

Vote: 110 Uganda Industrial Research Institute

Structure of Submission

QUARTER 4 Performance Report

Summary of Vote Performance

Cumulative Progress Report for Projects and Programme

Quarterly Progress Report for Projects and Programmes

Submission Checklist

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QUARTER 4: Highlights of Vote Performance

VI: Summary of Issues in Budget Execution

This section provides an overview of Vote expenditure

(i) Snapshot of Vote Releases and Expenditures

Table V1.1 below summarises cumulative releases and expenditures by the end of the quarter:

Table V1.1: Overview of Vote Expenditures (US\$ Billion)

(i) Excluding Arrears, Taxes	Approved Budget	Cashlimits by End	Released by End	Spent by End Jun	% Budget Released	% Budget Spent	% Releases Spent
Recurrent Wage	4.069	N/A	4.069	4.069	100.0%	100.0%	100.0%
Recurrent Non Wage	1.540	5.317	1.248	1.248	81.0%	81.0%	100.0%
Development GoU	7.030	5.526	5.526	5.526	78.6%	78.6%	100.0%
Development Donor*	0.000	N/A	0.000	0.000	N/A	N/A	N/A
GoU Total	12.640	10.843	10.843	10.843	85.8%	85.8%	100.0%
Total GoU+Donor (MTEF)	12.640	N/A	10.843	10.843	85.8%	85.8%	100.0%
(ii) Arrears and Taxes Arrears	0.000	N/A	0.000	0.000	N/A	N/A	N/A
(ii) Arrears and Taxes Taxes**	1.200	N/A	0.700	0.700	58.3%	58.3%	100.0%
Total Budget	13.840	10.843195	11.543	11.543	83.4%	83.4%	100.0%
(iii) Non Tax Revenue	0.100	N/A	0.000	0.000	0.0%	0.0%	N/A
Grand Total	13.940	10.843195	11.543	11.543	82.8%	82.8%	100.0%
Excluding Taxes, Arrears	12.740	10.843195	10.843	10.843	85.1%	85.1%	100.0%

* Donor expenditure information available

** Non VAT taxes on capital expenditure

The table below shows cumulative releases and expenditures to the Vote by Vote Function :

Table V1.2: Releases and Expenditure by Vote Function*

Billion Uganda Shillings	Approved Budget	Released	Spent	% Budget Released	% Budget Spent	% Releases Spent
VF:0651 Industrial Research	12.74	10.84	10.84	85.1%	85.1%	100.0%
Total For Vote	12.74	10.84	10.84	85.1%	85.1%	100.0%

* Excluding Taxes and Arrears

(ii) Matters to note in budget execution

Specific to Q4 the Institute has again experienced a shortfall of 1.8bn. The entire development budget was cut to zero. The trend of inconsistent and unpredictable budget releases each financial year makes it becomes difficult to implement planned activities and sustain smooth operations of the Institutes' programs. For instance in FY 2010/2011 the Institute experienced a shortfall of 1.8bn and FY 2011/2012 a shortfall of 1.5bn and now FY 2012/13 a shortfall of 1.8bn. This position renders a halt to most development operations and consequently under mine the whole industrialization process.

If only the Institute was funded in accordance with the NDP projections of 21.3bn for 5 consecutive Financial Years focused at establishing Research and Development agendas for self-sustainability, UIRI would quickly achieve its commitment to deliver on its mandate.

Otherwise the overall Industrial Development Situation Analysis or Challenges include

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- State of Industry: industry in Uganda is mainly dominated by Micro, Small and Medium Enterprises (MSME's) most of which are engaged in agro-processing and production of basic consumer goods.
- Weak Linkages among academia, R&D Institutions and Industry: there remains weak linkage between academia, R&D institutions and industry.
- Diffusion and Commercialization of Innovations: There remains lack of effort towards establishment of mechanisms for diffusion and commercialization of innovations that are relevant to the needs of society.
- R&D Funding: remains far below the agreed target set by African Heads of State under the Lagos Plan of Action which called for 1% GDP expenditure on R &D.
- Technical Skills Capacity Development: there remains need for increase in the number of relevant, qualified and competent scientists and engineers to undertake high-level R&D capable of driving the process of industrialization.
- Infrastructure: there remains need for substantial strengthening of R&D Institutions. Most RTO's continue to rely on use of decrepit facilities and obsolete equipment.

Table V1.3: High Unspent Balances and Over-Expenditure in the Domestic Budget (Ushs Bn)

<i>(i) Major unspent balances</i>
<i>(ii) Expenditures in excess of the original approved budget</i>
* Excluding Taxes and Arrears

V2: Performance Highlights

This section provides highlights of output performance, focusing on key outputs and actions implemented to improve section performance.

Table V2.1: Key Vote Output Indicators and Expenditures*

<i>Vote, Vote Function Key Output</i>	Approved Budget and Planned outputs	Cumulative Expenditure and Performance	Status and Reasons for any Variation from Plans
Vote Function: 0651 Industrial Research			
Output: 065101	Administration and Support Services		
<i>Description of Performance:</i>	To recruit 30 employees; pay salaries & other staff benefits to 235 employees; Asset insurances, utility & property expenses, communication and general supplies, maintenance and professional services paid.	A total of 45 new employees were recruited; and salaries of 230 were paid. Asset insurances, utility & property expenses were paid. Communication and general supplies, maintenance and professional services were paid. Required logistics and administrative support was provided for the smooth operations of the Institute.	Due to operationalisation of all UIRI model value addition centers, (Nabusanke, Lira, Kabale and at UIRI) there was need to recruit technical staff to undertake the day to day technical operations at the respective centers. The need to recruit as per unfilled staff establishment vacancies is still challenged by inadequate budget.
<i>Performance Indicators:</i>			
Payment of all utility bills, subscriptions and insurances expenses etc	100	100	
No. of staff recruited	30	45	
No. of staff whose salaries and benefits have been paid	230	230	

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<i>Vote, Vote Function Key Output</i>	Approved Budget and Planned outputs	Cumulative Expenditure and Performance	Status and Reasons for any Variation from Plans
<i>Output Cost:</i>	US\$ Bn: 5.710	US\$ Bn: 5.317	% Budget Spent: 93.1%
Output: 065102	Research and Development		
<i>Description of Performance:</i>	To operationalise the Arua fruit processing facility. Collect and analyze data of vaccine against Newcastle performance in the 12 pilot districts. To develop more novel products.	<p>Major activities under R&D are categorized in the following areas, i.e. food formulations, handmade paper development, ceramics formulation, chemical and microbial analysis of products, research and development of scientific solution aimed at addressing social economic transformation. The project involves developing new products, verification of industry products, pilot testing, capacity building and process design</p> <ul style="list-style-type: none"> •The Essential Oil Pilot Project is on ground in Luweero. Five species of aromatic plants were established between 13th April and 15th April. The progress is very good. •Successfully completed the formulation of fish and vegetable sausages •Successfully completed the Formulation of five dairy products and further development of meat, bakery •Completed bamboo safety processing and production procedures. •Research experiment aimed at production of wine from passion fruit with aim of retaining the fruit flavor. Sixty (60) Liters of the first batch were filtered ready for consumer testing. Consumer sensory studies are underway •Sustained a range of initiatives to support the first phase commercial pilot processing (market development) for the Fruit Processing Project, Nabusanke <ol style="list-style-type: none"> i. A new product recipe (fruit juice cocktail) finalized ready for commercial trial production ii. Preparation of requirements needed for the UNBS Certification iii. Pilot production trials iv. Re-inspection of the project plant by UNBS 	<ul style="list-style-type: none"> •The institute did not receive any release of funds for the development budget during Q4. A shortfall of 1.8bn. Though most Research and Development activities initiated did not progress due to lack of finances for procurement of research inputs a few going concern projects being undertaken proceeded. Other payment obligations already contracted remained

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Vote, Vote Function Key Output	Approved Budget and Planned outputs	Cumulative Expenditure and Performance	Status and Reasons for any Variation from Plans
		<ul style="list-style-type: none"> • Commencement of the market development phase for products produced from Peanut Research & Processing Center, Lira <ul style="list-style-type: none"> i.Launch of a product market testing exercise and awareness campaign ii.Strengthening the groundnut farmer supply networks to meet projected production demands iii.Completion of framework contracts for supply of consumables for market development •Maintained provision of laboratory testing services for both internal and external clientsAnalyzed 187 samples for both chemical and microbiological parameters •A study on scientific assessment of low cost road sealing using Geogrit Technology coordination of research with the research assistants from Makerere is ongoing. •Neonatal and Maternal Healthcare collaborative project (Partners involved: College of Health Sciences, Makerere University and Oxford BioHorizons Ltd.) Development of in-house Biomedical engineering projects- Automated IV fluid delivery regulator, Biomedical Monitoring System and Baby thermometer/ make an assessment of available medical equipment at Mulago hospital and beyond for neonatal and maternal health and possibly publishing papers on the status/All this with the help of our partners Development of the three projects is ongoing successfully reached simulation and firmware design stage for all projects, prototyping is still pending financing /Rapport is ongoing with our partner on publishing papers on the status of medical equipment. •Research and Development of Agriculture based projects. The Division has started laying 	

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Vote, Vote Function Key Output	Approved Budget and Planned outputs	Cumulative Expenditure and Performance	Status and Reasons for any Variation from Plans
		<p>the foundation for the development of intelligent agricultural solutions. The strategic plan has been launched with feasibility trips to Agricultural Research Institutes. The Division visited the National Agricultural Research Laboratory in Kawanda and also plans to visit the Animal Production Research Institute (NAARI) and Makerere University Agricultural Research Institute in Kabanyolo (MUARIK). We intend to engage our partners at NECTEC, NSTDA once we have outlined some key projects.</p> <p>On-going</p> <ul style="list-style-type: none"> •The instrumentation Unit is currently engaged with 10 projects: •Interactive Traffic Light System, •Automatic indoor/outdoor Lighting System, •Keypad based door lock system, •Solar Powered Egg incubator, •Weighing Scale, automatic Voltage Regulator, •Multi-purpose temperature control monitoring, •Fingerprint and pin code based security access control system, •Motion detection, •The above Reverse Engineering projects will entile Design, simulate, prototype and real life testing of each of these projects. •Hardware, Firmware design, simulation and prototyping is ongoing for these team oriented projects, Instrumentation team still awaiting arrival of much needed hardware to proceed to prototyping stage. Team members are working on firmware as hardware procurement issues are being verified (On-going) <p>•Fabrication of 3rd generation 50 Biochar stoves is almost complete. Designs, shearing, rolling, welding, testing of the</p>	

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Vote, Vote Function Key Output	Approved Budget and Planned outputs	Cumulative Expenditure and Performance	Status and Reasons for any Variation from Plans
		<p>units is under way.</p> <ul style="list-style-type: none"> •One complete wooden electrical cabinet was designed fabricated and fitted •Development of energy efficient Eco stove that generates electricity:- <p>Conduction of a series of electrical analysis experimental tests on the eco stove prototype from the energy laboratory is on-going.</p> <p>The Energy Systems division conducted three experimental tests from the TDC workshop. Currently a report that involves the necessary improvements on the prototype for a final market ready product and corresponding cost implication is being prepared.</p> <ul style="list-style-type: none"> •Proposed partnership program between UIRI's energy systems division and the waste management division of Kampala City Council Authority especially on the Integrated Solid Waste Management (ISWM) a project of KCCA is underway. A meeting held with KCCA concluded on the mode of collaboration between the two parties and the support that ESD would provide in the ISWM project UIRI currently developing an alternative waste management and utilization methods to suggest to KCCA. •Submission of Samples for testing to Pan African Veterinary Center (PANVAC) for final testing to obtain market authorization is on-going •Setup of 12 shops in the eastern region to promote sales during the market pilot is on going •Contract for supply of items from Joint Medical Stores for the Vaccine Production Unit is now in Place •A concept of comprehensive Business plans, financial plans, ICT business solutions, electronic ordering & inventory management systems for 	

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<i>Vote, Vote Function Key Output</i>	Approved Budget and Planned outputs	Cumulative Expenditure and Performance	Status and Reasons for any Variation from Plans
		business efficiency and profitability, business management systems, computerized systems for business transaction tracking for the UIRI incubatees is being analyzed for development	
<i>Performance Indicators:</i>			
No. of research projects undertaken to increase targeted value addition for rural industrialisation to reduce post harvest loss.	25	28	
No. of research projects initiated and underway	45	40	
No. of new innovations and value added products developed	40	55	
<i>Output Cost:</i>	UShs Bn: 1.660	UShs Bn: 1.347	% Budget Spent: 81.2%
Output: 065103	Industrial and technological Incubation		
<i>Description of Performance:</i>	Extend support to business incubation and SME. Promote and create awareness of new products by SME's, Develop business management skills through ICT applications	Industrial and technological incubation Products from the research and development projects are pilot commercial tested in partnership with the private sector under the PPP arrangement. These entrepreneurs are supported to commercialize these products through the industrial incubation program some to the achieved Industrial incubation activities include •Propagation of YOBA-YOBA a probiotic product containing live bacteria that are used in making yoghurt is ongoing with a number of incubates taking on starter cultures. Laboratory records and live cultures have also been stored and are continuously monitored. •5 species of aromatic plants were established at Adeke Farm Limited the anchor host of the Essential Oil Pilot Project. Several studies of plant management, plant performance while on a weed mat against the control, survival, and resistance rates to pests and diseases are under way. •A technique for the analysis of	With the institute not receiving any release of funds for the development budget during Q4. The business incubation program did not engage in many new activities as projected and planned. However the UIRI business incubation program remains vibrant with the entrepreneurs gaining momentum with skills and technical support offered by the Institute

