven thousand (7000) bales of hay each weigh 35 Kgs (245 Metric tons).this represents 120% of annual planned figure.

9) Training, refreshing and facilitating AI and MOET technicians

Fifty six (56) Artificial inseminator's technician's Technical capacity was strengthened from 23 Districts representing 121% of the annual planned total.

10) Two thousand (2000) Farmers from different parts of the country were trained in Assisted Reproductive Technologies (ARTs),Seven hundred (700) students hosted along ARTs and various best practices From Bukalasa,Mityana Agrovot, Busitema ,Makerere University and many others reprenting 125% performance of the annual planned total.

11) Twenty seven thousand, one hundred and forty

(27,140) dozes of semen were produced and distributed to 63 districts of Uganda through NAGRC AI sub-centers centers.

12) Production, procurement and sale of liquid nitrogen and associated equipment.

Nineteen thousand, two hundred and eighty seven point five (19,287.50) liters of liquid Nitrogen were produced and utilized to distribute semen across 63 Districts of Uganda representing 44.6% performance of the annual planned total.

Preliminary 2015/16 Performance

Generally the performance In quarter one was good compared to the inadequate resources released during the quarter which was the major constraint however the following were the deliverables.

1.The number of pure dairy calves of Friesian, Ayrshire, Brown Swiss, Guernsey Jersey that were produced in quarter one stood at twenty three (23)

2.The number of Dairy crosses produced stood at forty one (41).

3.The number of beef calves produced stood at two hundred twenty six (226)

4.The number of indigenous calves produced stood at One hundred and eighty five (185).

5.The total number of Kuroiler birds produced stood at One hundred forty four thousand, two hundred fifty nine (144,259) and these were distributed to twenty seven districts of Uganda including neighboring countries of Kenya Tanzania.

6.The number of kids born stood at One hundred eighty eight kids (188).

7.A total of one thousand two hundred and thirty (1230) dozes of semen were produced during the quarter and the other 24,000 from South Africa are yet to arrive in Uganda.

8.A total of one thousand eight hundred and ninety seven (1897) liters of liquid nitrogen were produced and distributed for Artificial insemination and maintenance of semen banks in the country.

9.The quantity of silage produced stood at five hundred ten (510) metric tons and whole maize grain stood at sixty(60) metric tons.

10.The number of hay bales produced at Bull Stud, Njeru, LES, Kasolwe and Rubona stood at eight thousand, seventy nine (8079) bales.

11.The total number of comborough pigs produced stood at Fifty one (51) piglets and twenty eight(28) were extended to fifteen farmers in Eight districts of Mukono,Mbarara,Buyende,Iganga,Wakiso,Buikwe,Masaka and Jinja.

Table V2.1: Past and 2016/17 Key Vote Outputs*

<i>Vote, Vote Function Key Output</i>	Approved Budget and Planned outputs	2015/16 Spending and Outputs Achieved by End Sept	2016/17 Proposed Budget and Planned Outputs
Vote: 125 National Animal Genetic Res. Centre and Data Bank			
Vote Function: 0156 Breeding and Genetic Development			
Output:015609	Multiplication of pure Dairy animals & appropriate crosses		

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<i>Vote, Vote Function Key Output</i>	Approved Budget and Planned outputs	2015/16 Spending and Outputs Achieved by End Sept	2016/17 Proposed Budget and Planned Outputs
<i>Description of Outputs:</i>	Development, multiplication and utilization of livestock genetic resources for example Multiplication of various cattle breeds (Dairy and beef), breeding and multiplication Pig germplasm, breeding and multiplication of goats, Breeding and multiplication of chicken.	<p>1.The number of pure dairy calves of Friesian, Ayrshire, Brown swiss, Gurnsey Jersey that were produced in quarter one stood at twenty three (23)</p> <p>2.The number of Dairy crosses produced stood at forty one (41).</p> <p>3.The number of beef calves produced stood at two hundred twenty six (226)</p> <p>4.The number of indigenous calves produced stood at One hundred and eighty five (185).</p> <p>5.The total number of Kuroiler birds produced stood at One hundred forty four thousand, two hundred fifty nine (144,259) and these were distributed to twenty seven districts of Uganda including neighboring countries of Kenya Tanzania.</p> <p>6.The number of kids born stood at One hundred eighty eight kids (188).</p> <p>7.A total of one thousand two hundred and thirty (1230) dozens of semen were produced during the quarter and the other 240,000 from South Africa are yet to arrive in Uganda.</p> <p>8.A total of one thousand eight hundred and ninety seven (1897) liters of liquid nitrogen were produced and distributed for Artificial insemination and maintenance of semen banks in the country.</p> <p>9.The quantity of silage produced stood at five hundred ten (510) tons and whole maize grain stood at sixty metric tons.</p> <p>10.The number of hay bales produced at Bull Stud, Njeru, LES, Kasolwe and Rubona stood at eight thousand, seventy nine (8079) bales.</p> <p>11.The total number of comb rough pigs produced stood at Fifty one (51) piglets an twenty eight(28)</p>	
<i>Performance Indicators:</i>			
Quantity of improved breeds produced (cattle, goats, pigs, chicken)	843,250	144922	843,250

