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# Vote:110

 Uganda Industrial Research Institute

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## V1: Vote Overview

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### I. Vote Mission Statement

The Mission of the Institute is "To catalyze the socio-economic transformation of Uganda and the Region through enhanced Research and Development, and Technology use."

### II. Strategic Objective

1. To undertake applied research for the development of products and optimal production processes, for Uganda's nascent industry.
2. To develop and /or acquire appreciate technology, in order to create a strong, effective and competitive industrial sector.
3. Act as a bridge between academia, government, and the private sector with respect to commercialization of innovation and research results.
4. Spearhead value addition activities in conjunction with national development priorities.
5. Lead the national effort in technology transfer and technology diffusion, to assure the development of appropriate technologies.

### III. Major Achievements in 2017/18

UIRI's Major Performance Highlights for Q1 and Q2 for FY17/18 include;

UIRI's Major Performance Highlights for Q1 and Q2 for FY17/18 include

1. UIRI held a successful earth breaking ceremony for the construction of the Machining, Manufacturing, and Industrial Skills Training Center in Namanve (MMISTC). The event was held on 25th January 2018,
2. 100% completion of construction works at Arua Meat Processing Plant in Arua District
3. 100% completion of construction works of a Model Dairy Farm in Karubuga of Ntungamo District
4. 100% completion of construction works of Itojo Fruit Juice Processing Plant
5. 75% construction works at the Palm Oil Production Facility in Kanungu District
6. Analysis and issuance of analysis certificates for 120 Laboratory Samples of Food, Alcohol, Beverages, Cosmetics and Plants analyzed for chemical Composition.
7. Trained 125 entrepreneurs in various value addition processing
8. Trained 175 industrial trainees
9. Operating a vibrant business incubation portfolio
10. Increased awareness of UIRI's role in the industrialization process of Uganda evidenced by the high inflow of public and private sector people seeking information, knowledge and advisory services.

### IV. Medium Term Plans

The following are UIRI's Medium Term Plans of NDP II, Vision 2040 and the NRM Manifesto aimed to achieve Middle Income Status by 2020

1. Establish regional value addition centers to address product prevalent in specific regions across the country
2. Promote and expand the Industrial and Technological Incubation Center and accelerate graduation of incubatees
3. Establish a Machining and Manufacturing Production and Training Center for Industrial Skills Capacity Training
4. Innovate and development technologies for uptake to foster Industrial Development
5. Establish an Essential Oil Sector in conjunction with Council for Scientific and Industrial Research
6. Develop affordable technologies for dissemination/ easy uptake to foster economic development
7. Create a pool of technically skilled professionals
8. Become a self sustaining institute in Research and Development
9. Develop a range of biomedical technologies and veterinary vaccines
10. Build capacity for Buy Uganda Build Uganda through the business incubation program

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## V. Summary of Past Performance and Medium Term Budget Allocations

Table 5.1: Overview of Vote Expenditures (US\$ Billion)

	2016/17 Outturn	2017/18		2018/19	MTEF Budget Projections				
		Approved Budget	Expenditure by End Dec		2019/20	2020/21	2021/22	2022/23	
<b>Recurrent</b>									
Wage	0.000	3.720	1.861	3.720	4.092	4.297	4.512	4.737	
Non Wage	0.000	2.059	1.234	2.011	2.453	2.821	3.386	4.063	
<b>Devt.</b>									
GoU	0.000	8.173	1.838	7.984	9.740	11.689	11.689	11.689	
Ext. Fin.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
<b>GoU Total</b>	<b>0.000</b>	<b>13.952</b>	<b>4.933</b>	<b>13.715</b>	<b>16.286</b>	<b>18.807</b>	<b>19.586</b>	<b>20.488</b>	
<b>Total GoU+Ext Fin (MTEF)</b>	<b>0.000</b>	<b>13.952</b>	<b>4.933</b>	<b>13.715</b>	<b>16.286</b>	<b>18.807</b>	<b>19.586</b>	<b>20.488</b>	
Arrears	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.000	
<b>Total Budget</b>	<b>0.000</b>	<b>13.952</b>	<b>4.933</b>	<b>13.760</b>	<b>16.286</b>	<b>18.807</b>	<b>19.586</b>	<b>20.488</b>	
<b>A.I.A Total</b>	<b>0.000</b>	<b>0.200</b>	<b>0.119</b>	<b>0.256</b>	<b>0.378</b>	<b>0.450</b>	<b>0.530</b>	<b>0.610</b>	
<b>Grand Total</b>	<b>0.000</b>	<b>14.152</b>	<b>5.052</b>	<b>14.016</b>	<b>16.664</b>	<b>19.257</b>	<b>20.116</b>	<b>21.098</b>	
<b>Total Vote Budget Excluding Arrears</b>	<b>0.000</b>	<b>14.152</b>	<b>5.052</b>	<b>13.971</b>	<b>16.664</b>	<b>19.257</b>	<b>20.116</b>	<b>21.098</b>	

