Vote Summary

V1: 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

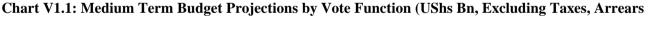
Table V1 below summarises the Medium Term Budget allocations for the Vote:

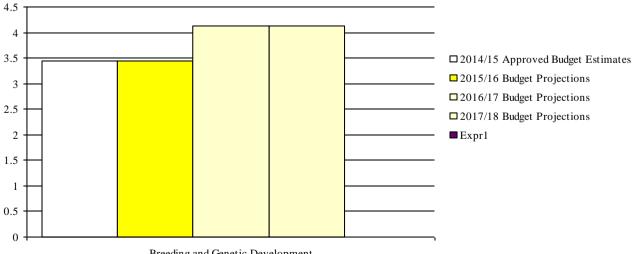
Table V1.1: Overview of Vote Expenditures (UShs Billion)

		2012/14	2013/14 Approved Spent by		MTEF Budget Projections			
(i) Excluding	Arrears, Taxes	2013/14 Outturn	Approved Budget	End Sept	2015/16	2016/17	2017/18	
	Wage	0.000	1.400	0.115	1.400	1.667	1.667	
Recurrent	Non Wage	4.953	2.050	0.095	2.050	2.460	2.460	
Davidonman	GoU	0.000	0.000	0.000	0.000	0.000	0.000	
Developmen	Ext.Fin	0.000	0.000	0.000	0.000	0.000	0.000	
	GoU Total	4.953	3.450	0.210	3.450	4.127	4.127	
Fotal GoU+D	onor (MTEF)	4.953	3.450	0.210	3.450	4.127	4.127	
(ii) Arrears	Arrears	0.000	0.000	0.000	0.000	N/A	N/A	
and Taxes	Taxes**	0.000	0.000	0.000	0.000	N/A	N/A	
	Total Budget	4.953	3.450	0.210	3.450	N/A	N/A	
(iii) Non Tax	Revenue	0.000	0.600	0.155	0.800	1.000	2.000	
	Grand Total	4.953	4.050	0.365	4.250	N/A	N/A	
Excluding '	Γaxes, Arrears	4.953	4.050	0.365	4.250	5.127	6.127	

Donor expenditure data unavailable

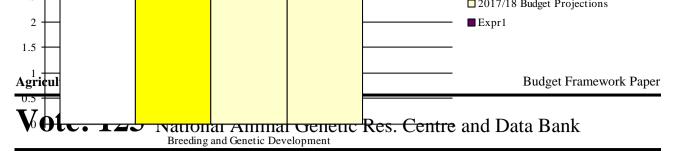
The chart below shows total funding allocations to the Vote by Vote Function over the medium term:





Breeding and Genetic Development

^{**} Non VAT taxes on capital expenditure



Vote Summary

(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:
Agricultural Production and Productivity	Improved markets and increase in value addition	Improvement in the enabling environment & Institutional strengthening
Vote Function: 01 56 Breeding and Ge	netic Development	
Outputs Contributing to Outcome 1:	Outputs Contributing to Outcome 2:	Outputs Contributing to Outcome 3:
Outputs Provided	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

2013/14 Performance

Performance highlightsof strategic key outputs for Vote 125 in FY 2013/14 include; ASSISTED REPRODUCTIVE TECHNOLOGIES (ARTS)

- •Fourteen thousand, one hundred fourteen (14,114.50) Liters of liquid nitrogen produced
- Fifty Seven thousand three hundred 57300) doses of semen for dairy and beef breeds shall be produced and procure 27998 dozes both sexed and non-sexed semen.distributed
- •A minimum of one thousand six hundred (1600) Farmers trained along ARTS value chain.
- •Two thousand four hundred twenty four (2,424) students trained in modern animal husbandry practices POULTRY GENETICS DEVELOPMENT
- •Three hundred seventy four thousand two hundred eighty six (374,286) commercial Kuroiler Chicksproduced and distributed to farmers in 50 districts of uganda including Rwanda, Kenya, southern Sudan and Tanzania.

DAIRY AND BEEF

- •One thousand two hundred and sixty four (1264) Dairy and beef calves born
- •Four thousand one hundred fifty two (4,152) cows synchronized and inseminated
- •One thousand two hundred thirty two (1,232) farmers profiled and sensitized in preparation for recruitment into the Open Nucleus Breeding Scheme (ONBS)
- •Three Valley tanks were desilted at Ruhengere ranch.
- •Two Breeders platforms/workshops held with Reline (Renaissance Livestock Farmers Network) to discuss National Breeding program.

SMALL RUMINANTS AND NON-RUMINANTS

- •Seven hundred fourty eight 748 kids were born at NAGRC farms of Sanga, Ruhengere, Rubona and Njeru and 468 breeding goats were sold to farmers in seven districts.
- •Two hundred thirteen 213 Comb rough piglets were produced and extended to farmers farmers in 15 districts.

Vote Summary

PASTURE AND FEEDS

•Three thousand and sixty (3,060) bales of hay produced and

Nine hundred thirty (930) tons of silage produced as quality animal feed and the technology was extended to 1793 farmers from different parts of the country.