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<i>Vote, Vote Function Key Output</i>	Approved Budget and Planned outputs	2015/16 Spending and Outputs Achieved by End Sept	2016/17 Proposed Budget and Planned Outputs
Number of technicians trained in assisted reproductive techniques (AI, ET, NPD)	100	27	200
Number of farmers sensitized in assisted reproductive techniques (AI, ET, NPD)	2,600	1048	2,600
No. of AI Satellite centres established	4	0	4
Litres of liquid nitrogen produced	43,200 LTRS	1897	80,000 LTRS
Doses of semen produced and sold to farmers	76,200	1230	80,000
<i>Output Cost: UShs Bn:</i>	<i>0.388</i>	<i>UShs Bn:</i>	<i>0.036</i>
Vote Function Cost	UShs Bn:	4.950 UShs Bn:	0.741 UShs Bn:
Cost of Vote Services:	UShs Bn:	4.950 UShs Bn:	5.150 UShs Bn:

* Excluding Taxes and Arrears

2016/17 Planned Outputs

1. One hundred fifty (150) Calves from pure dairy breeds (Friesian, Gurney, Jersey, Brown Swiss and Ayrshire etc.) shall be produced for future trials and multiplication.
2. One thousand three hundred (1,300) cross bred calves born from both Dairy and Beef cattle;
3. Six hundred (600) calves from the elite local cattle herd shall be produced;
4. A minimum of eight hundred (800,000) commercial Kuroiler chicks shall be produced;
5. A minimum of 1,000 goats will be produced;
6. A minimum 450 quality genetic piglets shall be produced.
7. 76,200 doses of cattle semen produced at NAGRC&DB for dairy and beef shall be procured and distributed.
8. Four hundred twenty (420) tons of corn;
9. Six thousand (6,000) bales of hay produced.
10. Three hundred (300) tons of quality animal feeds.
12. A minimum of 50 Ai technicians trained
13. Three hundred (300) tons of quality animal feeds.
12. A minimum of forty three thousand, two hundred (43,200 LTRS) Liters of Liquid Nitrogen produced.
14. A minimum of one thousand six hundred (1600) Farmers trained along ARTS value chain.
15. Minimum of fifty Artificial Insemination Technicians shall be trained.
15. A minimum of four (04) AI set light centers strengthened.

Table V2.2: Past and Medum Term Key Vote Output Indicators*

<i>Vote Function Key Output Indicators and Costs:</i>	2015/16		MTEF Projections			
	2014/15 Outturn	Approved Plan	Outturn by End Sept	2016/17	2017/18	2018/19
Vote: 125 National Animal Genetic Res. Centre and Data Bank						
Vote Function:0156 Breeding and Genetic Development						
Doses of semen produced and sold to farmers		76,200	1230	80,000	100,000	

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Vote Function Key Output Indicators and Costs:	2014/15 Outturn	2015/16		MTEF Projections		
		Approved Plan	Outturn by End Sept	2016/17	2017/18	2018/19
Litres of liquid nitrogen produced		43,200 LTRS	1897	80,000 LTRS	100,000 LTRS	
No. of AI Satellite centres established		4	0	4	4	
Number of farmers sensitized in assisted reproductive techniques (AI, ET, NPD)		2,600	1048	2,600	2,600	
Number of technicians trained in assisted reproductive techniques (AI, ET, NPD)		100	27	200	200	
Quantity of improved breeds produced (cattle, goats, pigs,		843,250	144922	843,250	843,250	
Vote Function Cost (US\$ bn)	4.953	4.950	0.741	5.150	6.673	5.254
Cost of Vote Services (US\$ Bn)	4.953	4.950	0.741	5.150	6.673	5.254