## VI. Budget By Economic Classification

Table V6.1 2017/18 and 2018/19 Budget Allocations by Item

<i>Billion Uganda Shillings</i>	2017/18 Approved Budget				2018/19 Draft Estimates			
	GoU	Ext. Fin	AIA	Total	GoU	Ext. Fin	AIA	Total
<b>Output Class : Outputs Provided</b>	<b>10.947</b>	<b>0.000</b>	<b>0.200</b>	<b>11.147</b>	<b>11.508</b>	<b>0.000</b>	<b>0.256</b>	<b>11.764</b>
211 Wages and Salaries	4.786	0.000	0.030	4.816	5.149	0.000	0.030	5.179
212 Social Contributions	0.468	0.000	0.000	0.468	0.507	0.000	0.000	0.507
213 Other Employee Costs	1.600	0.000	0.000	1.600	2.083	0.000	0.000	2.083
221 General Expenses	0.324	0.000	0.080	0.405	0.395	0.000	0.131	0.525
222 Communications	0.106	0.000	0.000	0.106	0.170	0.000	0.000	0.170
223 Utility and Property Expenses	1.092	0.000	0.090	1.182	1.425	0.000	0.065	1.490
224 Supplies and Services	0.715	0.000	0.000	0.715	0.598	0.000	0.000	0.598
226 Insurances and Licenses	0.151	0.000	0.000	0.151	0.050	0.000	0.000	0.050
227 Travel and Transport	0.461	0.000	0.000	0.461	0.306	0.000	0.030	0.336
228 Maintenance	1.243	0.000	0.000	1.243	0.826	0.000	0.000	0.826
<b>Output Class : Capital Purchases</b>	<b>3.005</b>	<b>0.000</b>	<b>0.000</b>	<b>3.005</b>	<b>2.207</b>	<b>0.000</b>	<b>0.000</b>	<b>2.207</b>
281 Property expenses other than interest	0.100	0.000	0.000	0.100	0.080	0.000	0.000	0.080
312 FIXED ASSETS	2.905	0.000	0.000	2.905	2.127	0.000	0.000	2.127
<b>Output Class : Arrears</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.045</b>	<b>0.000</b>	<b>0.000</b>	<b>0.045</b>

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321 DOMESTIC	0.000	0.000	0.000	0.000	0.045	0.000	0.000	0.045
<b>Grand Total :</b>	<b>13.952</b>	<b>0.000</b>	<b>0.200</b>	<b>14.152</b>	<b>13.760</b>	<b>0.000</b>	<b>0.256</b>	<b>14.016</b>
<b>Total excluding Arrears</b>	<b>13.952</b>	<b>0.000</b>	<b>0.200</b>	<b>14.152</b>	<b>13.715</b>	<b>0.000</b>	<b>0.256</b>	<b>13.971</b>