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Vote, Vote Function Key Output	Approved Budget and Planned outputs	Cumulative Expenditure and Performance	Status and Reasons for any Variation from Plans
		<p>Aflatoxin B1 in fermented cassava flour has been developed. A demand driven study by cassava processors in Arua district who require a small tool for analysis to demonstrate compliance to standards. The project is a continuous</p> <ul style="list-style-type: none"> •Technological Needs Assessment for Ntugamo and Mbarara (Karubunga dairy farm& Nyarubanga dairy farm) has been made and report completed. •Following the completion of a pre-feasibility study aimed at Identifying needs from farmer groups in Lango and Acholi regions, to develop/acquire technologies to mechanize shelling and enable raw material quality certification has been conducted and completed. The farmers are now carrying out trails •Development of microcontroller based physics lab equipment. The Instrumentation Division continues to support E-Tech with microcontroller based development of the following E-tech equipment: Battery tester, Signal generators, and the grain moisture meter. •UIRI has extended technical support to Pamoja in the development and implementation of biomass gasification power generation technology in Uganda. This involved installation and launching of the Muduma biomass power plant. Energy Systems conducted a technical assessment visit to Muduma and prepared a technical assessments report in which recommended several improvements on the project. The department is currently working towards officially launching the Muduma power plant project and also supporting Pamoja in the implementation process of three 	

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<i>Vote, Vote Function Key Output</i>	Approved Budget and Planned outputs	Cumulative Expenditure and Performance	Status and Reasons for any Variation from Plans
		<p>other biomass power plants. Energy systems are also developing a new MOU between UIRI and Pamoja.</p> <ul style="list-style-type: none"> •The UIRI business incubation program has a portfolio of 43 incubatees in different enterprises producing various products and creating employment 	
<i>Performance Indicators:</i>			
No. of technologies deployed with incubatees	10	12	
No. of SME's created through incubation	40	44	
No. of industrial Incubatees taken on	5	6	
<i>Output Cost:</i>	US\$ Bn: 1.288	US\$ Bn: 0.959	% Budget Spent: 74.5%
Output: 065104	Model Value Addition Centre Establishment		
<i>Description of Performance:</i>	<p>The Institute will continue to carry out routine general and period civil works that need maintenance</p>	<p>Setting up value addition facilities by UIRI is in line with the GOU's strategy of encouraging mass industrialization at every resource abundant area. These units are to serve the country in the following ways:</p> <ol style="list-style-type: none"> 1. Demonstration of the benefits of value addition and hence widen awareness and interest in the public. 2. Act as hubs for knowledge and skills transfer. 3. In partnership with selected and capable private partners through business incubation develop and commercialize a range of value added products. 4. Create employment hence discourage rural-urban migration. 5. Work with Agricultural research institutions in developing and promoting crop varieties and animal breeds suitable for high value products. <p>IVaccine production Unit</p> <ul style="list-style-type: none"> •A Proposal for construction of Specified Pasogen Free Animal Facility is under way and the facility designs are at draft Stage Arua •Machinery for Arua Mango Juice processing plant were delivered, installed and 	<p>While the institute did not receive any release of funds for the development budget during Q4. Only critical maintenance works could be undertaken.</p>

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Vote, Vote Function Key Output	Approved Budget and Planned outputs	Cumulative Expenditure and Performance	Status and Reasons for any Variation from Plans
		<p>tested and the Processing Plant was successfully handed over to the incubatee to commence production.</p> <ul style="list-style-type: none"> •The specified step-down transformer capacity was acquired, installation works were supervised. Power was then connected power to the Main Distribution Box and to individual machines, tested and the works were also commissioned. <p>Mbarara winery</p> <ul style="list-style-type: none"> •Wine processing technology equipments from South Africa were delivered to Mbarara winery facility. Awaiting is installation, training and commissioning of the facility. •Construction works and installation of a complete functional processing plant at the Blueswan Tissue production plant; Namugongo is complete. However the facility awaits installation of a 3-Phase power Step-down transformer to commence operations •Designs and bills of quantities for a functional water bottling plant in Bushenyi are being prepared •Remodeling and reconstruction of complete safe habitable staff housing at Kabale Potato and Bamboo Plant is ongoing works include Demolitions, retaining wall, house construction, toilet facilities and others •Civil works for a complete functional juice processing plant at Luwero Kika are at procurement level •Civil works for Maziba Winery Project, Kabale are at procurement level 	
<i>Performance Indicators:</i>			
No. of products up-scaled and commercialized by the centres	20	16	
No. of model value addition centres established	5	6	

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<i>Vote, Vote Function Key Output</i>	Approved Budget and Planned outputs	Cumulative Expenditure and Performance	Status and Reasons for any Variation from Plans
No. of local raw materials developed and populated in the scientific databases	30	54	
<i>Output Cost:</i>	US\$ Bn: 0.463	US\$ Bn: 0.345	% Budget Spent: 74.5%
Output: 065105	Facility Repair and Maintenance		
<i>Description of Performance:</i>	Continued preventative / routine maintenance, upgrades of system and servicing of unplanned break downs. These include machinery equipment, of electrical system, water and drianage,cold rooms, air conditioners. Replacements and refabrication of parts.	Continued preventative / routine maintenance, upgrades of system and servicing of unplanned break downs. These include machinery equipment, electrical, water & drianage systems ,cold rooms, air conditioners. Replacements and refabrication of parts.	N/A
<i>Performance Indicators:</i>			
No. of technologies applied to reduce utility costs	20	22	
No. of on-site machines and equipment maintained	150	146	
No. of off-site pilot plants maintained	20	23	
<i>Output Cost:</i>	US\$ Bn: 0.325	US\$ Bn: 0.271	% Budget Spent: 83.3%
Vote Function Cost	US\$ Bn: 12.740	US\$ Bn: 10.843	% Budget Spent: 85.1%
Cost of Vote Services:	US\$ Bn: 12.740	US\$ Bn: 10.843	% Budget Spent: 85.1%

* Excluding Taxes and Arrears

The most successful emerging trend at Uganda Industrial Research Institute is the achievement and award of Regional Center of Excellence for R&D. UIRI has established strategies for sustaining UIRI as a Regional Center of Excellence as highlighted here below.

- To champion technical implementation of the regional industrialization policy.
- Take a lead role in initiation and coordination of collaborative R&D among Regional Technological Organizations (KIRDI, TIRDO, KIST etc)
- Initiate regional “technology platform” projects by coordinating preparation, submission, assessment and award of collaborative research proposals.
- Take a lead role in propagating its successful business incubator model to other academic and research institutions in the region
- Having successfully established a thriving Industrial Training Program (ITP), UIRI can take a lead in propagating its successful model to the region with the objective to uplift core industrial skills and competencies.
- Having successfully established a thriving Technology Development Center (TDC), UIRI can be a focal point for technology transfer and adaptation in the region. Efforts in this area can also include indigenous technology development.
- UIRI can extend to the region; it’s tried and tested approach for establishment of model value addition processing facilities at the source of raw materials
- UIRI can expand the scope of its existing Industry Resource Center (IRC) to cover the EAC region.
- UIRI’s already has state of the art industrial analytical chemistry, microbiology and biotechnology laboratories. With support of EAC these facilities can be strengthened through international accreditation.
- UIRI can spearhead human capacity development through training exchange programs for specialized skills aimed at strengthening technical and administrative capacity in areas where a particular RTO has more expertise.
- UIRI’s vaccine production facility can scale up and diversify its operations for the manufacture of a wide

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Planned Actions:	Actual Actions:	Reasons for Variation
<p>UIRI looks to strengthen its industrial incubation initiatives aimed at boosting specific industrial sectors for commercialization of competitive quality products developed by the Institute.</p>	<p>UIRI continues to support the establishment of model processing industries in line with agricultural zoning program. The Institute has so far established a fruit processing facility in Arua and Nabusanke, a Peanut processing facility in Lira, a Potato processing facility in Kabale, mushroom training and research center in Kabale, Vaccine Production Unit at UIRI. The institute aims to establish regional raw material oriented facilities. In addition the momentum of UIRI incubation's program aims to fast track the current situation of un-competitiveness nature of local industry.</p>	<p>With inconsistent and unpredictable budget releases each financial year it becomes difficult to implement planned activities and sustain smooth operations of the Institutes' programs. For instance in FY 2010/2011 the Institute experienced a shortfall of 1.8bn, FY 2011/2012 a shortfall of 1.5 and in FY 2012/13 another shortfall of 1.8bn rendering a halt to most development operations. If only the Institute was funded in accordance with the NDP projections of 21.3bn for 5 consecutive Financial Years focused at establishing Research and Development agenda for self-sustainability, UIRI would quickly achieve its commitment to deliver on its mandate.</p>
<p>Two of UIRI's staff are currently undertaking their PhD's in South Africa. Other staffs have had opportunity to train under the established platforms of collaboration. This highly trained resource will form adequate capacity to undertake appropriate R&D</p>	<p>The Institute is has focused to establish and foster a National Innovations System for proper and adequate exploitation of R&D outputs and promote emerging technological needs Following the award of EAC R&D center of excellence UIRI aims to Sensitize and create awareness on industrial development services offered in the areas of product formulation, processes and technology development aimed at promoting value added industries especially agro-industries and increase competitiveness of Ugandan products</p>	<p>With inconsistent and unpredictable budget releases each financial year it becomes difficult to implement planned activities and sustain smooth operations of the Institutes' programs. For instance in FY 2010/2011 the Institute experienced a shortfall of 1.8bn, FY 2011/2012 a shortfall of 1.4 and in FY 2012/13 another shortfall of 1.5bn rendering a halt to most development operations. If only the Institute was funded in accordance with the NDP projections of 21.3bn for 5 consecutive Financial Years focused at establishing Research and Development agenda for self-sustainability, UIRI would quickly achieve its commitment to deliver on its mandate.</p>

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Planned Actions:	Actual Actions:	Reasons for Variation
The Institute aims for fully functional facilities by the end of FY 2012/13. Awareness campaigns are being carried out to form farmer groups for sustainable supply of raw materials like specific species of potatoes, peanuts and fruits that are of interest	<p>Setting up value addition facilities by UIRI is in line with the GOU's strategy of encouraging mass industrialization at every resource abundant area. These units are to serve the country in the following ways:</p> <ol style="list-style-type: none"> 1.Demonstration of the benefits of value addition and hence widen awareness and interest in the public. 2.Act as hubs for knowledge and skills transfer. 3.In partnership with selected and capable private partners through business incubation develop and commercialize a range of value added products. 4.Create employment hence discourage rural-urban migration. 5.Work with Agricultural research institutions in developing and promoting crop varieties and animal breeds suitable for high value products and promoting crop varieties and animal breeds suitable for high value products. <p>The Institute remains committed to establish functional value addition centers</p>	<p>With inconsistent and unpredictable budget releases each financial year it becomes difficult to implement planned activities and sustain smooth operations of the Institutes' programs. For instance in FY 2010/2011 the Institute experienced a shortfall of 1.8bn, FY 2011/2012 a shortfall of 1.4 and in FY 2012/13 another shortfall of 1.5bn rendering a halt to most development operations.</p> <p>If only the Institute was funded in accordance with the NDP projections of 21.3bn for 5 consecutive Financial Years focused at establishing Research and Development agenda for self-sustainability, UIRI would quickly achieve its commitment to deliver on its mandate.</p>

V3: Details of Releases and Expenditure

This section provides a comprehensive summary of the outputs delivered by the Vote and further details of Vote expenditures by Vote Function and Expenditure Item.