Medium Term Plans

Over the next five years, with proper funding, personnel, and management, NAGRC&DB plans to achieve on the following medium term plans;

1. Continue developing the National Livestock Registry and National Databank,
2. Establish regional wise/NAGRC&DB center farms based national herd/milk/beef recording schemes,
3. Continue promoting and fostering Breeding Associations and Breed Societies,
4. Establish and maintain performance and progeny-testing schemes,
5. Provide specialized training in Assisted Reproductive Technologies (ARTs) to service providers,
6. Establish state of the art Gene-Depository and Evaluation Centre,
7. Establish new NAGRC&DB Satellite Centers for breeding extension,
8. Establish Fish breeding centers on all NAGRC&DB farms with water bodies,
9. Expand the National Gene Bank,
10. Conserve indigenous livestock genetic resources.
11. Secure land titles and property under NAGRC & DB,
12. Established livestock breeding programs,
13. rehabilitated farm structures & scheduled repair/maintenance of equipment,
14. Collaborative research in animal breeding and genetics

(ii) Efficiency of Vote Budget Allocations

To ensure efficient allocation of resources, value for money and service delivery, funds have were allocated to programmes which shall contribute to higher level outputs of breeding and genetic development under vote 125 in the country that is:

Dairy cattle breeding and reproduction UGX 445, 915,000, Beef cattle breeding and reproduction UGX457,500,000, Poultry breeding and reproduction-UGX100,000,000, Goats, pig breeding and reproduction-UGX190,000,000, Animal nutrition-UGX 300,000,000, National Animal Data Bank -UGX 40,000,000, Fish breeding and production- UGX 35,000,000, Assisted Reproductive Technologies (ARTs) UGX 500, 000,000, SAGIP UGX 200,000,000.

Table V2.3: Allocations to Key Sector and Service Delivery Outputs over the Medium Term

Billion Uganda Shillings	(i) Allocation (\$hs Bn)				(ii) % Vote Budget			
	2015/16	2016/17	2017/18	2018/19	2015/16	2016/17	2017/18	2018/19
Key Sector	0.4	0.4	1.7		7.8%	7.5%	25.9%	0.0%

N/A

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Table V2.4: Key Unit Costs of Services Provided and Services Funded (Shs '000)

Unit Cost Description	Actual 2014/15	Planned 2015/16	Actual by Sept	Proposed 2016/17	Costing Assumptions and Reasons for any Changes and Variations from Plan
<i>Vote Function: 0156 Breeding and Genetic Development</i>					
Hormones		200,000			1. There is a lot of vigorous research aimed at improving potency of animal drugs and therefore influences prices of the improved ones. 2. The procurement processes, nature of the procurement and the periods (bid validity periods) they take.
Fuel and lubricants	54,167	54,167			The number of livestock units increase every day on farms and therefore increases fuel consumption for management activities.
Assorted veterinary drugs		61			The fluctuation of the dollar makes the prices unstable.
Acaricides	57,377	91,136			1. There is a lot of vigorous research aimed at improving potency of animal drugs and therefore influences prices of the improved ones. 2. The procurement processes, nature of the procurement and the periods (bid validity periods) they take.
A drum of Mollases	219,178	219,178			The procurement processes, nature of the procurement and the time period (bid validity periods) they take.

(iii) Vote Investment Plans

The institution has not got development budget.

Table V2.5: Allocations to Capital Investment over the Medium Term

Billion Uganda Shillings	(i) Allocation (Shs Bn)				(ii) % Vote Budget			
	2015/16	2016/17	2017/18	2018/19	2015/16	2016/17	2017/18	2018/19
Consumption Expenditure (Outputs Provided)	5.0	5.0	6.7		100.0%	96.1%	100.0%	
Investment (Capital Purchases)		0.2				3.9%		
Grand Total	5.0	5.2	6.7		100.0%	100.0%	100.0%	100.0%

Since the institution is currently running a recurrent budget and capital development funds allocated, there no capital development investments can be undertaken.