Preliminary 2014/15 Performance

2). DAIRY CATTLE:

- •One Breeders workshop supported. The Reline farmers organized it and NAGRC&DB were facilitators;
- •Ninety nine (99) Cross bred beef calves were born
- •Sixty (60) pure bred dairy calves born;

3). BEEF CATTLE:

- •One hundred twenty nine (129) -Cross bred beef calves produced;
- •One hundred fifty nine (15) steers produced;
- •One hundred (100) indigenous calves born;
- •One (1) Farmer fora on indigenous genetics attended;

4). POULTRY:

Distributed One hundred eighty four thousand and seventy one kuroiler birds (184,071) to 25 Districts of Bukomansimbi 51,Gomba 306,Hoima 102,Jinja 15,815,Kabale 3,075,Kalangala,459,Kampala 10,731Kamuli 306 Kanungu 3,060 Kasese 2,244 Kayunga ,102 Kiboga 204 Luwero 4,712,Masaka 2,040,Mayuge 510,Mbale 153 Mityana 5,202 Mukono 4,302 Nakasongola 816, Sembabule 1,020,Soroti 306, Tororo 2,579,Wakiso 60,590, Zombo 510, and Nairobi 2,448.

05) SMALL RUMINANTS & NON RUMINANTS:

- •One hundred forty one (141) castrates produced
- •Four hundred five (405) Kids born
- •One hundred and seventeen (117) piglets of Camborough breed were born at
- •Two pig houses at Livestock Experimental station (LES) undergoing repair.

6). PASTURE AND FEEDS:

- 1). Five (5) acres of soya bean planted.
- 2). One hundred seventy three (173) acres of maize planted.
- 3).2,220 Bales of hay produced.
- 4) Twenty (20) tons of corn harvested
- 5) Fifteen (15) acres of improved Napier grass established at Njeru and Ruhengere
- 6) Two (2) acres of Brachiaria Brizatha
- 7) Five (5) acres of beans were established.
- 8) One hundred and fifteen (115) acres of maize planted at the different NAGRC&DB farms.
- 9) Sixty (60) acres of grazing area renewed/restored through bush clearing and mechanized slashing.
- 10) One hundred (100) tons of silage produced.
- 11) Ten (10) tons of poultry feeds processed.
- 8). NATIONAL ANIMAL DATA BANK.
- •One meeting held with the Commissioner with regards to the national animal identification system,
- •Streamlined the recording systems at Nshara, Kasolwe, Lusenke and Bulago farms
- •At Sanga, trained the records assistant on how to capture herd/flock dynamics, milk
- •Took stock of all the animals at the farm and identified those without tags and tagged them

Vote Summary

- •200 ancestral records compiled
- •Installed Inter-herd at Njeru stock farm, created a new user account for data entry
- •Identified 10 farmers to be recruited into the ONBS for performance testing and progeny testing
- •Milk yield data for LES, Njeru, and Rubona Compiled
- Distributed 1,136 recording card to; LES, Bull Stud, Bulago, Lusenke, Njeru, Kasolwe, Ruhengyere, Sanga, Nsaara, and AI technicians from western Uganda
- •A semen inventory maintained and up graded.

10). ASSISTED REPRODUCTIVE TECHNOLOGIES (ARTS)

- •Twenty six (26) Artificial Insemination technicians trained
- •Eleven thousand and Nine (11,009) liters of liquid of nitrogen produced.
- Nine hundred fifty (950) Doses of semen produced at the NAGRC&DB Bull stud.

Table V2.1: Past and 2015/16 Key Vote Outputs*

Vote, Vote Function Key Output	Approved Budget and Planned outputs		5 pending and Outp chieved by End So		2015/16 Proposed Budget and Planned Outputs	
Vote: 125 National Animal C			K			
Vote Function: 0156 Breedin	<u> </u>					
-	Aultiplication of pure Dairy		ls & appropriate o	rosses		
Description of Outputs:	Development, multiplication and utilization of livestock genetic resources for examp Multiplication of various cabreeds (Dairy and beef), breeding and multiplication germplasm, breeding and multiplication of goats, Breeding and multiplication chicken.	or ple thattle are properties of the properties	total of one hundre thousand nine had thousand nine had the thousand nine had total two (121932) animal genetic resoured that is:53E 8Pure dairy 4BEEF CROSSES OCONSERVATION 21,459Kuroiler chie 97Kids born 1Camborough pigle	undred and improved rees pairy crosses	Development, multiplica and utilization of livesto genetic resources for exa Multiplication of various breeds (Dairy and beef), breeding and multiplicat germplasm, breeding and multiplication of goats, Breeding and multiplicat chicken.	ck imple s cattle ion Pig
Performance Indicators:						
Quantity of improved breeds produced (cattle, goats, pigs, chicken)	843,250	1:	21,932		843,250	
Number of technicians trained in assisted reproductive techniques (AI, ET, NPD)	50	2	6		100	
Number of farmers sensitized in assisted reproductive techniques (AI, ET, NPD)	1,600	1	,037		2,600	
No. of AI Satellite centres established	4	1			4	
Litres of liquid nitrogen produced	43,200	5	,322		43,200 LTRS	
Doses of semen produced and sold to farmers	76,200	9.	50		76,200	
Output Cost:	UShs Bn: 0.800	U	Shs Bn:	0.018	UShs Bn:	0.388
Vote Function Cost	UShs Bn:	4.050 U	Shs Bn:	0.210	UShs Bn:	4.250
Cost of Vote Services:			Shs Bn:		UShs Bn:	4.250