Table V3.1: GoU Releases and Expenditure by Output*

Billion Uganda Shillings	Approved Budget	Released	Spent	% GoU Budget Released	% GoU Budget Spent	% GoU Releases Spent
VF:0651 Industrial Research	12.64	10.84	10.84	85.8%	85.8%	100.0%
<i>Class: Outputs Provided</i>	9.35	8.24	8.24	88.2%	88.2%	100.0%
065101 Administration	5.61	5.32	5.32	94.8%	94.8%	100.0%
065102 Research and Development	1.66	1.35	1.35	81.2%	81.2%	100.0%
065103 Industrial Incubation	1.29	0.96	0.96	74.5%	74.5%	100.0%
065104 Maintenance - Civil works	0.46	0.35	0.35	74.5%	74.5%	100.0%
065105 Maintenance - Machinery and Equipment	0.33	0.27	0.27	83.3%	83.3%	100.0%
<i>Class: Capital Purchases</i>	3.29	2.60	2.60	79.0%	79.0%	100.0%
065172 Government Buildings and Administrative Infrastructure	0.46	0.32	0.32	69.2%	69.2%	100.0%
065176 Purchase of Office and ICT Equipment, including Software	0.13	0.11	0.11	83.3%	83.3%	100.0%
065177 Purchase of Specialised Machinery & Equipment	2.71	2.18	2.18	80.5%	80.5%	100.0%
Total For Vote	12.64	10.84	10.84	85.8%	85.8%	100.0%

* Excluding Taxes and Arrears

Table V3.2: 2012/13 GoU Expenditure by Item

Billion Uganda Shillings	Approved Budget	Releases	Expend-iture	% Budget Released	% Budget Spent	% Releases Spent
<i>Output Class: Outputs Provided</i>	9.35	8.24	8.24	88.2%	88.2%	100.0%
211102 Contract Staff Salaries (Incl. Casuals, Temporary)	4.07	4.07	4.07	100.0%	100.0%	100.0%

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<i>Billion Uganda Shillings</i>	Approved Budget	Releases	Expenditure	% Budget Released	% Budget Spent	% Releases Spent
211103 Allowances	0.03	0.03	0.03	83.1%	83.1%	100.0%
212101 Social Security Contributions (NSSF)	0.41	0.41	0.41	100.0%	100.0%	100.0%
213001 Medical Expenses(To Employees)	0.20	0.20	0.20	100.0%	100.0%	100.0%
221001 Advertising and Public Relations	0.01	0.01	0.01	100.0%	100.0%	100.0%
221002 Workshops and Seminars	0.01	0.00	0.00	82.0%	82.0%	100.0%
221003 Staff Training	0.11	0.06	0.06	56.6%	56.6%	100.0%
221004 Recruitment Expenses	0.00	0.00	0.00	75.0%	75.0%	100.0%
221009 Welfare and Entertainment	0.06	0.05	0.05	77.2%	77.2%	100.0%
221011 Printing, Stationery, Photocopying and Binding	0.01	0.01	0.01	82.9%	82.9%	100.0%
221012 Small Office Equipment	0.03	0.01	0.01	25.0%	24.9%	99.8%
221017 Subscriptions	0.00	0.00	0.00	75.0%	75.0%	100.0%
222001 Telecommunications	0.07	0.05	0.05	76.1%	76.1%	100.0%
222002 Postage and Courier	0.00	0.00	0.00	75.0%	74.1%	98.7%
222003 Information and Communications Technology	0.11	0.09	0.09	85.1%	85.1%	100.0%
223001 Property Expenses	0.07	0.07	0.07	100.0%	100.0%	100.0%
223004 Guard and Security services	0.06	0.06	0.06	100.0%	100.0%	100.0%
223005 Electricity	0.25	0.23	0.23	90.4%	90.4%	100.0%
223006 Water	0.06	0.06	0.06	100.0%	100.0%	100.0%
224002 General Supply of Goods and Services	2.11	1.74	1.74	82.2%	82.2%	100.0%
226001 Insurances	0.11	0.06	0.06	55.6%	55.6%	100.0%
227001 Travel Inland	0.01	0.01	0.01	86.7%	86.7%	100.0%
227002 Travel Abroad	0.08	0.06	0.06	83.2%	83.2%	100.0%
227003 Carriage, Haulage, Freight and Transport Hire	0.01	0.01	0.01	75.0%	75.0%	100.0%
227004 Fuel, Lubricants and Oils	0.37	0.18	0.18	48.3%	48.3%	100.0%
228001 Maintenance - Civil	0.46	0.35	0.35	74.5%	74.5%	100.0%
228002 Maintenance - Vehicles	0.33	0.17	0.17	51.8%	51.8%	100.0%
228003 Maintenance Machinery, Equipment and Furniture	0.33	0.27	0.27	83.3%	83.3%	100.0%
Output Class: Capital Purchases	4.49	3.30	3.30	73.5%	73.5%	100.0%
231001 Non-Residential Buildings	0.46	0.32	0.32	69.2%	69.2%	100.0%
231005 Machinery and Equipment	2.83	2.28	2.28	80.6%	80.6%	100.0%
312206 Gross Tax	1.20	0.70	0.70	58.3%	58.3%	100.0%
Grand Total:	13.84	11.54	11.54	83.4%	83.4%	100.0%
Total Excluding Taxes and Arrears:	12.64	10.84	10.84	85.8%	85.8%	100.0%

Table V3.3: GoU Releases and Expenditure by Project and Programme*

<i>Billion Uganda Shillings</i>	Approved Budget	Released	Spent	% GoU Budget Released	% GoU Budget Spent	% GoU Releases Spent
VF:0651 Industrial Research	12.64	10.84	10.84	85.8%	85.8%	100.0%
<i>Recurrent Programmes</i>						
01 Headquarters	5.61	5.32	5.32	94.8%	94.8%	100.0%
<i>Development Projects</i>						
0430 Uganda Industrial Research Institute	7.03	5.53	5.53	78.6%	78.6%	100.0%
Total For Vote	12.64	10.84	10.84	85.8%	85.8%	100.0%

* Excluding Taxes and Arrears

Table V3.4: Donor Releases and Expenditure by Project and Programme*

Vote: 110 Uganda Industrial Research Institute

QUARTER 4: Cumulative Outputs and Expenditure by End of Quarter

Annual Planned Outputs and Cumulative Outputs Achieved by End of Quarter (Quantity and Location)	Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	UShs Thousand
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Vote Function: 0651 Industrial Research

Recurrent Programmes

Programme 01 Headquarters

Outputs Provided

Output: 06 5101 Administration

	Item	Spent
Annual Planned Outputs:		
- Recruit 30 New Employees	211102 Contract Staff Salaries (Incl. Casuals, Temporary)	4,068,916
- Pay off current staff salaries and benefits	211103 Allowances	25,587
- Insure Institute Assets Equipment, Vehicles, IT Servers and IT Equipment	212101 Social Security Contributions (NSSF)	406,948
- Clear Utility and property expenses	213001 Medical Expenses (To Employees)	195,000
- Enhance communication links	221001 Advertising and Public Relations	14,600
- Provide General Supplies	221002 Workshops and Seminars	4,100
- Meet obligations of Subscriptions and Professional Fees	221003 Staff Training	12,750
	221004 Recruitment Expenses	750
	221009 Welfare and Entertainment	48,200
	221011 Printing, Stationery, Photocopying and Binding	5,800
	221012 Small Office Equipment	6,984
	221017 Subscriptions	2,250
	222001 Telecommunications	52,500
	222002 Postage and Courier	1,481
	222003 Information and Communications Technology	30,971
	223001 Property Expenses	72,000
	223004 Guard and Security services	61,400
	223005 Electricity	105,541
	223006 Water	60,000
	226001 Insurances	12,500
	227001 Travel Inland	6,020
	227002 Travel Abroad	63,860
	227003 Carriage, Haulage, Freight and Transport Hire	7,500
	227004 Fuel, Lubricants and Oils	27,551
	228002 Maintenance - Vehicles	23,496
	Total	5,316,705
	Wage Recurrent	4,068,916
	Non Wage Recurrent	1,247,789
	NTR	0

Cumulative Outputs Achieved by the end of the Quarter:

Salaries for a total of 230 staff were paid. Institute Assets were insured. utility & property expenses were paid. Medical insurance cover was provided for every employee and their immediate family. Administrative services were rendered to the core departments of the Institute. Communication and general supplies were provided. Maintenance and professional services were paid for. Required logistics and administrative support was provided for the smooth operations of the Institute.

Reasons for Variation in performance

N/A

Development Projects

Project 0430 Uganda Industrial Research Institute

Capital Purchases

Output: 06 5172 Government Buildings and Administrative Infrastructure

	Item	Spent
Annual Planned Outputs:		
Civil works renovations and modifications to Ceramics lab facility	231001 Non-Residential Buildings	318,918
Upgrading of storm water channel along the northern boundary		
Construction of the northern Boundary wall		
Upgrading of access road to the Eastern gate		
Cumulative Outputs Achieved by the end of the Quarter:		
•Arua Fruit processing Facility civil works and installation of		

Vote: 110 Uganda Industrial Research Institute

QUARTER 4: Cumulative Outputs and Expenditure by End of Quarter

Annual Planned Outputs and Cumulative Outputs Achieved by End of Quarter (Quantity and Location)	Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	<i>UShs Thousand</i>
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Vote Function: 0651 Industrial Research

Development Projects

Project 0430 Uganda Industrial Research Institute

machinery and equipment processing lines were completed and handed over

- Northern boundary wall is under construction to enhance security at the Institute

- Designs and Bills of Quantities for Upgrade of storm water channel along the northern boundary are under way

Reasons for Variation in performance

Modification and reconstruction of the ceramic unit and a packaging center of excellence is on hold due to shortfall in budget release

Total	318,918
<i>GoU Development</i>	318,918
<i>External Financing</i>	0
<i>NTR</i>	0

Output: 06 5176 Purchase of Office and ICT Equipment, including Software

<i>Annual Planned Outputs:</i>	<i>Item</i>	<i>Spent</i>
ICT training & certification	231005 Machinery and Equipment	105,171
Procurement of ICT Back up system.		
Procurement and installation		
ICT Hardware and Software maintenance		
Internet hosting services		

Cumulative Outputs Achieved by the end of the Quarter:

- UIRI ICT Team is undertaking site planning, design of website structures, content development, uploading of content and site publishing for Ministry of Trade, Industry and Cooperatives (MTIC) Website

- UIRI Internet network has been extended to the pilot plants and non-networked areas. Necessary equipment were procured and wireless access point set up and configured for the non-networked areas

- ICT team continues to carry out monitoring and evaluation for maintenance and servicing of UIRI ICT equipment on a regular scheduled basis

- Re-tendering process is on-going for procurement of a CNC Router machine

- ICT training & certification is ongoing

- Procurement of ICT Back up system is ongoing.

- Procurement and installation ICT Hardware and Software maintenance is ongoing

- Internet hosting services for several entitles including but not limited to Vaccine, Uganda Petroleum Institute Kigumba, Speakers Forum, Mbarara University, Derekop and the Ministry of Trade Industry and Cooperatives websites

Reasons for Variation in performance

Most ICT activities remain pending due to short fall in Q4 release

Total	105,171
<i>GoU Development</i>	105,171
<i>External Financing</i>	0
<i>NTR</i>	0

Output: 06 5177 Purchase of Specialised Machinery & Equipment

Vote: 110 Uganda Industrial Research Institute

QUARTER 4: Cumulative Outputs and Expenditure by End of Quarter

Annual Planned Outputs and Cumulative Outputs Achieved by End of Quarter (Quantity and Location)	Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs
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US\$ Thousand

Vote Function: 0651 Industrial Research

Development Projects

Project 0430 Uganda Industrial Research Institute

Annual Planned Outputs:	<i>Item</i>	<i>Spent</i>
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	231005 Machinery and Equipment	2,178,500
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- Essential oils extraction /distillation equipments
- A flavor applicator for Potato project in Kabale
- A Biscuit production equipment line for Kabale
- A Savoury meat equipment for UIRI
- A range of different fruit juice pulpers for UIRI
- Procurement of bamboo strip polishing machine
- Fruits and Vegetables' machines and accessories
- Purchase of burger making machine
- Procurement of dairy equipment for one of the in-house Dairy incubatees
- Chill unit equipment for UIRI
- Bentonite Processing equipment
- Cosmetics and detergents technology
- Grains and animal feeds processing technology
- Refrigerated cool boxes
- Procurement of toothpick packaging machine,
- ICT hardware & software, ICT requirements, ICT network security systems, ICT utilities
- Establishment of Multi-purpose Engineering training lab, plumbing tools and equipment, energy Laboratory purchase of equipments for the initial phase of establishing Energy systems lab

Cumulative Outputs Achieved by the end of the Quarter:

Micro syringes
Hexane
Acetone
acetone
Ethanol
Filter funnels
Filter papers
TLC plates

Reasons for Variation in performance

The procurement processes are very lengthy and hence most items are received in Q3 and Q4. Others items procured in FY 2012/13 will be delivered in FY 2013/14

Total	2,178,500
<i>GoU Development</i>	2,178,500
<i>External Financing</i>	0
<i>NTR</i>	0

Outputs Provided

Output: 06 51 02 Research and Development

Annual Planned Outputs:	<i>Item</i>	<i>Spent</i>
To issue analytical testing certificates and reports for industrial products for chemical and microbiological quality to internal users (researchers) and external (private sector) users.	222003 Information and Communications Technology	58,342
To develop at least two new bamboo products.	223005 Electricity	120,833
To develop food processes/product quality and safety standards.	224002 General Supply of Goods and Services	1,122,460
To formulate 2 new dairy products, and carry our market tests.	226001 Insurances	45,833
To refine and adopt at least 2 dairy product technologies by SMEs		
To formulate 1 meat product		
To formulate 2 bakery products		
To develop 2 fruit and vegetable products		
To establish alternative energy laboratories		
To develop prototypes of a demo solar dryer, solar cooker, briquette		

Vote: 110 Uganda Industrial Research Institute

QUARTER 4: Cumulative Outputs and Expenditure by End of Quarter

Annual Planned Outputs and Cumulative Outputs Achieved by End of Quarter (Quantity and Location)	Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs <i>UShs Thousand</i>
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Vote Function: 0651 Industrial Research

Development Projects

Project 0430 Uganda Industrial Research Institute

machine, biogas plant and their accessories.
 To conduct capacity building and management of Energy Systems Unit
 To develop energy efficient lighting fixtures and electronic ballast
 To assess wind energy technology
 To design biogas production, purification, and compressed storage system
 To design wet Coffee processing technology
 To refine and upscale the poultry Hatchery
 To replicate food processing equipments
 To design of electronic applications
 To acquire phase 1 of Timber Kiln/Seasoning technology
 To develop and publish a Technology Catalogue of Food, Handmade paper, Ceramics and Other industrial products developed.