Table V2.6: Major Capital Investments

(iv) Vote Actions to improve Priority Sector Outcomes

Currently vote 125 is running on a recurrent budget which doesn't favor capital development activities, to solve such a problem, the institution is under taking the following measures to improve on the performance:

- 1) NAGRC has developed a strategic intervention for animal genetics improvement project (SAGIP) at a total cost of USD 36,051,964 in order to attain a capital development fund.
- 2) The institution plans to purchase an automatic semen packing and freezing machine to replace the Old and manual semen packing machine which has made the number of doses of semen produced to be very low, there is an urgent need to Purchase a semen packing, freezing machine and restocking of the bull stud with 10 AI Bulls to replace the old ones.

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3)Mechanization. There are inadequate tractors and associated implements for the organization yet NAGRC&DB has the biggest ranches in Uganda. There is an urgent need to purchase equipment to establish and maintain the pasture grounds. Due to this inadequacy, the institution is facing a challenge of farms/ ranches being encroached on by bush and its associated effect.

4)Purchase of vehicles to replace the expensive old vehicles.

Table V2.7: Priority Vote Actions to Improve Sector Performance

2015/16 Planned Actions:	2015/16 Actions by Sept:	2016/17 Planned Actions:	MT Strategy:
Sector Outcome 1: Agricultural Production and Productivity			
Vote Function: 01 56 Breeding and Genetic Development			
<i>VF Performance Issue: Animal feed resources development Land encroachment.</i>			
1. Use available funds to continue establishing new fences and rehabilitating existing fence lines.	In collaboration with Agricultural police, over 2800 heads of cattle from encroachers have been evicted from NAGRC farms of Nshara, Ruhengyere and Sanga.		- Continue Negotiating with encroachers in a bid to regain the encroached areas. - Continue opening up more land for planting pasture fields. Submit proposals for restocking of government farms.
Sector Outcome 3: Improvement in the enabling environment & Institutional strengthening			
Vote Function: 01 56 Breeding and Genetic Development			
<i>VF Performance Issue: Inadquate funding in areas of wage and non wages.</i>			
A project has been developed and ready for submission to attain capital development fund.	A project was aproved (Strategic intervention for animal Genetic Improvement Project (SAGIP) code 1325 worth 100billion for the next five years) awaiting resources allocation from Government.		To effectively and efficiently utilise the available technical and support staff base to ensure optimum vote performance.
<i>VF Performance Issue: Infrastructure development (esterblishment and rehabilitation & restocking).</i>			
A project has been developed and if approved livestock infrastructures can be improved.	Since infrastructural development is a capital development activity,a project was aproved (Strategic intervention for animal Genetic Improvement Project (SAGIP) code 1325 worth 100billion for the next five years) awaiting resources allocation from Government.		The institution through the estates department will Continue maintaining existing infrastructure.

V3 Proposed Budget Allocations for 2016/17 and the Medium Term

This section sets out the proposed vote budget allocations for 2016/17 and the medium term, including major areas of expenditures and any notable changes in allocations.

Table V3.1: Past Outturns and Medium Term Projections by Vote Function*

	2014/15 Outturn	2015/16		MTEF Budget Projections		
		Appr. Budget	Spent by End Sept	2016/17	2017/18	2018/19
Vote: 125 National Animal Genetic Res. Centre and Data Bank						
0156 Breeding and Genetic Development	4.953	4.950	0.741	5.150	6.673	5.254
Total for Vote:	4.953	4.950	0.741	5.150	6.673	5.254

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(i) The Total Budget over the Medium Term

In the Medium term, the following are the resource allocations in billions per financial year: FY 2015/16 UGX 4.4(Bn), FY 2016/17 UGX 4.4(Bn), FY 2017/18 UGX 4.6725(Bn), and FY 2018/19 UGX 5.2542 (Bn)

(ii) The major expenditure allocations in the Vote for 2016/17

1.Headquarters-NAGRC&DB (Support services)	1,900,000,000 (wage)
	781, 585, 0000
2.(Non-wage recurrent)	
3.Dairy cattle	445,915,000
4.Beef cattle	457,500,000
5.Poultry	100,000,000
6.Small ruminants & non ruminants	190,000,000
7.Pasture and feeds	300,000,000
8.National Animal Data Bank	40,000,000
9.Fish breeding and production	35,000,000
10.Assisted Reproductive Technologies (ARTs)	n 500, 000,000
11.SAGIP	200,000,000

(iii) The major planned changes in resource allocations within the Vote for 2016/17