### VII. Budget By Programme And Subprogramme

**Table V7.1: Past Expenditure Outturns and Medium Term Projections by Programme and SubProgramme**

<i>Billion Uganda shillings</i>	FY 2016/17 Outturn	FY 2017/18		2018-19 Proposed Budget	Medium Term Projections			
		Approved Budget	Spent By End Dec		2019-20	2020-21	2021-22	2022-23
<b>04 Industrial Research</b>	<b>0.000</b>	<b>14.152</b>	<b>4.933</b>	<b>14.016</b>	<b>16.664</b>	<b>19.257</b>	<b>20.116</b>	<b>21.098</b>
01 Headquarters	0.000	5.979	3.094	6.032	6.923	7.568	8.427	9.410
0430 Uganda Industrial Research Institute	0.000	8.173	1.838	7.984	9.740	11.689	11.689	11.689
<b>Total for the Vote</b>	<b>0.000</b>	<b>14.152</b>	<b>4.933</b>	<b>14.016</b>	<b>16.664</b>	<b>19.257</b>	<b>20.116</b>	<b>21.098</b>
<b>Total Excluding Arrears</b>	<b>0.000</b>	<b>14.152</b>	<b>4.933</b>	<b>13.971</b>	<b>16.664</b>	<b>19.257</b>	<b>20.116</b>	<b>21.098</b>

### VIII. Programme Performance and Medium Term Plans

**Table V8.1: Programme Outcome and Outcome Indicators ( Only applicable for FY 2018/19)**

<b>Programme :</b>	04 Industrial Research		
<b>Programme Objective :</b>	<ol style="list-style-type: none"> <li>To undertake applied research for the development of products and optimal production processes, for Uganda's nascent industry.</li> <li>To develop and /or acquire appreciate technology, in order to create a strong, effective and competitive industrial sector.</li> <li>Act as a bridge between academia, government, and the private sector with respect to commercialization of innovation and research results.</li> <li>Spearhead value addition activities in conjunction with national development priorities.</li> <li>Lead the national effort in technology transfer and technology diffusion, to assure the development of appropriate technologies.</li> </ol>		
<b>Responsible Officer:</b>	Prof. Charles Kwesiga		
<b>Programme Outcome:</b>	Industrial Product Development and Technological Advancement		
<i>Sector Outcomes contributed to by the Programme Outcome</i>			
<b>1. Increased technological and science uptake in development</b>			
<b>2. More technologies adopted</b>			
<b>Outcome Indicators</b>	<b>Performance Targets</b>		
	<b>2018/19</b>	<b>2019/20</b>	<b>2020/21</b>
	<b>Target</b>	<b>Projection</b>	<b>Projection</b>
• Number of Research Innovations developed	10	15	20
• Number of developed and transfered Technologies utilized	15	20	25

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• Cumulative Number of Sustainable Model Value Addition Centers and Technical Business Incubation Enterprises	4	6	8
<b>SubProgramme: 0430 Uganda Industrial Research Institute</b>			
<b>Output: 02 Research and Development</b>			
No. of product analyses undertaken for quality checks	2000	2500	3000
No. of research projects initiated	6	8	10
<b>Output: 03 Industrial and technological Incubation</b>			
No. of value added products developed for industrialisation to reduce post harvest losses	45	50	55
No. of SME's incubates taken on	10	15	20
No. of technologies deployed with incubatees	15	20	25
<b>Output: 04 Model Value Addition Centre Establishment</b>			
No. of value addition centers established	4	6	8
<b>Output: 06 Industrial Skills Development and Capacity Building</b>			
No. of SMEs trained in industrial development and value addition processing	1400	1500	1600
No. of apprenticeships taken on	30	40	50
<b>Output: 07 Technology, Innovation, Transfer and Development</b>			
No. of technologies transferred	15	20	25
No. of technologies developed	3	6	9
No. of research innovations developed	6	8	10
<b>Output: 08 Popularization of research and technologies</b>			
No. of exhibitions and public forums participated in	5	10	15
No. of knowledge sharing platforms organized	4	8	12
No. of research Published	3	6	9

## IX. Major Capital Investments And Changes In Resource Allocation

Table 9.1: Major Capital Investment (Capital Purchases outputs over 0.5Billion)