Cumulative Outputs Achieved by the end of the Quarter:

- The Essential Oil Pilot Project is on ground in Luweero. Five species of aromatic plants were established between 13th April and 15th April. The progress is very good.
- Successfully completed the formulation of fish and vegetable sausages
- Successfully completed the Formulation of five dairy products and further development of meat, bakery
- Completed bamboo safety processing and production procedures.
- Research experiment aimed at production of wine from passion fruit with aim of retaining the fruit flavor.Sixty (60) Liters of the first batch were filtered ready for consumer testing. Consumer sensory studies are underway
- Sustained a range of initiatives to support the first phase commercial pilot processing (market development) for the Fruit Processing Project, Nabusanke
 - i.A new product recipe (fruit juice cocktail) finalized ready for commercial trial production
 - ii.Preparation of requirements needed for the UNBS Certification
 - iii.Pilot production trials
 - iv.Re-inspection of the project plant by UNBS
- Commencement of the market development phase for products produced from Peanut Research & Processing Center, Lira
 - i.Launch of a product market testing exercise and awareness campaign
 - ii.Strengthening the groundnut farmer supply networks to meet projected production demands
 - iii.Completion of framework contracts for supply of consumables for market development
- Maintained provision of laboratory testing services for both internal and external clientsAnalyzed 187 samples for both chemical and microbiological parameters
- A study on scientific assessment of low cost road sealing using Geogrit Technology coordination of research with the research assistants from Makerere is ongoing.
- Neonatal and Maternal Healthcare collaborative project (Partners involved: College of Health Sciences, Makerere University and Oxford BioHorizons Ltd.)
 Development of in-house Biomedical engineering projects- Automated IV fluid delivery regulator, Biomedical Monitoring System and Baby thermometer/ make an assessment of available medical equipment at Mulago hospital and beyond for neonatal and maternal health and possibly publishing papers on the status/All this with the help of our partners Development of the three projects is ongoing successfully reached simulation and firmware design stage for all projects, prototyping is still pending financing /Rapport is ongoing with our partner on publishing papers on the status of medical equipment.
- Research and Development of Agriculture based projects.
 The Division has started laying the foundation for the development of

Vote: 110 Uganda Industrial Research Institute

QUARTER 4: Cumulative Outputs and Expenditure by End of Quarter

Annual Planned Outputs and Cumulative Outputs Achieved by End of Quarter (Quantity and Location)	Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs <i>US\$ Thousand</i>
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Vote Function: 0651 Industrial Research

Development Projects

Project 0430 Uganda Industrial Research Institute

intelligent agricultural solutions. The strategic plan has been launched with feasibility trips to Agricultural Research Institutes. The Division visited the National Agricultural Research Laboratory in Kawanda and also plans to visit the Animal Production Research Institute (NAARI) and Makerere University Agricultural Research Institute in Kabanyolo (MUARIK). We intend to engage our partners at NECTEC, NSTDA once we have outlined some key projects. On-going

•The instrumentation Unit is currently engaged with 10 projects:

- Interactive Traffic Light System,
- Automatic indoor/outdoor Lighting System,
- Keypad based door lock system,
- Solar Powered Egg incubator,
- Weighing Scale, automatic Voltage Regulator,
- Multi-purpose temperature control monitoring,
- Fingerprint and pin code based security access control system,
- Motion detection,
- The above Reverse Engineering projects will entile Design, simulate, prototype and real life testing of each of these projects.
- Hardware, Firmware design, simulation and prototyping is ongoing for these team oriented projects, Instrumentation team still awaiting arrival of much needed hardware to proceed to prototyping stage. Team members are working on firmware as hardware procurement issues are being verified (On-going)

•Fabrication of 3rd generation 50 Biochar stoves is almost complete. Designs, shearing, rolling, welding, testing of the units is under way.
•One complete wooden electrical cabinet was designed fabricated and fitted

•Development of energy efficient Eco stove that generates electricity:-
Conduction of a series of electrical analysis experimental tests on the eco stove prototype from the energy laboratory is on-going.
The Energy Systems division conducted three experimental tests from the TDC workshop. Currently a report that involves the necessary improvements on the prototype for a final market ready product and corresponding cost implication is being prepared.

•Proposed partnership program between UIRI's energy systems division and the waste management division of Kampala City Council Authority especially on the Integrated Solid Waste Management (ISWM) a project of KCCA is underway. A meeting held with KCCA concluded on the mode of collaboration between the two parties and the support that ESD would provide in the ISWM project UIRI currently developing an alternative waste management and utilization methods to suggest to KCCA.

•Submission of Samples for testing to Pan African Veterinary Center (PANVAC) for final testing to obtain market authorization is on-going
•Setup of 12 shops in the eastern region to promote sales during the market pilot is on going

•Contract for supply of items from Joint Medical Stores for the Vaccine Production Unit is now in Place

•A concept of comprehensive Business plans, financial plans, ICT business solutions, electronic ordering & inventory management systems for business efficiency and profitability, business management systems, computerized systems for business transaction tracking for the UIRI incubatees is being analyzed for development

•15 youth received training in cow horn processing from Kabale Youth Action plan

•Over 200 Business communities for Mukono, Kayunga and Buikwe were trained under a Collaboration with Uganda Investment Authority Presentation

•Internal Awareness Seminar: on 14th May 2013, The Instrumentation

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QUARTER 4: Cumulative Outputs and Expenditure by End of Quarter

Annual Planned Outputs and Cumulative Outputs Achieved by End of Quarter (Quantity and Location)	Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs <i>US\$ Thousand</i>
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Vote Function: 0651 Industrial Research

Development Projects

Project 0430 Uganda Industrial Research Institute

Division showcased its work to UIRI staff so that they have a better understanding of what they do, why they do it, and how it impacts the development of electronic manufacturing in the country/simple prototypes were exhibited to demonstrate the functionality of a microcontroller and its importance in an embedded system

•On 9th to 12th July, 2013 Two members of Kabale University staff to be trained in web server management and Administration.

•Over 100 people have trained in the various course modules coordinated by UIRI Business Development Center's ICT outreach and Arua Business development programs for trainers, small and micro enterprises

•UIRI has trained 378 people from SME's and the general public in introduction to computers and day today operational applications with an orientation to their applicability to business operations

•17th to 22nd June One ICT employee has attended CISSP(Certified Information Systems Security Professional) training aimed at gaining skills in information security governance, internet security, access control, operational security and software development security among others

•19th June-3rd July 2013 ICT Manger attended Advanced ICT Management at Galilee International Management Institute (GIMI), Israel; Trends and strategies for ICT management aimed at providing skills and knowledge in ICT management for better understanding and efficiency

•7 continuing students Under the Industrial Training and student capacity developmenta hands-on training from different universities Training to be done in Database management, Business Development and management programs at the BDC, web and mail servers, computer maintenance and support etc for a period of two months(June-August)Training in progress

Reasons for Variation in performance

The Institute suffered a shortfall of 1.8bn during Q4 and hence most R&D activities were halted. Some going concern development projects could only proceed. Payments for already awarded contracts remained outstanding.

Total	1,347,468
<i>GoU Development</i>	<i>1,347,468</i>
<i>External Financing</i>	<i>0</i>
<i>NTR</i>	<i>0</i>

Output: 06 5103 Industrial Incubation

<i>Annual Planned Outputs:</i>	<i>Item</i>	<i>Spent</i>
To establish Essential Oil Pilot Projects.	221003 Staff Training	50,395
To support start up value addition projects and extension of technical services to industrial enterprises. Commercialization of the UIRI bakery unit	224002 General Supply of Goods and Services	613,414
CEDARS (U) Ltd	227004 Fuel, Lubricants and Oils	150,053
To support Edu Creations	228002 Maintenance - Vehicles	145,351
Procure consumables for developing educational learning materials.		
To upscale bamboo plant production of toothpick and mats at the production lines in kabale and at UIRI		
Design bamboo Product labels		
support towards sustainability and training of virtual incubatees, Create awareness for bamboo production capacity (kisoro bamboo farmers)		
Monitoring and evaluation of virtual incubatees		
Support towards sustainability & improvement of virtual incubatees'		

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QUARTER 4: Cumulative Outputs and Expenditure by End of Quarter

Annual Planned Outputs and Cumulative Outputs Achieved by End of Quarter (Quantity and Location)	Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs <i>US\$ Thousand</i>
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Vote Function: 0651 Industrial Research

Development Projects

Project 0430 Uganda Industrial Research Institute

production capacity.
 Construction of a Small scale Dairy Processing Facility in Ntungamo
 To support Quality plus
 Royal Jubilee (U) Ltd (Mbale meat processing.)
 To support Gina Enterprises Kigumba.
 To support Kigezi maize millers
 Kamabale enterprizes
 Extend technical support for development of Blue Swan toiletries and detergent products
 Support to Nyakire mixed farm
 Lubumba seed/feed training centre

Cumulative Outputs Achieved by the end of the Quarter:

- Expansion on Institute Collaborations both locally and internationally to facilitate collaborative projects and resource/knowledge sharing
- Propagation of YOBA-YOBA a probiotic product containing live bacteria that are used in making yoghurt is ongoing with a number of incubates taking on starter cultures. Laboratory records and live cultures have also been stored and are continuously monitored.
- 5 species of aromatic plants were established at Adeke Farm Limited the anchor host of the Essential Oil Pilot Project. Several studies of plant management, plant performance while on a weed mat against the control, survival, and resistance rates to pests and diseases are under way.
- A technique for the analysis of Aflatoxin B1 in fermented cassava flour has been developed. A demand driven study by cassava processors in Arua district who require a small tool for analysis to demonstrate compliance to standards. The project is a continuous
- Technological Needs Assessment for Ntungamo and Mbarara (Karubunga dairy farm& Nyarubanga dairy farm) has been made and report completed.
- Following the completion of a pre-feasibility study aimed at Identifying needs from farmer groups in Lango and Acholi regions, to develop/acquire technologies to mechanize shelling and enable raw material quality certification has been conducted and completed. The farmers are now carrying out trails
- Development of microcontroller based physics lab equipment. The Instrumentation Division continues to support E-Tech with microcontroller based development of the following E-tech equipment: Battery tester, Signal generators, and the grain moisture meter.
- UIRI has extended technical support to Pamoja in the development and implementation of biomass gasification power generation technology in Uganda. This involved installation and launching of the Muduma biomass power plant. Energy Systems conducted a technical assessment visit to Muduma and prepared a technical assessments report in which recommended several improvements on the project. The department is currently working towards officially launching the Muduma power plant project and also supporting Pamoja in the implementation process of three other biomass power plants. Energy systems are also developing a new MOU between UIRI and Pamoja. •The UIRI business incubation program has a portfolio of 43 incubatees in different enterprises producing various products and creating employment

Reasons for Variation in performance

The Institute suffered a shortfall of 1.8bn during Q4 and hence most business incubation programs were halted. Some going concern development projects could only proceed. Payments for already awarded contracts remained outstanding

Vote: 110 Uganda Industrial Research Institute

QUARTER 4: Cumulative Outputs and Expenditure by End of Quarter

Annual Planned Outputs and Cumulative Outputs Achieved by End of Quarter (Quantity and Location)	Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	<i>US\$ Thousand</i>
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Vote Function: 0651 Industrial Research

Development Projects

Project 0430 Uganda Industrial Research Institute

Total	959,213
<i>GoU Development</i>	959,213
<i>External Financing</i>	0
<i>NTR</i>	0

Output: 06 51 04 Maintenance - Civil works

<i>Annual Planned Outputs:</i>	<i>Item</i>	<i>Spent</i>
	228001 Maintenance - Civil	345,440
Upgrading of storm water channel along the northern boundary		
Construction of Northern Boundary wall		
Upgrading of access road to the Eastern gate		
Upgrading of water pipeline-phase 2		
Pump house repair		
Waste water treatment Maintenance materials		
Maintenance of engineering shops		
Maintenance of electrical, water and compressed air utility machinery and equipment		
AC installation in TDC and Administration offices		
Remodelling Instrumentation and PCB labs		
Repair works at the bamboo plant (UIRI)		
Construction of bamboo storage shed		
Extension of the Meat Pilot plant		
Routine Pilot plant repairs		
Office space expansion		
Pilot plant cleaning materials		
Civil works renovations and modifications to Ceramics lab facility		
Civil works renovations and modifications to Chemistry Lab		
To pay retention fees for concluded contracts whose retention period has passed,		

Cumulative Outputs Achieved by the end of the Quarter:

Vaccine production Unit

•A Proposal for construction of Specified Pasogen Free Animal Facility is under way and the facility designs are at draft Stage Arua

•Machinery for Arua Mango Juice processing plant were delivered, installed and tested and the Processing Plant was successfully handed over to the incubatee to commence production.