N/A

Table V3.2: Key Changes in Vote Resource Allocation

Changes in Budget Allocations and Outputs from 2015/16 Planned Levels:			Justification for proposed Changes in Expenditure and Outputs
2016/17	2017/18	2018/19	
<i>Vote Function:0109 Breeding and Genetic Development</i>			
Output: 0156 09 Multiplication of pure Dairy animals & appropriate crosses			
<i>UShs Bn:</i>	-0.218	<i>UShs Bn:</i> 1.355	<i>UShs Bn:</i> -0.388
The output shall increase as a result of increased funding.	There can be an increased out put as a result of increased demand for dairy genetics.		
Output: 0156 14 Multiplication of pure beef breeds & appropriate crosses			
<i>UShs Bn:</i>	-0.224	<i>UShs Bn:</i> 0.076	<i>UShs Bn:</i> -0.424
The output shall be 700 calves produced as a result of growth in the herds.	The output shall be 800 calves produced as a result of growth in the herds.		
Output: 0156 23 Breeding & multiplication of pigs			
<i>UShs Bn:</i>	-0.100	<i>UShs Bn:</i> -0.130	<i>UShs Bn:</i> -0.130
Output: 0156 39 Production, procurement and sale of semen, eggs, ova, embryos and their associated equipment			
<i>UShs Bn:</i>	-0.100	<i>UShs Bn:</i> -0.260	<i>UShs Bn:</i> -0.260
Output: 0156 75 Purchase of Motor Vehicles and Other Transport Equipment			
<i>UShs Bn:</i>	0.200	<i>UShs Bn:</i> 0.000	<i>UShs Bn:</i> 0.000

V4: Vote Challenges for 2016/17 and the Medium Term

This section sets out the major challenges the vote faces in 2016/17 and the medium term which the vote has been unable to address in its spending plans.

1)High level of siltation of the valley tanks, which require UGX 1,000,000,000). Available funds 200,000,000 Funding gap UGX 800,000,000 .Due to high levels of siltation, animals get stack and die as they can't be rescued and it is dangerous to human life. These silted valley tanks are the major sources of water to the farms and ranches.

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2) Rehabilitation of the farms. There is a big challenge of the need to rehabilitate the infrastructure of government farms/ ranches under NAGRC&DB. The existing infrastructure is more than thirty (30) years old and therefore requires extra funding to improve on them to the tune of UGX 60,500,000,000. The infrastructure includes: fences, farm roads, fire breaks, residential farm managers and workers houses, water and watering facilities and animal dips, there is also need to establish woodlots on all NAGRC&DB farms.

3) Restocking of the NAGRC&DB farms and ranches. His Excellence the President of Uganda gave a directive in 2011 to restock Aswa ranch with 5000 animals (UGX 25,000,000,000) and Rubona Stock farm UGX 9,000,000,000 which were affected by war.

4) Land encroachment, since most of the land is not fenced; the institution is encountering encroachment and the related implications Funds required UGX 20,000,000,000 to fence and demarcate boundaries.

5) Transport. Currently NAGRC&DB is facing a big challenge of transport since all its vehicles are beyond five years and are over 250, 0000 KM. Ministry of Works and Transport requires boarding off these vehicles Funds required (UGX 3,000,000,000) to purchase vehicles and motor cycles for officers at farms and ranches, funds available 300,000,000 and the funding gap is UGX 2,700,000,000.

6) Inadequate storage and distribution facility for liquid Nitrogen which plays a pivotal role in preservation of semen, this in turn has led to a decline in numbers of Artificial Inseminations (AI) carried out. The amount of funds required for purchase of vehicle with cryogenic tanks is UGX 2,000,000,000.

7) Old and manual semen packing machine which has made the number of doses of semen produced very low ,there is an urgent need to Purchase a semen packing, freezing machine and restocking of the bull stud with 10 AI Bulls worth UGX 2,160,000,000 to strengthen what EAAPP has done since it has ended.

8) Mechanization. There are inadequate tractors and associated implements for the organization yet NAGRC&DB has the biggest ranches in Uganda. This equipment is needed to establish and maintain the pasture grounds. Due to this inadequacy, the institution is facing a challenge of farms/ ranches being encroached on by bush and its associated effect. Funds required (UGX 4, 650,000,000).

9) Kuroiler Chicken. There is a high demand for Kuroiler chicken in Uganda, despite the efforts to expand and increase production capacity of Kuroiler up to 1,000,000 Chicks. There is need to expand the hatching facilities at NAGRC&DB and to build and facilitate 13 mother Units all over the country to increase on the supply of the day-old chicks. There is also a need for selection of 4,000 indigenous chickens of different characteristics from different regions of the country to develop a Ugandan Kuroiler like breed through selection and improvement. Funds required (UGX 2,000,000,000) Funds available Ugx 60,000,000 and the funding gap is UGX 1,400,000,000.