^{*} Excluding Taxes and Arrears

2015/16 Planned Outputs

Vote Summary

- 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 840,000 commercial Kuroiler chicks shall be produced;
- 5. A minimum of 1,000 cross bred goats will be produced;
- 6. A minimum 200 quality genetic piglets shall be produced.
- 7. Seventy six thousand two hundred (76,200) doses of semen for dairy and beef breeds shall be produced and procure 2799.8 dozes both sexed and non-sexed semen.
- 8. Four hundred twenty (420) tons of corn;
- 9. Six thousand (6,000) bales of hay produced and;
- 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 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.A minimum of four (04) AI set light centers Established in Uganda.

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

W - F - + W - O	•	2014/	15	MTEF I		
Vote Function Key Output Indicators and Costs:	2013/14 Outturn	Approved Plan	Outturn by End Sept	2015/16	2016/17	2017/18
Vote: 125 National Animal Genetic R	es. Centre an	d Data Bank				
Vote Function:0156 Breeding and Gen	etic Developm	ent				
Doses of semen produced and sold to farmers		76,200	950 <mark>-</mark>	76,200	80,000	100,000
Litres of liquid nitrogen produced		43,200	5,322	43,200 LTRS	80,000 LTRS	100,000 LTRS
No. of AI Satellite centres established		4	1	4	4	4
Number of farmers sensitized in assisted reproductive techniques (AI, ET, NPD)		1,600	1,037	2,600	2,600	2,600
Number of technicians trained in assisted reproductive techniques (AI, ET, NPD)		50	26	100	200	200
Quantity of improved breeds produced (cattle, goats, pigs, chicken)		843,250	121,932	843,250	843,250	843,250
Vote Function Cost (UShs bn)	4.953	4.050	0.210	4.250	5.127	6.127
Cost of Vote Services (UShs Bn)	4.953	4.050	0.210	4.250	5.127	6.127

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,

Vote Summary

- 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

The National Animal Genetic Resources center and Data Bank (NAGRC&DB) is mandated to establish a cost effective breeding services delivery system in Uganda that should lead to improved productivity and production of the farmers' animals. The institution works towards fulfilling delivery of this public good through implementing a holistic ARTs delivery model that involves procurement, production and distribution of liquid nitrogen, frozen semen and associated consumables (gloves, sheath, etc.). The institution is also responsible for training of the breeding technologies service providers.

The costing for the key service delivery outputs that include; liquid nitrogen, semen, hormones is based on the following assumptions;

- a). Liquid nitrogen; due to the prevailing high cost of electricity and the evaporation nature of liquid nitrogen, it has been worked out through time that a liter of liquid nitrogen at a government subsidized price should cost UGX 6,000, whereas;
- b) A straw of semen that is also dependent on the cost of maintaining the breeding bulls at the bull stud, the subsidized market price is UGX 4,000.
- c). Hormones used in controlled breeding (synchronization) to rapidly multiply both dairy and beef genetics is dependent on the prevailing market prices. The fact that NAGRC&DB does not produce hormones, their supply is dependent on the imports from contracted international service providers. The price of one dose as sold to the farmers is UGX 50,000.

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

	(i) Allocat	(i) Allocation (Shs Bn)			(ii) % Vote Budget			
Billion Uganda Shillings	2014/15	2015/16	2016/17	2017/18	2014/15	2015/16	2016/17	2017/18
Key Sector	0.8	0.4	0.6		19.7%	9.1%	12.3%	0.0%

PLANNS TO IMPROVE VOTE PERFORMANCE:

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.

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

Unit Cost Description	Actual 2013/14	Planned 2014/15	Actual by Sept	Proposed 2015/16	Costing Assumptions and Reasons for any Changes and Variations from Plan
Vote Function:0156 Breed	ing and Genetic I	Development			
Hormones	200,000	205,000		200,000	1. There is a lot of vigorous research aimed at improving potence 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	54,167	54,167	The number of livestock units increase every day on farms and therefore increases fuel consumption for

Vote Summary

Unit Cost Description	Actual 2013/14	Planned 2014/15	Actual by Sept	Proposed 2015/16	Costing Assumptions and Reasons for any Changes and Variations from Plan
					management activities.
Assorted veterinarry drugs				61	The fluctuation of the dollar makes the prices unstable.
Acaricides	90,164	91,136	57,377	91,136	1. There is a lot of vigorous research aimed at improving potence 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	200,000	219,178	2,191,781	219,178	The procurement processes, nature of the procurement and the time period (bid validity periods) they take.