•The specified step-down transformer capacity was acquired, installation works were supervised. Power was then connected power to the Main Distribution Box and to individual machines, tested and the works were also commissioned.

Mbarara winery

•Wine processing technology equipments from South Africa were delivered to Mbarara winery facility. Awaiting is installation, training and commissioning of the facility.

•Construction works and installation of a complete functional processing plant at the Blueswan Tissue production plant; Namugongois complete. However the facility awaits installation of a 3-Phase power Step-down transformer to commence operations

•Designs and bills of quantities for a functional water bottling plant in Bushenyi are being prepared

•Remodeling and reconstruction of complete safe habitable staff housing at Kabale Potato and Bamboo Plantis ongoing works include Demolitions, retaining wall, house construction, toilet facilities and others

•Civil works for a complete functional juice processing plantat

Vote: 110 Uganda Industrial Research Institute

QUARTER 4: Cumulative Outputs and Expenditure by End of Quarter

Annual Planned Outputs and Cumulative Outputs Achieved by End of Quarter (Quantity and Location)	Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs	<i>US\$ Thousand</i>
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Vote Function: 0651 Industrial Research

Development Projects

Project 0430 Uganda Industrial Research Institute

Luwero Kika are at procurement level

•Civil works for Maziba Winery Project, Kabale are at procurement level

Reasons for Variation in performance

With a shortfall of 1.8bn during Q4 several establishment programs were halted. Payments for already awarded contracts remain outstanding

Total	345,440
<i>GoU Development</i>	345,440
<i>External Financing</i>	0
<i>NTR</i>	0

Output: 06 5105 Maintenance - Machinery and Equipment

Annual Planned Outputs:

Maintenance and repair of pilot plant machinery and equipment

Automation of cooling tower and supported cold-rooms

To maintain machinery and equipment of On-site pilot plants, Off-site pilot plants, analytical laboratories, engineering workshops, carpentry shop, foundry shop, textile shop, welding & fabrication shop, machining shop, electrical shop

Installation of 8 New air conditioners in newly created offices,

Maintenance plumbing facilities -Assorted units like toilets, sinks and taps

Maintenance electronic and electric facilities -Assorted units for lighting and power control systems

Item

228003 Maintenance Machinery, Equipment and Furniture

Spent

271,133

Cumulative Outputs Achieved by the end of the Quarter:

•Completion of acquisition of a service and maintenance provider for the high- tech laboratory instruments in order to expand the range of services offered.

•Refurbishment of the Mbale Meat Processing Plant is complete

•Routine civil works maintenance for UIRI pilot plants is ongoing

•Roof finishes, wall finishes, painting to improve the outlook of the northern UIRI side is at procurement level

•Repairs works at Bamboo plant , UIRIPartitioning works with MDF boards and repairs to windowsPartitioning works will reduce dust from the bamboo section getting into the weaving section.Requisition at procurement

•Refurbishment of UIRI meat processing Plant including remodeling, introduction of new footbath, drainage channel, replacing of internal and external doors to enable the plants attain UNBS inspection standards is ongoing

•Internal Painting of Dairy, Bakery, Meat Plants and external selected buildings are under way aimed at improved sanitary conditions in preparation for attaining UNBS inspection standards.

•Proposed supply and Installation of wood cabinets in Vaccine Laboratory is underway

•Installation of wooden cabinets to create more storage space for consumables in the microbiology was completed

•UIRI ICT Team is undertaking site planning, design of website structures, content development, uploading of content and site publishing for Ministry of Trade, Industry and Cooperatives (MTIC) Website

•Annual Equipment Calibration Service Contract for the Vaccine Production Unit equipments is now place with Mainlabs c.c. from South Africa

•Procurement of Recertification of Air Handling Unit for the Vaccine

Vote: 110 Uganda Industrial Research Institute

QUARTER 4: Cumulative Outputs and Expenditure by End of Quarter

Annual Planned Outputs and Cumulative Outputs Achieved by End of Quarter (Quantity and Location)	Cumulative Expenditures made by the End of the Quarter to Deliver Cumulative Outputs <i>UShs Thousand</i>
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Vote Function: 0651 Industrial Research

Development Projects

Project 0430 Uganda Industrial Research Institute

Production Unit is on going

Micro biology section

•One working table for the micro biology laboratory was fabricated and completed

Dairy section

•Construction of changing room for dairy section staffhas been completed and handed over

•The engineering maintenance team undertook a survey to rectify power problems at Lira Peanut Research Centre and Nabusanke Fruit Juice Plant.

•All Institute pilot plants are running in order and are fully functional as routine preventive general maintenance and autonomous maintenance of the pilot plants is carried out on a regular scheduled basis.

•UIRI Internet network has been extended to the pilot plants and non-networked areas. Necessary equipment were procured and wireless access point set up and configured for the non-networked areas

•ICT team continues to carry out monitoring and evaluation for maintenance and servicing of UIRI ICT equipment on a regular scheduled basis

Reasons for Variation in performance

Most maintenance works are on hold due to 1.8bn release shortfall

Total	271,133
<i>GoU Development</i>	271,133
<i>External Financing</i>	0
<i>NTR</i>	0
<hr/>	
GRAND TOTAL	10,842,549
<i>Wage Recurrent</i>	4,068,916
<i>Non Wage Recurrent</i>	1,247,789
<i>GoU Development</i>	5,525,844
<i>External Financing</i>	0
<i>NTR</i>	0

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QUARTER 4: Outputs and Expenditure in Quarter

Planned and Actual Outputs in Quarter (Quantity and Location)	Expenditures incurred in the Quarter to deliver outputs <i>US\$ Thousand</i>
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Vote Function: 0651 Industrial Research

Recurrent Programmes

Programme 01 Headquarters

Outputs Provided

Output: 06 5101 Administration

	<i>Item</i>	<i>Spent</i>
Outputs Planned in Quarter:		
- Recruit 5 New Employees as per departmental requirements,	211102 Contract Staff Salaries (Incl. Casuals, Temporary)	260,386
- Pay off current staff salaries and benefits	211103 Allowances	8
- Insure Institute Assets Equipment, Vehicles, IT Servers and IT Equipment	212101 Social Security Contributions (NSSF)	101,771
- Clear Utility and property expenses	213001 Medical Expenses (To Employees)	32,500
- Enhance communication links	221001 Advertising and Public Relations	3,433
- Provide General Supplies	221002 Workshops and Seminars	0
- Meet obligations of Subscriptions and Professional Fees	221003 Staff Training	0
	221004 Recruitment Expenses	750
	221009 Welfare and Entertainment	186
	221011 Printing, Stationery, Photocopying and Binding	839
	221012 Small Office Equipment	84
	221017 Subscriptions	175
	222001 Telecommunications	0
	222002 Postage and Courier	0
	222003 Information and Communications Technology	4,200
	223001 Property Expenses	19,150
	223004 Guard and Security services	0
	223005 Electricity	0
	223006 Water	0
	226001 Insurances	783
	227001 Travel Inland	906
	227002 Travel Abroad	247
	227003 Carriage, Haulage, Freight and Transport Hire	0
	227004 Fuel, Lubricants and Oils	0
	228002 Maintenance - Vehicles	50
	Total	425,468
	Wage Recurrent	260,386
	Non Wage Recurrent	165,083
	NTR	0
Actual Outputs Achieved in Quarter:		
No employees were recruited. 2 staff exited. Salaries for 230 staff were paid. Asset insurances, utility & property expenses were paid. Medical insurance cover was provided for every employee and their immediate family. Administrative services were rendered to the core departments of the Institute. Communication and general supplies were provided. Maintenance and professional services were paid for. Required logistics and administrative support was provided for the smooth operations of the Institute.		
Reasons for Variation in performance		
N/A		

Development Projects

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Capital Purchases

Output: 06 5172 Government Buildings and Administrative Infrastructure

	<i>Item</i>	<i>Spent</i>
Outputs Planned in Quarter:		
Modification and reconstruction of the ceramic unit and a packaging center of excellence	231001 Non-Residential Buildings	83,753
Actual Outputs Achieved in Quarter:		
• Arua Fruit processing Facility civil works and installation of machinery and equipment processing lines were completed and		

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QUARTER 4: Outputs and Expenditure in Quarter

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handed over

- Northern boundary wall is under construction to enhance security at the Institute

- Designs and Bills of Quantities for Upgrade of storm water channel along the northern boundary are under way

Reasons for Variation in performance

Modification and reconstruction of the ceramic unit and a packaging center of excellence is on hold due to shortfall in budget release

Total	83,753
<i>GoU Development</i>	83,753
<i>External Financing</i>	0
<i>NTR</i>	0

Output: 06 5176 Purchase of Office and ICT Equipment, including Software

<i>Outputs Planned in Quarter:</i>	<i>Item</i>	<i>Spent</i>
ICT training & certification	231005 Machinery and Equipment	5,739
Procurement of ICT Back up system.		
Procurement and installation		
ICT Hardware and Software maintenance		
Internet hosting services		

Actual Outputs Achieved in Quarter:

- UIRI ICT Team is undertaking site planning, design of website structures, content development, uploading of content and site publishing for Ministry of Trade, Industry and Cooperatives (MTIC) Website

- UIRI Internet network has been extended to the pilot plants and non-networked areas. Necessary equipment were procured and wireless access point set up and configured for the non-networked areas

- ICT team continues to carry out monitoring and evaluation for maintenance and servicing of UIRI ICT equipment on a regular scheduled basis

- Re-tendering process is on-going for procurement of a CNC Router machine

- ICT training & certification is ongoing

- Procurement of ICT Back up system is ongoing.

- Procurement and installation ICT Hardware and Software maintenance is ongoing

- Internet hosting services for several entitles including but not limited to Vaccine, Uganda Petroleum Institute Kigumba, Speakers Forum, Mbarara University, Derekop and the Ministry of Trade Industry and Cooperatives websites

Reasons for Variation in performance

Most ICT activities remain pending due to short fall in Q4 release

Total	5,739
<i>GoU Development</i>	5,739
<i>External Financing</i>	0
<i>NTR</i>	0

Output: 06 5177 Purchase of Specialised Machinery & Equipment

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	<i>Item</i>	<i>Spent</i>
Outputs Planned in Quarter:	231005 Machinery and Equipment	8,195

-Key machinery & equipment for CAD/CAM, UIRI Campus.

-One Formica pilot line introduced, UIRI Campus

-Briquett press - One pilot line introduced, UIRI Campus.

-One renewable energy technologies introduced , UIRI Campus

-Chemistry lab reequipped at UIRI - final phase

-One microbiology lab at UIRI equipped - phase II

-One Fruit pulp extraction center set upcountry

-One Ceramics Tile Machinery production set at UIRI

Actual Outputs Achieved in Quarter:

The Essential Oil Pilot Project received

The Agri-weave

An analytical balance

Digital weighing scale

Heavy duty flatbed trolley

Refrigerator

Laboratory stands and Clamps(full set)

Thermometer

Portable Top loading autoclave

Conical separating funnels

Measuring cylinder

Glass beakers

Erlenmeyer Conical flasks

Oil storage Drums Spec: 25 L white, UN approved, code Y1-4,

Fluorinated, 60mm caps, Price: R50/25L drum. They are also available in 5L and 1L.

Screw neck vials

Screw neck vials

For Gas chromatography sample preparation

Micro syringes

Hexane

Acetone

acetone

Ethanol

Filter funnels

Filter papers

TLC plates

The distillation equipment will arrive on 28th August 2013

Engineering Department receive the following tools and equipments

R8 Round collets Metric

R8BC 3mm Collet

R8BC 6mm Collet

R8BC 8mm Collet

R8BC 10mm Collet

R8BC 11mm Collet

R8BC 12mm Collet

R8BC 14mm Collet

R8BC 16mm Collet

R8BC 20mm Collet

R8 Round collets Standard

R8BC 1/4"mm COLLET

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R8BC 3/8"mm COLLET

R8BC 1/2"mm COLLET

R8BC 5/8"mm COLLET

R8BC 3/4"mm COLLET

R8BC 7/8"mm COLLET

R8 Sidelock adaptors

Shank R8 and bore SL20

Shank R8 and bore SL25

Shank R8 bore MT1

Shank R8 bore MT2

Shank R8 bore MT3

5- C collets

5-C Collet. 1.0mm

5-C Collet. 3.0mm

5-C Collet. 5.0mm

5-C Collet. 7.0mm

5-C Collet. 9.0mm

5-C Collet. 11.0mm

5-C Collet. 13.0mm

5-C Collet. 15.0mm

5-C Collet. 17.0mm

5-C Collet. 19.0mm

5-C Collet. 21.0mm

5-C Collet. 23.0mm

Angle Collet Fixture. (Vertical and Horizontal).