10) Fish breeding funds required worth UGX 500,000,000, funds available ugx 35,000,000 and the fun

The continued underfunding and lack of a development budget to vote 125, has led to slow implementation of activities and hinders delivery to the vote function of breeding and genetic development in the country.

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Table V4.1: Additional Output Funding Requests

Additional Requirements for Funding and Outputs in 2016/17:	Justification of Requirement for Additional Outputs and Funding
<i>Vote Function: 0101 Breeding and Genetic Development</i>	
Output: 0156 01 Human Resource management & development.	
<p><i>US\$ Bn: 46.180</i></p> <p>1). Although salaries of the institution's staff were increased by about 40% through the 2013/14 wage funding, salaries of staff still need to be matched with those of the approved organostructure to enable optimal staff performance and also minimize on staff turn over rate. 2). Additional wage funding would also enable recruitment and filling of vacant key positions affecting performance. An annual increase in funding of staff salaries to a tune of at least 25% should be considered to enable gradual increase in staff salaries and recruitment of more staff.</p>	<p><i>For the last ten (10) years since 1995 NAGRC&DB staff has been getting inadequate salaries and non operationalisation of the approved organo structure, which has for long demotivated staff leading to under performance and at times loss of quality staff as they seek for better paying jobs. Increasing staff wage to a satisfactory level is a very important motivating tool that would impact tremendously on their performance (performance to improve at least to 75%) and performance of the sector.</i></p>
Output: 0156 09 Multiplication of pure Dairy animals & appropriate crosses	
<p><i>US\$ Bn: 4.000</i></p> <p>1). Increased production of quality and affordable female dairy crossbred calves, 2,000 calves to be produced. 2). Increased production of affordable female pure bred calves, 1,000 calves to be produced.</p>	<p><i>NAGRC&DB is operating five (5) dairy farms where each farm is mandated to successfully implement a particular breeding program that must contribute to availability of enough quality and affordable dairy genetics to the farming communities in the respective regions where they are situated (At least one dairy heifer d to each family in the region). Optimal Performance of these dairy farms is still affected by majorly: - lack of Water points, silting of valley tanks and dams, poor condition of farm buildings, roads, fences. Lack of land titles/encroachment on some of the farms, lack or inadequate farm machinery, poor pasture fields, etc.</i></p> <p><i>For optimal breeding, production, reproduction and multiplication of livestock genetics in the required quantities and quality for the farmers in Uganda, there is need for additional funding to facilitate; restocking of each farm with two hundred (200) pedigree heifers, purchase of five (5) new motor vehicles, all the existing vehicles are above 250,000 Kilometers and are above five years old so the law requires boarding them off yet the institution requires vehicles to facilitate timely execution and monitoring of various activities on these dairy farms. Purchase of three (3) Tractors with implements, there is a need to provide each farm with a tractor and associated implements which will facilitate production of animal feeds, maintenance of paddocks and pasture grounds on farms in order to produce optimally and contribute to sector performance.</i></p>
Output: 0156 14 Multiplication of pure beef breeds & appropriate crosses	
<p><i>US\$ Bn: 2.000</i></p> <p>1). Increased production of quality and affordable female beef crossbred calves, 1,500 calves to be produced. 2). Increased production of affordable beef pure bred calves, 500 calves to be produced.</p>	<p><i>NAGRC&DB is operating five (5) beef ranches where each of the ranches is mandated to successfully implement a particular breeding program (for both pure and crossbred genetics) that must contribute to availability of enough quality and affordable beef genetics to the farming communities in the respective regions where they are situated. Optimal Performance of these ranches is still affected by majorly: - lack of Water points, silting of valley tanks and dams, poor condition of farm buildings, roads, fences. Lack of land titles/encroachment on some of the farms, lack or inadequate farm machinery, poor pasture fields, etc.</i></p> <p><i>For optimal breeding, production, reproduction and multiplication of livestock genetics in the required quantities and quality for the farmers in Uganda, there is need for additional funding to facilitate; restocking of the ranches with at least five hundred (500) female heifers, purchase five (5) new motor</i></p>