(iii) Vote Investment Plans

All the capital purchases are long term investments to help in sustainable solving of the exisiting national service delivery and production challenges. This therefore justifies the high level of money invested/allocated to each one of them. On average all the capital investments are costing a billion shillings and above.

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

	(i) Allocation (Shs Bn)			(ii) % Vote Budget				
Billion Uganda Shillings	2014/15	2015/16	2016/17	2017/18	2014/15	2015/16	2016/17	2017/18
Consumption Expendture(Outputs Provided)	4.0	4.3	4.9		100.0%	100.0%	100.0%	
Grand Total	4.0	4.3	4.9		100.0%	100.0%	100.0%	100.0%

The National Animal Genetic Resources Center and Data Bank (NAGRC&DB), investments during the FY 2014/2015 include; Rehabilitation of the hatchery unit at the Livestock Experimental station, procurement of three (3) tractors and related implements together with two (2) double cabin vehicles, installation of a new Liquid Nitrogen Plant at NAGRC&DB head office with production capacity of 80 liters per hour. This is the biggest in East Africa. Rehabilitation of The embryo transfer Laboratory at Livestock experimental station, fencing off land equivalent to 20 square miles at the different NAGRC&DB farms. Stocking the poultry breeding unit at LES with 5,000 Kuroiler parent stock birds. Maintaining over 8,000 dairy and beef animals at the different NAGRC&DB Farms, Installation of animal feeds amonofication center/s at Les. Establishing fodder banks and pasture fields at the different NAGRC&DB farms.

Table V2.6: Major Capital Investments

(iv) Vote Actions to improve Priority Sector Outomes

Performance 2013/14

•Two thousand four hundred twenty four (2,424) students trained in modern animal husbandry practices POULTRY GENETICS DEVELOPMENT

Three hundred seventy four thousand, two hundred eighty six (374,286) commercial Kuroiler Chicks produced and distributed to 1100 individual farmers and 13 Mother Units for brooding) in 50 Districts of Uganda

Thirteen (13) mother units for brooding of chicken for farmers maintained in different parts of the country. A new setter and a hatcher were installed at Livestock experimental station Entebbe.

DAIRY AND BEEF CATTLE BREEDING

Vote Summary

One thousand two hundred and sixty four (1264) calves were born at NAGRC farms of Ruhengere, Kasolwe, Nshara and Sanga and 312.animals were extended to farmers.

A new breed of Grauvierh Cattle has been introduced to Uganda and its performance is being studied through cross breeding with East African short horned Zebu at Lusenke stock farm. Twenty two (22) calves were produced in the FY 2013

Four thousand one hundred fifty two (4,152) cows synchronized and inseminated

One thousand two hundred thirty two (1,232) farmers profiled and sensitized in preparation for recruitment into the Open Nucleus Breeding Scheme (ONBS)

Three Valley tans were redesigned and de-silted at Ruhengere with 27.4 million liters holding capacity. There is an urgent need for funds to desilt more valley tanks since only three out of 21 were de-silted yet from the early 1960's such water structures have never been de-silted hence being infested with snails which leads to facioliasis in cattle.

Restocked Aswa and Ruhengere ranches with 1145 breeding Ankole long horned cattle, in the FY 2012/13 NAGRC&DB received a supplementary fund of UGX 2,000,000,000 to restock Aswa and Ruhengere ranches this was successfully done, though more funds are required to improve the infrastructure.

Two Breeders platforms/workshops held with Reline (Renaissance Livestock Farmers Network) to discuss National Breeding program.

SMALL RUMINANTS AND NON-RUMINANTS

Seven hundred forty eight 748 kids were born at NAGRC farms of Sanga, Ruhengere, Rubona and Njeru and 468 breeding goats were sold to farmers in districts of Kaberamaido, Buikwe Kamuli, Mukono, Luweero and Jinja

Two hundred (213) piglets produced and extended to 50 farmers in 15 districts

namely:Wakiso,Gulu,Mukono,Soroti,Kamuli,Buikwe,Kampala,Masaka,lira,Kasese,Kayunga,Palisa,kuumi,ji nja and Mbale.

Three (3) goats houses were constructed to control mortality in the Kids.

HEAD QUARTERS

Ten (10) staff trained in short courses.

PASTURE AND FEEDS

One thousand seven hundred and ninety three (1793) youths from different parts of the country were trained on feeds and Feeding management in livestock at NAGRC and DB farms.

Produced and utilized three thousand and sixty (3,060), bales of hay, nine hundred and thirty (930) tons of silage produced as quality animal feed at Njeru LES,Ruhengere and Lubona stock farm. The same technology was extended to one thousand seven hundred and ninety three (1793) farmers.