Versatile drill Press vise made from high grade cast iron for large work load capacity with hardened V groove jaws. Vertical & horizontal V-grooved jaws for firmly holding work materials flat, round and irregular shapes with rapid acting nut. Jaw opening 75mm, jaw width 95mm and jaw depth 35mm. With swivel base height 42mm

Angle Lock & Positive Locking vise with movable jaws and hardened vise bed and jaw plates recommended for milling and grinding. Vise size 6inch jaw width 6 inch and max. jaw opening 8.8 inch

Angle Lock & Positive Locking vise with movable jaws and hardened vise bed and jaw plates recommended for milling and grinding. Vise size 5 inch jaw width 5 inch and max. jaw opening 4.25 inch

Quick Change Tool holder.

WCD 35x 150.

WCJ 40 x 160

WCD 32 x 150.

Steel Clamping fixtures T-slot set 58 piece metric milling

Table slot nuts M14 size 16x25x18mm

Engineers stud M14x75x35mm

Engineers stud M14x100x35mm

Engineers stud M14x125x35mm

Engineers stud M14x150x35mm

Engineers stud M14x175x35mm

Engineers stud M14x200x35mm

Step clamps LxWxH mm (64x28x12)

Step clamps LxWxH mm (100x32x19)

Step clamps LxWxH mm (150x32x22)

Extension nuts M14 x42mm long

Flange nuts M14 x21mm long

Step block height 28mm adjustment range 20-38

Step block height 35mm adjustment range 28-64

Step block height 98mm adjustment range 64-152

Total

Steel Clamping fixtures T-slot set 58 piece metric drilling

Table slot nuts

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M16 size 20x25x20mm
 Engineers stud M16x75x35mm
 Engineers stud M16x100x35mm
 Engineers stud M16x125x35mm
 Engineers stud M16x150x35mm
 Engineers stud M16x175x35mm
 Engineers stud M16x200x35mm
 Step clamps LxWxHmm (64x31x12)
 Step clamps LxWxHmm (100x38x20)
 Step clamps LxWxHmm (150x38x22)
 Extension nuts M16 x48mm long
 Flange nuts M16x24mm long
 Step block height 28mm adjustment range 20-38
 Step block height 35mm adjustment range 28-64
 Step block height 98mm adjustment range 64-152
 Total
 Workshop Vee Blocks pair of closed ironcasting accurately machined
 with precision 90 deg. Dimensions LxWxH (100x40x65mm)
 Workshop Vee Blocks pair 125x50x78mm
 Ball bearing super chuck heavy duty drill with mount 3JT and
 capacity 1 -13mm with chuck key
 R8 x 3JT Drill chuck arbor with overall length 145mm
 Hydraulic sheet Bending machine has 800mm
 knives (male dies)
 100mm knives (male dies required)
 200mm knives (male dies required)
 300mm knives (male dies required)
 Shell end milling arbors
 16mm. MT3
 22mm. MT3
 16mm. MT4.
 22mm MT4.
 Tapping chuck complete with wooden case for drill bits with shanks
 of 5,6,7,10mm and dies of diameter 16,20,25,&30mm
 HSS Metric keyway broaches sets
 Keyway 2x2x130mm bushings for bore diameters 6,8 &10mm
 Keyway 3x3x130mm bushing for bore diameters 6,8 &10mm
 Keyway 5x5x150mm bushing for bore diameters 12,14,15 &16mm
 Keyway 6x6x300mm bushing for bore diameters 18,19,20&22mm
 Keyway 8x7x300mm bushing for bore diameters 25,26,28&30mm
 Keyway 10x8x330mm bushing for bore diameters 32,34,35, 36mm
 Keyway 12x8x330mm bushing for bore diameters38,40,42,44mm
 Centre Drills, see sizes below:
 4mm
 5mm
 6.3mm
 8mm
 10mm
 12.5mm
 16.0mm
 Side milling cutters 3 sided cutting edge bore 22mm teeth 14 diam.66
 Thickness 4mm
 Thickness 5mm
 Thickness 6mm
 Thickness 8mm
 Thickness 10mm
 Thickness 12mm
 Radius profile cutters convex with bore 22mm
 Radius 2.5mm, diam. 63 thickness 5mm
 Radius 3mm, diam.63mm thickness 6mm

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Radius 4mm, diam. 63mm thickness 8mm
 Radius 5mm, diam.63mm thickness 10mm
 Radius 6mm, diam.80mm thickness 12mm
 Radius 8mm, diam. 80mm thickness 16mm and bore 27mm
 Radius 10mm, diam.100mm thickness 20 and bore 32mm
 End mills HSS
 DIN 1835 B (3,4,5,6,8,10,12,14,18,20)
 DIN 844 B (3,4,5,6,8,10,12,14,18,20)
 Reducing sleeves MT/MT for milling(2/1,3/2, 4/1,4/2,5/2,5/4,3/4)
 Extension sleeves for horizontal mill (2/3, 3-4, 4/5)
 Swivel rotary table For graduated and indirect division from 2 to 66
 and all divisions from 68 to 132 dividable by 2, 3, and 5, Table
 diameter 300 mm Face concentricity, parallelism and base of work
 table set up <= 0.02 Setup table with 3600 scale, worm gear ratio 90:1,
 Hand wheel can be replaced with indexing table Maximum height
 255mm
 Ring and profile bender Machine type KP8-48 - Tools required
 Specialised rollers B dimensions UNP 80 min. bend 800mm Diam.
 Specialised rollers B dimensions UNP 80 min. bend 1200mm Diam.
 Specialised rollers B dimensions 60x2.9 3/8"x2 min. bend 1200mm
 Specialised rollers B dimesions 60x2 15x1 min bend 1000mm diam.
 Specialised rollers B dimensions 45x45x3
 Specialised rollers B dimensions 60x30x3
 Profile cutting machine, Type HPS 55/110D KNUTH
 Tools required (standard male diameter female diameter) Male and
 female punches 10mm, 12mm, 16mm, 18mm, 20mm,22mm, 24mm
 26mm, 28mm, 30mm, 32mm
 Standard duty revolving centers
 Manufactured of high alloy steel hardened and tempered, precision
 ground and bearings fitted and centers have 60 deg point
 Morse tapper No. 2 maximum runout 0.005mm, max rpm 7000
 Morse tapper No. 3 maximum runout 0.005mm, max rpm 6000
 Morse tapper No. 4 maximum runout 0.005mm, max rpm 5000
 morse tapper No. 5 maximum runout 0.005 mm, max rpm 4000
 Morse tapper No. 6 maximum runout 0.010mm, max rpm 4000
 Standard duty interchangeable revolving center set manufactured of
 high quality steel alloy, precision ground with a versatile revolving
 center
 Morse taper No. 2 length 124mm diameter 33mm
 Morse taper No. 3 length 152mm diameter 42mm
 Interchangeable point
 70 deg cone x30mm diam
 60 deg point x6mm diam.
 60 deg point x7.5mm diam.
 60 deg point x12.7mm diam
 60 deg internal x5.5 mm diam
 Drift key
 50 piece Metric socket set: sockets
 8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,30,32, 33,
 36mm. Screwdriver bits crosspoint No.2 No.3 No.4 Hex.
 4,5,6,7,8,10,12, 14,17, &19mm, screw driver bits 9 and 14mm Spark
 plug sockets M10 & M14 Must have a knurl feature to help in grip
 manufactured of chrome vanadium and fully chrome plated. The 12
 point bi-hexagon side drive design to give high torque With accessory
 replacement quick release ratchet sliding T-handle, swivel handle,
 universal joint 75,125 &250mm extension bars robust fitted case with
 security lock and cushion grip handle
 Double flaring tool and pipe cutting set: Flaring tool for 3/16", 1/4",
 5/16", 3/8", 7/16", 1/2" & 5/8" steel, copper and aluminium pipes.
 Cutter for 1/8" to 1 1/4" outside diameter pipe in robust moulded

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casing
 Flaring tool set single and double
 for pipe sizes 3/16", 1/4", 5/16", 3/8", & 1/2" 4.75,6,8,10 & 12mm
 Heavy duty wrenches drop and forged
 Length 200mm
 length300mm
 length 450mm
 length 600mm
 90 piece engineers workshop tool kit: 24 piece 1/2" drive metric socket set 6 piece 16cm cut 2 assorted needle file set 10x12" x1/2" x18tpi hacksaw blades 8"/200mm chrome vanadium adjustable spanner 12" rule wallet metric /inch feeler gauge 60mm blade length 16 oz black rubber mallet wood shaft 11/2lb ball pen hammer 5m/16ft locking tape rule 8seg, 18mm heavy duty snapoff blade knife DIY hacksaw 2x50mm G clamps 2x100 mm G clamps 6" snipe nose pliers/side cutter 8" straight blade tin snip 6" diagonal cutting nipper 7" linesman pliers 10" multiple slip joint pliers 10" straight jaw high strength grip wrench multi function pliers 16 function 10 blade tool 12 piece fluted handle screwdriver set 14 piece 6-19mm drop forged combination spanner set
 Telescopic gauge set measures true size holes, slots and recess from 8mm -152mm Plunger on gauge expands in hole to measure locks, constant spring tension for uniform feel, rigid handle with self centering feature, satin chrome finish supplied in a fitted case and contact ends hardened and radius ground. Number of pieces 6 preferably Mitutoyo brand
 Digital test indicator with bi-directional constant clockwise rotation, automatic reversal, three dovetail mountings, two dovetail extensions and two extra points. Measuring reading 0-25-0mm
 Dial gauge holder with magnetic base, universal swivel clamp hold 8, 6mm and length of bottom arm 110mm and top arm 101mm
 Rockwell Hardness Tester
 With automatic weight selection for Rockwell A, B & C scales Able to test hardness of all metals and alloys of flat, cylindrical and irregular shapes. Maximum opening 60mm Specifications: Full load 60,100,150kg; preset load 10kg; Throat depth 133 and Base size 184x457mm
 Mandatory Accessories One 146mm Testing anvil ; one 56mm testing anvil ; one 56mm testing anvil with V groove120deg. Diamond penetrator, 1.6mm steel ball 1 Rockwell A test block; 1 Rockwell B test block; 3 Rockwell C test blocks; 2 screw drivers and one instruction manual English
 Steel gauge Blocks, for workshop use. 88pce set. Comprising: (1) - 1.0005mm, (9) - 1.001 - 1.009mm, (49) - 1.01 - 1.49mm,(20) - .5 - 10mm & (29) - 20 - 100mm.
 Parallel Indicator 40x63x40, 8 micro
 Variable speed mill 3 Axis with DRO
 Table size: 228x1245mm Table travel: long 838mm, knee travel (vertical) 400mm Quill travel: 127mm, Ram travel: 315mm, spindle motor 2.2kW Quill power feed: 0.04,0.08, 0.15mm/rev, spindle speeds 70-4200 variable speed. Spindle to table: min 0mm Max. 415mm Spindle to column: Min 170mm, max. 485mm Spindle taper : R8 Standard accessories: Power feed to quill- three parts, servo type longitudinal, cross and vertical feed and rapid. One short lubrication, coolant system, electrically interlocked spindle and low volt machine light.
 Startup tooling Package:
 13 piece collet set R8
 Drill chuck and arbor
 Boring head set

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QUARTER 4: Outputs and Expenditure in Quarter