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Additional Requirements for Funding and Outputs in 2016/17:	Justification of Requirement for Additional Outputs and Funding
	<p>vehicles, all the existing vehicles are above 250,000 Kilometers and are above five years old so the law requires boarding them off yet the institution requires vehicles to facilitate timely execution and monitoring of various activities on these ranches. Purchase of five (5) Tractors with implements, there is a need to provide each ranch with a tractor and associated implements which will facilitate production of animal feeds, maintenance of paddocks and pasture grounds on the ranches in order to produce optimally and contribute to sector performance and development.</p>
<p>Output: 0156 27 Evaluation and multiplication of improved pasture and fodder germ-plasm US\$ Bn: 1.000 1). Establishment of fifty (50) commercial fodder banks (5 on each farm/ranch) for pastures and legumes production and multiplication on all NAGRC&DB farms. 2). Establishment of perimeter walls around each of the fodder banks. 3). Establishment of a nutritional laboratory. 4). with additional funding, the annual industrial quality and quantity production of animal feeds under NAGRC&DB is expected to increase by 20%.</p>	<p>For the institution to optimally breed, produce and multiply improved livestock genetics for availing to the farmers in Uganda and for the small holder farmers to benefit from their dairy enterprises, the cost of producing these genetics must be under control. In livestock production, feeding takes 60% of the total production costs, it's prudent that NAGRC&DB's efforts for commercial production of feeds is financially supported the fact that NAGRC's the only government institution with vast land (300 square miles), 50% of which is still underutilized. This land can be put to its best use if it's used to establish fodder multiplication fields for obtaining raw materials to be used in affordable, quality and quantity production of processed feeds for sell to farmers and for feeding the institution's herds.</p>
<p>Output: 0156 34 Production and sale of founder brood stock of fisheries resources. US\$ Bn: 1.500 1). Increased production of quality and affordable fish fingerings, 100 tons per year.</p>	<p>- One of the National Animal Genetic Resources Center and Data Bank (NAGRC&DB) mandate is to breed and produce economically viable fish genetics for commercial fish farmers in Uganda. Despite there being water bodies on the different NAGRC&DB farms and ranches, the institution till today has not engaged in any activity of fish breeding. This is all attributed to lack of funds to develop the necessary infrastructure.</p> <p>- For optimal fish fingerings breeding and production that would contribute to development of the fish subsector therefore, there is need to allocate funds to the NAGRC&DB fish genetics development department. Funding will facilitate; Establishment of ten (10) breeding ponds, recruitment of fish geneticists, install the required equipment and also purchase specialized vehicles.</p>

This section discusses how the vote's plans will address and respond to the cross-cutting policy, issues of gender and equity; HIV/AIDS; and the Environment, and other budgetary issues such as Arrears and NTR..

(i) Cross-cutting Policy Issues

(i) Gender and Equity

<p>Objective: To increase the number of women involved in livestock breeding, production and reproduction Uganda.</p>
<p>Issue of Concern : The number of women involved in livestock breeding, production and reproduction is negligible compared to that of men in Uganda.</p>
<p>Proposed Interventions During the admission of AI trainees, at least 20 slots shall be reserved for women in order to strike a balance through admissions for training through fifty percent discount. 2) NAGRC in collaboration</p>

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with sister agencies shall sale 80% of the planned outputs under programme 04 to women youth and other dis advantaged groups of the rural community.

Budget Allocations UGX billion 0.015

Performance Indicators

- 1)Performance Indicators, Six hundred and forty thousand (640,000) Kuroiler birds extended to women and other disadvantaged groups.
- 2)Twenty (20) female Artificial Insemination Technicians from all Districts of Uganda. Trained with 50% discount.

(ii) HIV/AIDS

Objective: To build, promote and strengthen an integrated approach to the HIV/AIDS intervention that will lead to protection, prevention, treatment and caring for the highly vulnerable persons.

Issue of Concern : In the bid to build, promote and strengthen an integrated approach to the HIV/AIDS intervention that will lead to protection, prevention, treatment and caring for the highly vulnerable persons has been thought of.

Proposed Interventions

- 1) Establishment of a linkage through 50% discount with HIV/AIDS concerned institutions, in order to avail interested HIV/AIDS infected Ugandans with 50,000 kuroiler birds at a 50% discount in order to improve nutrition and income generation amongst the HIV affected population.
- 2) Sensitizations of the community towards consumption of livestock products towards treatment of HIV/AIDS for example use of goats' milk in HIV/AIDS patients.
- 3) Quarterly HIV/AIDS counselling sessions shall be conducted in order to address the challenges of the disease.