One square mile of land was opened up for establishment of pastures and the following pastures have been established at Njeru Stock farm:

Soya bean 10 acres, Maize 193 acres, Elephant grass 3 acres, Lablab 3.5 acres, Desmodium 0.5 acres, Centrosema 0.5 acres, Rhodes Grass 3 acres, Brachiaria 2 acres and Wagabolige 0.5 acre

ARTs

Produced and distributed 14,114.50 liters of liquid Nitrogen and distributed 117385 conventional doses of semen and 275 doses of sexed semen to different parts of the country (45 districts):

An embryo transfer programme was implemented at Njeru stock farm, Ruhengere ranch, 300 embryos were transferred and the technology was extended to three farmers in the country.

Fifty three 53 AI technicians were trained in assisted reproductive techniques at NAGRC AND DB Ranch of Ruhengyere, Such trainees were drawn from 33 Districts of Uganda that is:

Sheema, Kiruhura, Mubende, Rakai, Bushenyi, Lira, Serere, Amolatar, Ntungamo, Mbarara, Kabale, Manafwa, Isin

Vote Summary

giro, Ibanda, Wakiso, Gulu, Buyikwe, Kiruhura, Rukungiri, Isingiro, Kabale, Ntungamo, Kyegegwa, Lira, Masaka, J inja, Nakasongola, Kayunga, Kamuli, Buyende, Bukwo, Namayigo and Busia.

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

2014/15 Planned Actions: 2014/15 Actions by Sept: 2015/16 Planned Actions: MT Strategy: Sector Outcome 1: Agricultural Production and Productivity Vote Function: 01 56 Breeding and Genetic Development VF Performance Issue: Animal feed resources development Land encroachment. - To develop and submit an One stock farm Lusenke has 1. Use available funds to - Continue Negotiating with encroachers in a bid to regain additional budget that will been surveyed and continue establishing new facilitate activities of arrangements under the fences and rehabilitating the encroached areas. surveying all pieces of developed project proposal to exisiting fence lines. government land and obtain fence have been made, a - Continue opening up more land titles for each one of number encroachers have been land for planting pasture dismissed through continued fields. Submit proposals for use of land for fodder restocking of government - Request for more funding to establishment. farms. establish more fodder banks. Sector Outcome 3: Improvement in the enabling environment & Institutional strengthening Vote Function: 01 56 Breeding and Genetic Development VF Performance Issue: Inadquate funding in areas of wage and non wages. - Continue requesting/writing Relevant communications A project has been developed To effectively and efficiently to the Ministry of Public have been made to Ministry of and ready for submission to utilise the available technical

Service to consider the institution's request since full allocation of the required wage bill will enable NAGRC&DB recruit and fill up all the missing positions affecting vote performance.

public service and Ministry of Finance to bridge the funding gap of wage recurrent and nonwage recurrent.

attain capital development fund.

and support staff base to ensure optimum vote performance.

VF Performance Issue: Infrastructure development (esterblishment and rehabilitation & restocking).

- Develop and submit to the Ministry of Finance Planning and Economic Development (MOFPED) a request to consider funding the institution's infrastructure; including government farms, restocking, procurement of vehicles, farm machinery, etc. A five year project proposal (Animal Genetics Improvement Project (AGIP)) worth 36 million USD has been developed and ready for submission to Ministry of Finance in order to undertake capital development activities in nature and they are key in in yielding the desired outputs.

A project has been developed and if approved livestock infrastructures can be improved.

The institution through the estates department will Continue maintaining existing infrastructure.

V3 Proposed Budget Allocations for 2015/16 and the Medium Term

This section sets out the proposed vote budget allocations for 2015/16 and the medium term, including major areas of expenditures and any notable changes in allocations.

Table V3 1. Past Outturns and Madium Tarm Projections by Vata Function*

Table V 5.1. Tast Outturns and Medium Term 110	jechons	by vote	r unction				
		2014/15		MTEF Budget Projections			
	2013/14 Outturn	Appr. Budget	Spent by End Sept	2015/16	2016/17	2017/18	
Vote: 125 National Animal Genetic Res. Centre and Data Bank							
0156 Breeding and Genetic Development	4.953	4.050	0.210	4.250	5.127	6.127	
Total for Vote:	4.953	4.050	0.210	4.250	5.127	6.127	

Vote Summary

(i) The Total Budget over the Medium Term

Proposed budget allocation 2015/16

NAGRC&DB Programs proposed budget allocations for 2016/2017 and medium term areas follows; program 1(headquarters) – UGX 800,000,000; Program 2 (Dairy genetics) – UGX 1,650,000,000; Program 03 (Beef genetics) – UGX 1,650,000,000; Program 04 (Poultry) – UGX 400,000,000; Program 05 (Small Ruminants and Non Ruminants) – UGX 600,000,000; Program 06 (Pasture and Feeds) – UGX 1,000,000,000; Program 08 (National Data Bank) – UGX 1,000,000,000, Program 09 (Fish genetics) UGX 200,000,000; Program 10 (Assisted Reproductive Technologies) – UGX 1,600,000,000.