FY 2017/18		FY 2018/19
Appr. Budget and Planned Outputs	Expenditures and Achievements by end Dec	Proposed Budget and Planned Outputs
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Program : 18 04 Industrial Research		
Development Project : 0430 Uganda Industrial Research Institute		
Output: 18 04 72 Government Buildings and Administrative Infrastructure		

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Bulk Potato storage facility constructed;		Bulk potato storage facility was was not constructed.	Establishment of Government Buildings and Administrative infrastructure
Construction of the Instrumentation Laboratory;		Completed designs for refurbishment of the instrumentation laboratory	
Refurbishment of the paper plant at UIRI A Prototyping Lab Project - Remodeling PCB Laboratory established;		Designs for the PCB Laboratory were completed pending approval	
A darkroom for screen print development and shooting;			
Designs of a mushroom facility;			
Civil Works completed for Microbiology laboratory			
<b>Total Output Cost(Ushs Thousand)</b>	<b>1,032,000</b>	<b>70,874</b>	
Gou Dev't:	1,032,000	70,874	1,112,500
Ext Fin:	0	0	0
A.I.A:	0	0	0
<b>Output: 18 04 77 Purchase of Specialised Machinery &amp; Equipment</b>			

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Purchase of a small scale wine filling machine; ball bearings and other spare parts for the pineapple juice extractor; cartridges for the water purification system Fabrication of soap slicing machines	Purchase of small scale wine machine, ball bearings and other spare parts for the pineapple juice extractor, cartridges for the water purification system were not undertaken Soap slicing machines were fabricated	UIRI shall procure specialized machinery and equipment for production processing and new technologies that can be easily adapted		
Equipping Energy Systems Projects Establishment of a Dairy Processing Facility in Namanve Machine Fabrication of Milling and bagging machine for a Silver Fish milling Facility	Equipping of Energy Systems was not undertaken Establishment of Dairy Processing Facility not undertaken Machine fabrication of milling and bagging machine for silver fish was not undertaken			
Purchase PCB Laboratory Equipment for the Prototyping Laboratory Project Hatchery for poultry markmat agro-processors	PCB Laboratory equipment were procured Hatchery for poultry Markmat Agro-Processors was not undertaken due to insufficient funds			
Development of MUTIMA- diagnostic device for Pneumonia Purchase of equipment for Kabale Potato Processing Facility; Purchase of a Fruit electric dryer for Product Development Equipping Microbiology Laboratory	Mutima Diagnostic device for Pneumonia was put on hold due to lack of funds Equipment for Kabale Potato Processing Facility not procured Purchase of a fruit electric dryer for Product Development was not procured Microbiology Laboratory Equipment not procured			
Supply of spare parts and tools for repair, general servicing, periodic maintenance of Pilot Plant equipments Equipping Sure Dairy Farm Limited	Some spare parts and tools for repair, general servicing, periodic maintenance of pilot plant equipment were procured Equipping of Sure Dairy Farm Limited was not undertaken			
Mineral Beneficiation . Adding value to Low – Value Minerals like Sand, Talc, Salt, Feldspar, Kaolin, Clay, Limestone, Bentonite, Vermiculite etc	Mineral Beneficiation is ongoing Handover of charcoal briquetting equipment to Luuka Community Development Group was accomplished on 30th November, 2017.			
Briquette Making /Processing Essential Oil Pilot Project Equipping of the Chemistry Laboratory Equipping of the Food Laboratory Procurement of equipment for Karubuga Dairy Processing Facility in Ntungamo Equipping in support of virtual incubation in Kabale District	Essential Oil Pilot Project is ongoing 1. Chemistry Laboratory fume hood, frigerators, analytical balance,& blenders			
Handmade Paper Production Project	2.			
Fabrication of assorted processing equipments such as a Passion Juice Extractor, Batch pasteurizer & Blending tank	HTDS- PULSE Health Care experts to service HPLC, AAS, FTIR, UV/vis spectrometer were being procured Equipping the Food Laboratory was not undertaken			
Solar Water Heater Assembly Mediclave - Solar powered autoclave Electronically Controlled Gravity Infusion Set- Prototype Development Poultry Processing Line for KAMADIC	Karubuga Dairy Processing Facility in Ntungamo was equipped Equipping in support of virtual incubation in Kabale District not undertaken Handmade Paper Production is ongoing Fabrication of processing equipment such as Juice Extractors, Batch Pasteurizers and Blending taken were not done due to insufficient funds resulting from Budget shortfalls Solar water heater assembly not undertaken Mediclave Solar Powered autoclave was not procured Electronically Controlled Gravity Infusion Set Prototype development is underway Poultry Processing Line for KAMADIC was not undertaken			
Equipping of the Textile Technology Section	Developed silk peddling machines for extraction of cotton threads for the Textile Industry			
<b>Total Output Cost(Ushs Thousand)</b>	<b>1,872,953</b>		<b>152,954</b>	<b>1,024,879</b>
Gou Dev't:	1,872,953		152,954	1,024,879
Ext Fin:	0		0	0
A.I.A:	0		0	0