Budget Allocations UGX billion 0.065

Performance Indicators Four Quarterly HIV/AIDS counselling sessions shall be conducted in order to address the challenges of the disease to NAGRC staff.

(iii) Environment

Objective: To establish and plant forage trees for environmental protection and animal feeds, practice and train livestock management best practices to farmers.

Issue of Concern : In Uganda there are environmentally hostile livestock management practices such as overstocking, poor waste management and over grazing which should be addressed immediately to avoid the devastating effects.

Proposed Interventions

There is an urgent need to put in place an everlasting solution for restoration of the ecological balance.

Budget Allocations UGX billion 0.015

Performance Indicators

- Establishment & planting of five thousand (5000) forage trees for environmental protection and animal feeds.
- Four (4) farm days for tree planting shall be conducted.
- Five hundred farmers trained in use of the right stocking rates to avoid overstock impacts on the environment.
- Employ Environmentally friendly Livestock management

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practices on and off NAGRC farms for example use of sock pits to dispose of wastes like acaricides and protection of water bodies from being eroded by livestock wastes.

(ii) Payment Arrears

The table below shows all the payment arrears outstanding for the Vote:

Payee	Payment Due Date	Amount (US\$ Bn)
Tire express (U) LTD	6/30/2015	0.01
Summer Auto Garage	6/30/2015	0.02
New vision (U) LTD	6/30/2015	0.02
Motor care (U) LTD	6/30/2015	0.01
Monitor publications	6/30/2015	0.01
IT pro (U) LTD	6/30/2015	0.01
Inter-Tech (u) LTD	6/30/2015	0.04
FB Motor garage (U) LTD	6/30/2015	0.01
Arrow Centre (U) LTD	6/30/2015	0.03
7)Spear motors (U) LTD	6/30/2015	0.01
UMEME (u) LTD	6/30/2015	0.06
Quality chemicals (U) LTD	6/30/2015	0.01
Eram (U) LTD	6/30/2015	0.90
	Total:	1.121

Towards closure of the FY 2014/15 NAGRC&DB faced challenges which instigated creation of domestic arrears such as unavoidable circumstances include; outbreak of diseases at Ruhengyere Ranch (CBPP), Rubona (Black quarter) Nshara Ranch (FMD) all these led to unplaned expenditure for vaccines and drugs. There was an urgent repair of vehicles

The following are the

- 1) Tire express - Supply of tractor tire UGX 6,000,000
- 2) Quality chemicals (U) LTD - supply of Vaccines UGX 10,000,000
- 3) Eram (U) LTD - Supply of Vaccines and Drugs UGX 90,000,000
- 4) Arrow Centre UGX Tractor tires UGX 27,000,000
- 5) Summer Auto Garage - Repair of field vehicles UGX 18,000,000
- 6) FB Motor garage - Repair of Field Vehicles UGX 10,000,000
- 7) Spear motors UGX 8,000,000
- 8) New vision publications UGX 17,000,000
- 9) Monitor publications UGX 14,000,000
- 10) IT pro (U) LTD - ups and anti-virus UGX 8200,000
- 11) Motor care (u) LTD - UGX 7,700,000
- 12) UMEME - Utility bills at Mbarara Liquid Nitrogen plant - UGX 60,000,000.

The above arrears occurred particularly due to under funding and outbreak of diseases on farms and ranches which required urgent intervention.

The institution will continue to agitate for improved funding, get development budget to purchase new vehicle in order to overcome the high costs of maintaining consumptive old vehicles.

(ii) Non Tax Revenue Collections

The table below shows Non-Tax Revenues that will be collected under the Vote:

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Source of NTR	UShs Bn	2014/15 Actual	2015/16 Budget	2015/16 Actual by Sept	2016/17 Projected
Animal & Crop Husbandry related Levies			0.800		1.000
	Total:		0.800		1.000

The NTR is projected at UGX 1,000,000,000 this will be attained through sale of breeding animals, steers, chicks, rent, Sale of milk, sport hunting, sale of semen, Liquid nitrogen and associated equipment.

Funds shall be utilized to purchase: a) animal drugs, b) Fencing, c) desilting of valley tanks, d) purchase of animal feeds and e) Operationalization of the project and Maintenance of goats and pig houses.