(ii) The major expenditure allocations in the Vote for 2015/16

The NAGRC&DB mandate is to spearhead establishment and operationalization of a sustainable animal breeding program in the country. Therefore, the highest allocations were prioritized on activities that impact directly on performance of the institution's mandate. Such activities include; livestock breeding, conservation, multiplication and their supporting activities. In regard to the 2015/16 funding allocation to NAGRC&DB

MAJOUR RESOURCE ALLOCATION

Headquarters-NAGRC&DB	1,400,000,000 (Wage bill)	681,585,000
Dairy cattle		245,915,000
Beef cattle		257, 5000,000
Poultry		60,000,000
Small ruminants &non ruminan	ts	130,000,000
Pasture and feeds		300,000,000
National Animal Data Bank		40,000,000
Fish breeding and production		35,000,000
Assisted Reproductive Technology	ogies (ARTs)	300, 000,000
Allocation per item:		

	• • • • • • • • • • • • • • • • • • • •
Assisted Reproductive Technologies (ARTs)	300, 000,000
Allocation per item:	
1)Contract Staff Salaries (Incl. Casuals, Temporary)	1,400,000,000
2)Allowances	253,177,000
3)Social Security Contributions	140,000,000
4)Medical expenses (To employees)	100,000,000
5)Advertising and Public Relations	32,000,000
6)Workshops and Seminars	80,000,000
7)Computer supplies and Information Technology	21,585,000
8)Welfare and Entertainment	20,000,000
9)Printing, Stationery, Photocopying and Binding	55,000,000
10)Telecommunications	16,500,000
11)Information and communications technology (ICT	10,000,000
12)Guard and Security services	100,000,000
13)Electricity	150,000,000
14)Water	22,000,000
15)Medical and Agricultural supplies	330,000,000
16)Uniforms, Beddings and Protective Gear	65,000,000
17)Agricultural Supplies	343,000,000
18)Travel inland	148,838,000
19)Travel abroad	70,000,000
20)Fuel, Lubricants and Oils	195,000,000
21)Maintenance – Civil	518,500,000
22)Maintenance – Vehicles	70,000,000
23)Maintenance – Machinery, Equipment & Furniture	64,500,000

Vote Summary	
24)Contract Staff Salaries (Incl. Casuals, Temporary)	1,400,000,000
25)Allowances	253,177,000
26)Social Security Contributions	140,000,000
27)Medical expenses (To employees)	100,000,000
28)Advertising and Public Relations	32,000,000
29)Workshops and Seminars	80,000,000
30)Computer supplies and Information Technology	21,585,000
31)Welfare and Entertainment	20,000,000
32)Printing, Stationery, Photocopying and Binding	55,000,000
33)Telecommunications	16,500,000
34)Information and communications technology (ICT	10,000,000
35)Guard and Security services	100,000,000
36)Electricity	150,000,000
37)Water	22,000,000
38)Medical and Agricultural supplies	330,000,000

(iii) The major planned changes in resource allocations within the Vote for 2015/16

In order For the National Animal Genetic Resources Center and Data Bank (NAGRC&DB) to perform optimally and contribute significantly to the successful performance of the Agricultural sector in FY 2015/16, its prudent that the underfunded and yet key areas contributing to the institution's performance be addressed and funding increased. Among the most important areas where resource allocation changes shall occur include;

- 1). Maintenance of valley tanks, these valley dams are the major sources of water to the farms and ranches, Lack of adequate amounts of water would lead to death of animals. This challenge needs to be addressed immediately UGX 1,000,000,000.
- 2) Maintenance of the farms infrastructure. 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. This 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. The proposals were submitted by NAGRC&DB to relevant authorities; currently we are still waiting for the positive response.
- 4) 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.

Table V3.2: Key Changes in Vote Resource Allocation

Changes in Budget Allocation 2015/16	ons and Outputs from 2014 2010		els: 2017/18	Justification for proposed Changes in Expenditure and Outputs	
Vote Function:0101 Breeding and Genetic Development Output: 0156 01 Human Resource management & development.					
Annual salry increase of 0.24 is to cater for inflationary rises, further	The increase mainly caters for the improvement staff welfare in order to realize the set targets and objective	The increase coresult of amendannual increments associated bene employees.	mes as a atory salary nts and	With strategic of objective of recruitment and retention of skilled and competent personnel, the increased funding of human resource will increase their production and productivity hence improved performance of personnel. This is in line with DSIP and NDP.	
Output: 0156 09 Multip	lication of pure Dairy animals	s & appropriate cr	osses		