## X. Vote Challenges and Plans To Improve Performance

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## Vote Challenges

### UIRI'S CHALLENGES

1. Underfunding of Research and Development
2. Inadequate budget allocation under MTEF
3. Deficit between allocated and actual released budget funds
4. Inadequate application and utilization of scientific research and technology for economic development
5. Inadequate capitalization of current model processing facilities and commercialization of business incubation projects
6. Un-competitiveness of local industries
7. Expensive financing from financial institutions to undertake R&D projects
8. Low technical skills
9. Lack of funds to support commercialization of innovations, technologies and products (Industrialization and Innovation Fund)
10. Inadequate remuneration for retention of highly skilled scientists and engineers
11. Absence of critical technical skills
12. Weak inter-institutional cohesion and cooperation
13. Limited levels of entrepreneurial competences in our society
14. Lack of adequate infrastructure and limited connectivity
15. Governmental and societal ambivalence with regard to R&D

## Plans to improve Vote Performance

1. Establishment and implementation of an Industrial and Innovation Fund Industrialization fund (for affordable financing)
2. Business incubation (Commercialization of developed products and services, increased tax base)
3. Promoting buy Uganda build Uganda (by developing Competitive Ugandan products)
4. Enhancing skills and capacity building

## XI. Vote Cross Cutting Policy And Other Budgetary Issues

**Table 11.1: Cross- Cutting Policy Issues**

**Table 11.2: AIA Collections**

Source of AIA(Ush Bn)	2017/18 Budget	2017/18 Actual by Dec	2018/19 Projected
Rent & Rates - Non-Produced Assets – from private entities	0.000	0.000	0.200
Rent & Rates - Non-Produced Assets – from other Govt units	0.000	0.000	0.040
Sale of publications	0.000	0.000	0.006
Miscellaneous receipts/income	0.000	0.000	0.010
<b>Total</b>	<b>0.000</b>	<b>0.000</b>	<b>0.256</b>

## XII. Personnel Information

**Table 12.1 Staff Recruitment Plan**

Post Title	Salary Scale	No. Of Approved Posts	No Of Filled Posts	Vacant Posts	No. of Posts Cleared for Filling FY2018/19	Gross Salary Per Month (UGX)	Total Annual Salary (UGX)
Assistant Production Technician	UIRI/SC 8	52	3	49	4	2,880,000	34,560,000
Director Finance and Administration	UIRI/SC2	1	0	1	1	7,800,000	93,600,000
Director Product Development	UIRI/SC2	1	0	1	1	7,800,000	93,600,000
Director Production Systems	UIRI/SC2	1	0	1	1	7,800,000	93,600,000
Human Resource Manager	UIRI/SC3	1	0	1	1	6,200,000	74,400,000

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Intern Research Engineer	URI/SC7	20	4	16	2	1,800,000	21,600,000
Intern Research Technician Scientist	URI/SC7	25	5	20	3	2,700,000	32,400,000
Research Officers	URI/SC4	10	1	9	2	3,600,000	43,200,000
<b>Total</b>		111	13	98	15	40,580,000	486,960,000