Vote Summary

Changes in Budget Allocations and Outputs from 2014/15 Planned Levels: Justification for proposed Changes in					
2015/16	2016/		Expenditure and Outputs		
The outputs have remained		There can be an increased	Increased production of good quality cattle semen will lead to increased number of improved breeds thus increasing production and productivity.		
Output: 0156 14 Multi	plication of pure beef breeds &	appropriate crosses			
Despite the change in the resources allocated,the	UShs Bn: -0.310 The output shall be 700 calves produced as aresult of growth in the herds.	OUShs Bn: -0.310 The output shall be 800 calves produced as aresult of growth in the herds.	Due to increased demand in the dairy products and associated requirements like feeding and nutrition, there was a need to reduce the funds allocated to the MTEF and increase on other MTEFs which increase on production and productivity such as poultry.		
	mprove and conserve indegnou	is poultry genetic resources.			
The poultry genetics through the Kuroiler shall remain constant at 1 million chicks a year.	The poultry genetics through the Kuroiler shall remain constant at 1 million chicks a year and selection of 200 local birds for improvement.		The increase in resource allocation to the tune of 0.070 billion will help to increase production and productivity through selection, improvement and conservation of indigenous animal genetic resources.		
Output: 0156 40 Production, procurement and sale of liquid nitrogen and associated equipment.					
	UShs Bn: 0.037 There is an increase in production and distribution of Nitrogen (36800) fore custed as a result of increased use of nitrogen like animal identification through freez branding	TUShs Bn: -0.060 The increase of production by 20000 comes as aresult increaed use of nitrogent like in embryo transfer and othe uses	Currently NAGRC has an efficient Liquid nitrogen machine with industrial rates of power consumption which slightly reduces on the cost production hence leading to lesser resource allocation than the previous year hence efficiency.		

V4: Vote Challenges for 2015/16 and the Medium Term

This section sets out the major challenges the vote faces in 2015/16 and the medium term which the vote has been unable to address in its spending plans.

1.Failure to operationalize the approved organo structure for the last 11 years, the financial year 2015/2016 there will be a salary deficit of UGX 700,000,000 on the organo structure which was approved in 2005 since then there has been no increment for the last ten years, The continued insufficient funding to NAGRC & DB has led to low morale of staff, partly resulting in the loss of two staff with Phds. This inadequate pay has also not increased for the last ten (10) years. It should be noted that NAGRC &DB is a scientific institution and staff (most of whom are scientists) are supposed to be well facilitated to enable carry out breeding and other scientific activities. In comparison to our counterparts whom we started with at the same time such as NAADS, DDA & NARO their salaries are reasonably higher and there has been increments compared to those of NAGRC & DB. The above issue does not only negatively affect NAGRC & DB but also to the collaborating institutions such as NAADS, NARO and DSIP ,technologies for livestock improvement will simply go to waste by acquiring poor quality aforesaid materials.

- 2. Lack of gratuity for contract staff during last financial year 2013/14 NAGRC presented the issue of lack of gratuity to staff but there was no response to that matter. Currently the funding gap of gratuity stands at UGX 854,492,484.
- 3.High level of siltation of the valley tanks, which require UGX 1,000,000,000).due to such 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, 4.

Vote Summary

4 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 15,000,000,000. 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. 5.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.

A. 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.

- 6. 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 (UGX 3,000,000,000) to purchase vehicles and motor cycles for officer's ant farms and ranches.
- 7. This is because, liquid Nitrogen plays a pivotal role in preservation of semen, and in turn this has led to a decline in numbers of Artificial Inseminations (AI) carried out. The amount of funds required for a regular servicing, Purchase of semen packing, freezing machine and restocking of the bull stud with 10 AI Bulls is UGX 1,160,000,000.
- 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 1, 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).

Table V4.1: Additional Output Funding Requests

Additional Requirements for Funding and Outputs in 2015/16:

Justification of Requirement for Additional Outputs and Funding

Vote Function:0101 Breeding and Genetic Development

Output: 0156 01 Human Resource management &development.

UShs Bn:

46.180

1). Although salaries of the instituion'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 perfomance 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.

For the last ten (10) years since 1995 NAGRC&DB staff has been getting inadequate salaries and non operationalisation of the aproved 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.

Output: 0156 09 Multiplication of pure Dairy animals & appropriate crosses

UShs Bn: 3.000

1). Increased production of quality and affordable female dairy crossbred calves, 1,500 calves to be produced. 2). Increased production of affordable female pure bred calves 750 calves to be produced.

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

Vote Summary

Additional Requirements for Funding and Outputs in 2015/16:

Justification of Requirement for **Additional Outputs and Funding**

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.

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.

Output: 0156 14 Multiplication of pure beef breeds & appropriate crosses

UShs Bn:

1.500

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.

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. 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 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.

0156 27 Evaluation and multiplication of improved pasture and fodder germ-plasm

0.900

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%.

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

Vote Summary

Additional Requirements for Funding and Outputs in 2015/16:	Justification of Requirement for Additional Outputs and Funding		
	and quantity production of processed feeds for sell to farmers and for feeding the institution's herds.		
Output: 0156 34 Production and sale of founder brood	stock of fisheries resources.		
UShs Bn: 1.000 1). Increased production of quality and affordable fish fingerings, 100 tons per year.	- 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.		
	- 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.		

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

Objective: 3)A focal person with responsibility of gender mainstreaming was identified with in the existing staff and under programme output 01 one Gender focal person shall be trained.

Issue of Concern:

Proposed Intervensions

Budget Allocations UGX billion

Performance Indicators

Objective: 2) NAGRC in collaboration with sister agencies shall sale 80% of the planned outputs under

programme 04 to gender and equity groups, youth and dis advantaged groups of the rural community.

Issue of Concern :

Proposed Intervensions

Budget Allocations UGX billion

Performance Indicators

Objective: Under programme 10 output 37 UGX 15,000,000 has been allocated to training of Twenty

(20) Assisted Reproductive Technitians women practitioners.

Issue of Concern:

Vote Summary

Proposed Intervensions

Budget Allocations UGX billion

Performance Indicators

(ii) HIV/AIDS

Objective: Sensitizations of the community towards consumption of livestock products towards treatment of HIV/AIDS for example use of goats' milk in HIV/AIDS patients.

Issue of Concern:

Proposed Intervensions

Budget Allocations UGX billion

Performance Indicators

Objective:) 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 of dis

Issue of Concern:

Proposed Intervensions

Budget Allocations UGX billion

Performance Indicators

Objective: Under programme 04 (Poultry) output 19, UGX 65,000,000 from AIA were allocated towards addressing HIV/AIDS issues

Issue of Concern:

Proposed Intervensions

Budget Allocations UGX billion

Performance Indicators

(iii) Environment

Objective: Employ Environmentally friendly Livestock management practices on and off NAGRC farms for example use of sock pits to dispose of wastes like acaricides, protection of water bodies from being eroded by livestock wastes. Use of right stocking rates.

Issue of Concern:

Vote Summary

Proposed Intervensions

Budget Allocations UGX billion

Performance Indicators

Objective: 5)The vote proposes to establish a collaborative linkage with environmental protection organizations in order to strengthen the same on all NAGRC FARMS UGX 20,000,000 has been allocated towards such arrangements under programme 1 Output 04.

Issue of Concern:

Proposed Intervensions

Budget Allocations UGX billion

Performance Indicators

Objective: 1)Under programme 06 pasture and feeds, UGX 10,000,000 has been allocated towards environmental protection, establishment & planting of five thousand (5000) trees for forage & environmental protection, four farm days for tree planting shall be conducted.

Issue of Concern:

Proposed Intervensions

Budget Allocations UGX billion

Performance Indicators

(ii) Payment Arrears

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

Payee	Payment Due Date	Amount (UShs Bn)
Ultimate security	05/12/2013	0.01
Staff Salary arrears	31/05/2013	0.02
Staff gratuity	30/12/2014	0.85
Security plus	30/06/2013	0.01
Observer media	30/06/2013	0.00
NSSF	30/06/2013	0.29
New vision	31/08/2013	0.00
Monitor Publications	30/06/2013	0.00
Milly's restaurant	30/06/2013	0.11
lake Albert kuku feeds	30/06/2013	0.00
Energy electrical repairs	28/06/2013	0.00
Bwatda Enterprises	05/12/2013	0.01
Arrow center	31/05/2013	0.01
	Total:	1.326

The fact that the health and condition of animals that are managed on the different NAGRC&DB farms

Vote Summary

must be maintained at its best for optimal performance, this means that despite the limited funding received from the central government for a period of time, the institution on a daily basis had to meet both health and nutritional demands of the animals under its custody thus obtaining drugs, feeds and services on credit. The institution's existing arrears therefore are as a result of procuring drugs and feeds for the animals, paying of staff salaries and other support/related services.

After attaining vote status, funding of the institution was increased. With increased funding under agriculture supplies and salaries therefore, the institution is not expected to incur any new arrears. As a new vote in operation from traditional Civil service we had an over sight of gratuity which led to accumulation of arrears.

(ii) Non Tax Revenue Collections

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

Source of NTR	UShs Bn	2013/15 Actual	2014/15 Budget	2014/15 Actual by Sept	2015/16 Projected
Animal & Crop Husbandry related Levies		0.000	0.600		0.800
	Total:	0.000	0.600		0.800

According to the Animal Breeding Act 2001, the National Animal Genetic Resources Centre and Data Bank is supposed to obtain funding for its operations from the sources below:-

- •Funds appropriated to the Centre by the Parliament of Uganda
- •Loans from Government, or from any person or organization within or outside Uganda
- •Grants, Gifts and donations that may be received from any person or organizations from source within or outside Uganda
- •Profit from the commercial activities of the Centre.

(NAGRC&DB) through its commercial operations has the capacity to collect Non Taxable Revenue each financial year to aid it in its operations. For FY 2013/2014, the institution projected to generate about six hundred million Ugandan shillings (600,000,000/=) from the sale of animals, ground rent, provision of services, etc. In the subsequent financial year s, the institution projects to generate NTR as follows; FY 2014/2015 UGX 800,000,000, FY 2015/2016 UGX 1,000,000,000, and FY 2016/2017 UGX 1,200,000,000.

It's important to note that, NAGRC &DB currently has no capital development fund yet there are a number of infrastructural developments that have to be put in place on different farms. There are a number of emergency animal treatments that require a lot of money yet their funding from non-wage allocations is still small, the board of directors has to sit and also tour farms but their facilitation is not fully funded. The institution is also currently facing a problem of fencing land and land encroachment all of which need money. The same generated NTR needs to be ploughed back into the institution's commercial activities to enable generation of more revenue in order to break even. From the above explanation therefore, a number of activities that missed allocation of funds due to limited funding are facilitated from the generated NTR.