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precision machine vise on swivel base
 52 pieces block and clamping
 8 piece end mill holder set
 6 piece dial caliper
 10 inch rotary table
 Pedestrial grinders double ended 300mm diameter wheels
 Grinding wheel Diameter 300x50mm by 75mm bore motor power 2.2kW 415V 50Hz, speed 1450rpm stand for grinder 500x600x750mm
 Angle die pneumatic grinder kit 60 pcs throttle at the top of the grinder, 28,000rpm, 1/4" air inlet, 3/8" hose 1/4" collet with rear exhaust with a
 Kit consists of:
 gearless die grinder, 5-3" abrasive pads, 5-3" sanding discs, 5-2" abrassive pads, 5-2" sanding discs, 5-1/8" assorted stones, 5-1/4" assorted stones, 1-1/8" collet inserts, 2" and 3" backing pads, 2 collet wrenches, hose adapter, blow moulded case, (1) 1/4" shank x3/4" diameter, (1) 1/4" shankx 1" diameter, (1) 1/8" shankx3/8" diameter, (1) 1/8" shank x 1/2" diameter 16 belts for sanding 4 pcs for each size drum
 Angle grinder 175mm surface grinder disc type grinder wheel 180mm, torque 11Nm, idle revolution 8,500rpm, output power 1,400W spindle thread M14
 Small Angle grinder 100mm surface grinder disc type grinder wheel 180mm, torque 11Nm, idle revolution 10,000rpm, output power 1,400W spindle thread M14
 Snap ring pliers set
 For internal and external snap rings, made of heavy gauge tempered steel include: Four (4) straight pliers (0.09", 0.07", 0.047" and 0.038" tips) Four (4) 90 deg. pliers (0.09", 0.07", 0.047" and 0.038" tips)
 One straight tip stick one 90 deg. tip pick in a blow moulded plastic storage bag
 52 Pc snap rings assortment for repair purposes comes with a case , material carbon spring size range #8-1 1/2" both internal and external snap rings
 Electric 14" abrassive cut-off saws No load speed 4,000rpm, cutting capacity 125mm round, adjustable fence tool free 45deg. For fast and accurate cuts without using wrench arbour hole size 25mm voltage 240V 15amps motor
 Precision jointer
 Power input 600W, output 335W and no load speed 1000rpm, cutter diameter 100mm
 Fence adjustment 0-90deg. LxH (320x150mm)
 Knife grinder (planner blade sharpener
 Knife length 640mm grinding diam.
 255mmx16mmx25.4mm(ODxTxHole), lapping diam. 100mmx50mm x15.55mm, wheel speed 1400rpm 50Hz, feed speed 5.3m/min, grinding 0.75kW, lapping 0.2kW, pump 60W, coolant tank 11ltr
 Nailer
 Magazine angle 15 deg. Nail length 1945mm
 Nail diam. Range 2.9-3.8mm, magazine capacity 120 nails, energy at 6.9bar 70Nm Operating pressure 4.8-8.3 bar, air consumption per shot 6.9bar
 Combination air Nailer /stapler kit
 Uses nails 15-50mmlong Staples 13-40mm in length Nails: head-2mm ,Length: 15-50mm, Gauge: 18 gauge Staples:-crown 5.7mm,width:1.25mm, length:13-40mm,Gauge:18gauge,operating air pressure 60-100si(4-7bar),safe working pressure:120psi(8.3bar),minimum hose1.D,Air inlet:1/4 "BSP size 3/8 "Weight (nailer/stapler only):1.45kg
 Nailer attachment and nails for the machines Industrial standard high

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flow fastener

High flow flexible connector for improved nailermaneuverability 15 meter hose 5meter coil hose

Air pressure

Power 1.5 HP, Air displacement 190/min Free air delivery @ 6 Bar

120/min Max pressure 9 Bar, Pump speed 2850rpm

Tank volume 151

Router dove tail jigs

8mm shank dovetail and straight cutters (¼ GB) Guide

bushes,3baseadaptors Sanding Disc table 438x156mm, Pitch 25.4mm

Percussion drill

chuck capacity 1.5-13mm power input 650 watts, max torque 325watts

Type hilt no load speed 0-1100/0-2600rpm Max drilling capacity

(wood) 40/25mm

Small angle grinder 1500w-125mm variable speed Length x height

315x 90mm Weight 2.1kg, Max. disc diameter 125mm No. load speed

2800-10000 rpm Spindle thread M14

Bench disk sander

Disc size 305mm

Sanding Disc table 438x156mm

Table tilt 0-45degree

Disc speed 1400rpm weight 30kg

Variable speed plunge router

Power input 2000watts Power output 1400watts Max cutter diameter

50mm Length x height 290x295, Weight 5.1kg Plunge

stroke/movement 80mm No. load speed 8000-20000rpm

Spray gun

Operating pressure 22-60psi(1.5-4bars)

Air consumption 5.3 -14.0cfm

Nozzle 1.5mm, pot capacity 1 ltr,

Belt sander

Power put /input 800/360 Max. belt speed 427/min Belt size

75x140mm Length 280mm

Wood working vices: Opening/Jaw width 9''

Portable table saw

Blade bore 30mm

Power input 200watts Power output 1300watts Blade speed 3800rpm

Blade diameter 250mm Blade bore 30mm

Bevel capacity 45 degree Max.ripping capacity 90degree 77mm

Max.depth of cut at 45degree 57mm

Table size 700x577mm

Quick grip bar

Capacity from 150mm-450mm Spread range 216-420 & 216-570

Sash clamps

Capacity 600mm

Capacity 910mm Capacity1220mm Capacity 1670mm

T-handle clamps

Capacity 160mm-600mm Throat depth 80-110mm

Dust collector

Blower wheel diam.9 ½ '' Bag diametre14''

Motor 1Hp,1ph,115/230v Weight 88Lbs Air flow @ 4 Collector bag

capacity 2.1 (cu.Ft) Sound rating @ 3 Diameter of horse connection 4''

Dowel milling machine

Range of work diameter: 6 to 18mm

Range of work length: 240mm~unlimited

Drive motor: 1HP

Feed speed: 6 m/min

Standard accessories: cutter head set, guide tube, blades

Rubber pads /disk holder, Size: 75mm dia

Sanding pads

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Size: 75mm dia.
 Sand paper grade: no.100,120,80
 Corner clamps
 Max.clamping: 70x70mm.
 Jaw depth: 36mm.
 slot width :10mm
 Drill bits (twisted) HS
 Diameter: 1mm-25mm.
 Flute length: 37-75mm
 Fostener bits (sets of 15pcs)
 Dia.10mm,-50mm.
 length: 90mm
 Mitre saw
 Max.cutting width clamped at 45°: 115mm.
 Max.cutting width clamped at 90°: 125mm.
 Max.cutting height: 100mm
 Blade width: 45mm.
 Blade length: 550mm
 Table length :400mm
 Blower
 Max.air flow: 10.1m/min.
 Cubic capacity: 24.5cc.
 Engine: 4 stroke OHV.
 Mortise chisels (sets) Blade width range from: 6mm-38mm
 Paring chisels (sets) Blade width range from: 6mm-38mm
 Firmer chisels (sets) Blade width range from: 6mm-38mm
 Turning chisels (sets of 8pcs)
 Blade length: 125mm.
 Handle Length: 250mm.
 Bowl gouge with 127mm blade.
 Roughing gouge with 25mm blade.
 Oval skew with 25mm blade.
 Spindle gouge with 10mm blade.
 parting tool with 5.5mm
 Round nose with: 25mm
 Screw drivers set
 Set content parallel : 1.4, 2.0, 2.4, 3.0mm
 Set content cross point: PHO-3, PHO-2,
 Carpenters tool box (complete)
 complete with screw driver set
 hammers
 tape measures
 marking knife
 Marking gauge
 try square
 Claw hammers
 Head size: 16oz, /20oz.
 Length : 325mm
 Adjustable spanners
 Length: 6", 8", 10", 12".
 Jaw opening: 23mm-32mm
 Allen keys/hex keys Size: 1.5mm-8mm.
 length: 45mm-110mm
 Belt sander
 Max. Length emery belt: 430mm.
 Width of emery belt: 100mm
 Jig saw
 Voltage: 230V.
 Weight 2.8kg.
 Power input: 650w.

Vote: 110 Uganda Industrial Research Institute

QUARTER 4: Outputs and Expenditure in Quarter

Planned and Actual Outputs in Quarter (Quantity and Location)	Expenditures incurred in the Quarter to deliver outputs <i>UShs Thousand</i>
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Vote Function: 0651 Industrial Research

Development Projects

Project 0430 Uganda Industrial Research Institute

Max cut: wood 85mm
 Jack plane
 No.5.
 length 355mm.
 weight:3.2kg.
 Make: record.
 Blade width: 50mm.
 Body: grained iron body, tungsten, vanadium steel cutting iron, ABC
 handle for comfort
 Smoothing plane
 No.4
 length 245mm.
 weight:1.7kg
 Make: record.
 Blade width: 50mm.
 Body: grained iron body, tungsten, vanadium steel cutting iron, ABC
 handle for comfort
 Carpenters bench vice. Openings: 250mm.
 Weight: 16kg.
 Jaw width:230mm
 Sliding bevels
 Head size: 190-230mm.
 weight:1-2kg
 Speed clamps
 Capacity:100mm,throat depth:56mm
 Hole saw kit
 Dia.30mm-60mm
 Router bits (set of 12pcs) Two flute core box:12.7ØX6.3mm radius
 Two flute cove bit: 22mmØx6.3mm radius with ball bearing guide.
 Two flute dovetail bit:12.7mm dia x14°side cutting angle
 Two flute chamfering bit: 32mm dia x45°side cutting angle with ball
 bearing.
 Two flute flush trimming bit:12.7mm with ball bearing guide
 Two flute with straight template bit: 16mm dia.
 Two flute beading bit: 22mmØ x6.3radius with ball bearing guide.
 Two flute straight trimming bit: 12mm dia.
 Two flute straight trimming bit: 6mm dia
 Two flute rounding over bit: 28.6mm dia x9.5mm radius with ball
 bearing guide.
 Two flute V grooving bit:12.7mm dia x90° inclusive cutting angle
 Two flute roman ogee bit: 25.4mm dia x14.5mm

 Flat bits (Blue groove flat bit) a set of 8pcs
 Cutting dia.9mm-32mm
 overall length :160-170mm
 Band saw blades
 super flex back
 30m/100ft
 Tooth regular raker
 blade thickness 0.032”

 Pinchers
 bonded vinyl handle,
 Double polished head,
 Joint with induction hardened cutting edges
 Overall length :150-200mm
 Sanding discs
 305mm diameter.
 Grade no:80,120 &60
 Ratchet screw driver(supplied with bits)

Vote: 110 Uganda Industrial Research Institute

QUARTER 4: Outputs and Expenditure in Quarter

Planned and Actual Outputs in Quarter (Quantity and Location)	Expenditures incurred in the Quarter to deliver outputs <i>UShs Thousand</i>
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Vote Function: 0651 Industrial Research

Development Projects

Project 0430 Uganda Industrial Research Institute

Length:300mm/440mm/620mm

Portable Table saw

Power input:

2000watts.power

Output: 1300watts.

Blade speed: 3800rpm.

Blade dia: 250mm.

Bevel capacity: 45°.table *size: 700x577mm.max.

Depth of cut at 90°:77mm

Fret saw blade

22 TPI

Length 130mm

Ratchet brace

Ebonized hardwood head and handle; nickel plated; springless alligator jaws, Sweep 12"

G-clamps

Capacity: 25mm 50mm/75mm/100mm/150mm

Throat depth:40mm,52mm,82mm,100mm

Screw driver bit

Hardness 58-62HRC

High alloy chrome steel

cross point (star) & flat

overall length:25mm-50mm

Double ended

weight :5g-15g

Hacksaw frame & blade set of 10,

250-300mm hack

Multi-Functional Dovetail Jig fixture

Router bits

Circular saw blades

Multi-purpose lathe motor

Mortiser tools

Surface planer Machine blades

Pedestal grinder wheels

Machine Drill Bench vice

Machine Bench vice

90 piece Engineers workshop tool kit

Grease gun

Oil cans

Cutting and grinding discs

122 pc Service Engineers Tool kit

The vaccine department received a 10kVA UPS and Pulse HealthCare

Limited. Other items under procurement include an Incubator,

Purchase of Safety Equipment and Tool boxes and specialized

Electronic Components for the Instrumentation Department

Reasons for Variation in performance

The procurement processes are very lengthy and hence most items are received in Q3 and Q4. Others items procured in FY 2012/13 will be delivered in FY 2013/14

Total	8,195
<i>GoU Development</i>	8,195
<i>External Financing</i>	0
<i>NTR</i>	0

Outputs Provided

Output: 06 51 02 Research and Development

Vote: 110 Uganda Industrial Research Institute

QUARTER 4: Outputs and Expenditure in Quarter

Planned and Actual Outputs in Quarter (Quantity and Location)	Expenditures incurred in the Quarter to deliver outputs <i>UShs Thousand</i>
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Vote Function: 0651 Industrial Research

Development Projects

Project 0430 Uganda Industrial Research Institute

<i>Outputs Planned in Quarter:</i>	<i>Item</i>	<i>Spent</i>
To replicate and deploy one unit of avocado and cassava grating machine.	222003 Information and Communications Technology	0
To replicate and deploy one unit of fiber extractor. To develop two Metal Production machinery. To produce five thousand products from recycled materials and fibers. To source production materials for Arua, Lira, Nabusanke, and Kabale projects. To carry out twenty microbial analyses.	223005 Electricity	0
To develop and pilot five ceramic products. To characterize fifty samples and validate one analytical chemical method. To continue with production, commercialization and awareness campaigns of the Newcastle Disease Vaccines produced by UIRI vaccine unit. To continue with research and development for the improvement of fish and vegetable sausages. Formulation of five dairy products and further development of meat, bakery and bamboo safety processing and production procedures.	224002 General Supply of Goods and Services	46
	226001 Insurances	10,223

Actual Outputs Achieved in Quarter:

- The Essential Oil Pilot Project is on ground in Luweero. Five species of aromatic plants were established between 13th April and 15th April. The progress is very good.
 - Successfully completed the formulation of fish and vegetable sausages
 - Successfully completed the Formulation of five dairy products and further development of meat, bakery
 - Completed bamboo safety processing and production procedures.
 - Research experiment aimed at production of wine from passion fruit with aim of retaining the fruit flavor.Sixty (60) Liters of the first batch were filtered ready for consumer testing. Consumer sensory studies are underway
 - Sustained a range of initiatives to support the first phase commercial pilot processing (market development) for the Fruit Processing Project, Nabusanke
 - i.A new product recipe (fruit juice cocktail) finalized ready for commercial trial production
 - ii.Preparation of requirements needed for the UNBS Certification
 - iii.Pilot production trials
 - iv.Re-inspection of the project plant by UNBS
 - Commencement of the market development phase for products produced from Peanut Research & Processing Center, Lira
 - i.Launch of a product market testing exercise and awareness campaign
 - ii.Strengthening the groundnut farmer supply networks to meet projected production demands
 - iii.Completion of framework contracts for supply of consumables for market development
 - Maintained provision of laboratory testing services for both internal and external clientsAnalyzed 187 samples for both chemical and microbiological parameters
 - A study on scientific assessment of low cost road sealing using Geogrit Technology coordination of research with the research assistants from Makerere is ongoing.
 - Neonatal and Maternal Healthcare collaborative project (Partners involved: College of Health Sciences, Makerere University and Oxford BioHorizons Ltd.)
- Development of in-house Biomedical engineering projects- Automated IV fluid delivery regulator, Biomedical Monitoring System and Baby thermometer/ make an assessment of available medical equipment at Mulago hospital and beyond for neonatal and maternal health and possibly publishing papers on the status/All this with the help of our partners Development of the three projects is ongoing successfully reached simulation and firmware design stage for all projects, prototyping is still pending financing /Rapport is ongoing with our

Vote: 110 Uganda Industrial Research Institute

QUARTER 4: Outputs and Expenditure in Quarter

Planned and Actual Outputs in Quarter (Quantity and Location)	Expenditures incurred in the Quarter to deliver outputs <i>UShs Thousand</i>
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Vote Function: 0651 Industrial Research

Development Projects

Project 0430 Uganda Industrial Research Institute

partner on publishing papers on the status of medical equipment.

- Research and Development of Agriculture based projects.

The Division has started laying the foundation for the development of intelligent agricultural solutions. The strategic plan has been launched with feasibility trips to Agricultural Research Institutes. The Division visited the National Agricultural Research Laboratory in Kawanda and also plans to visit the Animal Production Research Institute (NAARI) and Makerere University Agricultural Research Institute in Kabanyolo (MUARIK). We intend to engage our partners at NECTEC, NSTDA once we have outlined some key projects. On-going

- The instrumentation Unit is currently engaged with 10 projects:

- Interactive Traffic Light System,

- Automatic indoor/outdoor Lighting System,

- Keypad based door lock system,

- Solar Powered Egg incubator,

- Weighing Scale, automatic Voltage Regulator,

- Multi-purpose temperature control monitoring,

- Fingerprint and pin code based security access control system,

- Motion detection,

- The above Reverse Engineering projects will entile Design, simulate, prototype and real life testing of each of these projects.

- Hardware, Firmware design, simulation and prototyping is ongoing for these team oriented projects, Instrumentation team still awaiting arrival of much needed hardware to proceed to prototyping stage. Team members are working on firmware as hardware procurement issues are being verified (On-going)

- Fabrication of 3rd generation 50 Biochar stoves is almost complete. Designs, shearing, rolling, welding, testing of the units is under way.

- One complete wooden electrical cabinet was designed fabricated and fitted

- Development of energy efficient Eco stove that generates electricity:- Conduction of a series of electrical analysis experimental tests on the eco stove prototype from the energy laboratory is on-going.

The Energy Systems division conducted three experimental tests from the TDC workshop. Currently a report that involves the necessary improvements on the prototype for a final market ready product and corresponding cost implication is being prepared.

- Proposed partnership program between UIRI's energy systems division and the waste management division of Kampala City Council Authority especially on the Integrated Solid Waste Management (ISWM) a project of KCCA is underway. A meeting held with KCCA concluded on the mode of collaboration between the two parties and the support that ESD would provide in the ISWM project UIRI currently developing an alternative waste management and utilization methods to suggest to KCCA.

- Submission of Samples for testing to Pan African Veterinary Center (PANVAC) for final testing to obtain market authorization is on-going

- Setup of 12 shops in the eastern region to promote sales during the market pilot is on going

- Contract for supply of items from Joint Medical Stores for the Vaccine Production Unit is now in Place

- A concept of comprehensive Business plans, financial plans, ICT business solutions, electronic ordering & inventory management systems for business efficiency and profitability, business management systems, computerized systems for business transaction tracking for the UIRI incubatees is being analyzed for development

- 15 youth received training in cow horn processing from Kabale Youth Action plan

Vote: 110 Uganda Industrial Research Institute

QUARTER 4: Outputs and Expenditure in Quarter

Planned and Actual Outputs in Quarter (Quantity and Location)	Expenditures incurred in the Quarter to deliver outputs <i>UShs Thousand</i>
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Vote Function: 0651 Industrial Research

Development Projects

Project 0430 Uganda Industrial Research Institute

- Over 200 Business communities for Mukono, Kayunga and Buikwe were trained under a Collaboration with Uganda Investment Authority Presentation
- Internal Awareness Seminar: on 14th May 2013, The Instrumentation Division showcased its work to UIRI staff so that they have a better understanding of what they do, why they do it, and how it impacts the development of electronic manufacturing in the country/simple prototypes were exhibited to demonstrate the functionality of a microcontroller and its importance in an embedded system
- On 9th to 12th July, 2013 Two members of Kabale University staff to be trained in web server management and Administration.
- Over 100 people have trained in the various course modules coordinated by UIRI Business Development Center's ICT outreach and Arua Business development programs for trainers, small and micro enterprises
- UIRI has trained 378 people from SME's and the general public in introduction to computers and day today operational applications with an orientation to their applicability to business operations
- 17th to 22nd June One ICT employee has attended CISSP(Certified Information Systems Security Professional) training aimed at gaining skills in information security governance, internet security, access control, operational security and software development security among others
- 19th June-3rd July 2013 ICT Manger attended Advanced ICT Management at Galilee International Management Institute (GIMI), Israel; Trends and strategies for ICT management aimed at providing skills and knowledge in ICT management for better understanding and efficiency
- 7 continuing students Under the Industrial Training and student capacity developmenta hands-on training from different universities Training to be done in Database management, Business Development and management programs at the BDC, web and mail servers, computer maintenance and support etc for a period of two months(June-August)Training in progress

Reasons for Variation in performance

The Institute suffered a shortfall of 1.8bn during Q4 and hence most R&D activities were halted. Some going concern development projects could only proceed. Payments for already awarded contracts remained outstanding.

Total	10,269
<i>GoU Development</i>	<i>10,269</i>
<i>External Financing</i>	<i>0</i>
<i>NTR</i>	<i>0</i>

Output: 06 51 03 Industrial Incubation

<i>Outputs Planned in Quarter:</i>	<i>Item</i>	<i>Spent</i>
-Monitoring and evaluation of virtual incubatees	221003 Staff Training	0
-Consumables for the bamboo plant	224002 General Supply of Goods and Services	1,629
-Support towards sustainability & improvement of virtual incubatees' production capacity	227004 Fuel, Lubricants and Oils	0
-value addition and technology transfer projects under the office of the President flagship projects	228002 Maintenance - Vehicles	4,590

Actual Outputs Achieved in Quarter:

- Expansion on Institute Collaborations both locally and

Vote: 110 Uganda Industrial Research Institute

QUARTER 4: Outputs and Expenditure in Quarter

Planned and Actual Outputs in Quarter (Quantity and Location)	Expenditures incurred in the Quarter to deliver outputs <i>UShs Thousand</i>
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Vote Function: 0651 Industrial Research

Development Projects

Project 0430 Uganda Industrial Research Institute

internationally to facilitate collaborative projects and resource/knowledge sharing

- Propagation of YOBA-YOBA a probiotic product containing live bacteria that are used in making yoghurt is ongoing with a number of incubates taking on starter cultures. Laboratory records and live cultures have also been stored and are continuously monitored.

- 5 species of aromatic plants were established at Adeke Farm Limited the anchor host of the Essential Oil Pilot Project. Several studies of plant management, plant performance while on a weed mat against the control, survival, and resistance rates to pests and diseases are under way.

- A technique for the analysis of Aflatoxin B1 in fermented cassava flour has been developed. A demand driven study by cassava

processors in Arua district who require a small tool for analysis to demonstrate compliance to standards. The project is a continuous

- Technological Needs Assessment for Ntugamo and Mbarara (Karubunga dairy farm & Nyarubanga dairy farm) has been made and report completed.

- Following the completion of a pre-feasibility study aimed at Identifying needs from farmer groups in Lango and Acholi regions, to develop/acquire technologies to mechanize shelling and enable raw material quality certification has been conducted and completed. The farmers are now carrying out trials

- Development of microcontroller based physics lab equipment. The Instrumentation Division continues to support E-Tech with microcontroller based development of the following E-tech equipment: Battery tester, Signal generators, and the grain moisture meter.

- UIRI has extended technical support to Pamoja in the development and implementation of biomass gasification power generation technology in Uganda. This involved installation and launching of the Muduma biomass power plant. Energy Systems conducted a technical assessment visit to Muduma and prepared a technical assessments report in which recommended several improvements on the project. The department is currently working towards officially launching the Muduma power plant project and also supporting Pamoja in the implementation process of three other biomass power plants. Energy systems are also developing a new MOU between UIRI and Pamoja. • The UIRI business incubation program has a portfolio of 43 incubatees in different enterprises producing various products and creating employment

Reasons for Variation in performance

The Institute suffered a shortfall of 1.8bn during Q4 and hence most business incubation programs were halted. Some going concern development projects could only proceed. Payments for already awarded contracts remained outstanding

Total	6,219
<i>GoU Development</i>	6,219
<i>External Financing</i>	0
<i>NTR</i>	0

Output: 06 5104 Maintenance - Civil works

Vote: 110 Uganda Industrial Research Institute

QUARTER 4: Outputs and Expenditure in Quarter

Planned and Actual Outputs in Quarter (Quantity and Location)	Expenditures incurred in the Quarter to deliver outputs <i>UShs Thousand</i>
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Vote Function: 0651 Industrial Research

Development Projects

Project 0430 Uganda Industrial Research Institute

<i>Outputs Planned in Quarter:</i>	<i>Item</i>	<i>Spent</i>
-Pilot plant repairs	228001 Maintenance - Civil	15,937
-Retention amount for previous works		
-General and minor repairs of small civil works and repairs to some of the water installations that may not be foreseen as of now		
Construction of Food Packaging Center and Renovation of Ceramics pilot plant		

Actual Outputs Achieved in Quarter:

Vaccine production Unit

•A Proposal for construction of Specified Pasogen Free Animal Facility is under way and the facility designs are at draft Stage Arua

•Machinery for Arua Mango Juice processing plant were delivered, installed and tested and the Processing Plant was successfully handed over to the incubatee to commence production.

•The specified step-down transformer capacity was acquired, installation works were supervised. Power was then connected power to the Main Distribution Box and to individual machines, tested and the works were also commissioned.

Mbarara winery

•Wine processing technology equipments from South Africa were delivered to Mbarara winery facility. Awaiting is installation, training and commissioning of the facility.

•Construction works and installation of a complete functional processing plant at the Blueswan Tissue production plant; Namugongois complete. However the facility awaits installation of a 3-Phase power Step-down transformer to commence operations

•Designs and bills of quantities for a functional water bottling plant in Bushenyi are being prepared

•Remodeling and reconstruction of complete safe habitable staff housing at Kabale Potato and Bamboo Plantis ongoing works include Demolitions, retaining wall, house construction, toilet facilities and others

•Civil works for a complete functional juice processing plant at Luwero Kika are at procurement level

•Civil works for Maziba Winery Project, Kabale are at procurement level

Reasons for Variation in performance

With a shortfall of 1.8bn during Q4 several esblishment programs were halted. Payments for already awarded contracts remain outstanding

Total	15,937
<i>GoU Development</i>	15,937
<i>External Financing</i>	0
<i>NTR</i>	0

Output: 06 5105 Maintenance - Machinery and Equipment

<i>Outputs Planned in Quarter:</i>	<i>Item</i>	<i>Spent</i>
-On-Site Pilot Plants- Maintenance of paper plant, meat plant, dairy plant, bakery plant, fruits & vegetables plants, ceramics plant, bamboo plants & on-site incubator facilities	228003 Maintenance Machinery, Equipment and Furniture	15,369
-Off-Site Pilot Plants-Maintenance of equipment in Kabale, Busia, Nabusanke, Arua, Lira		
-Analytical Laboratories- Maintenance of Microbiology, chemistry,		

Vote: 110 Uganda Industrial Research Institute

QUARTER 4: Outputs and Expenditure in Quarter

Planned and Actual Outputs in Quarter (Quantity and Location)	Expenditures incurred in the Quarter to deliver outputs <i>UShs Thousand</i>
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Vote Function: 0651 Industrial Research

Development Projects

Project 0430 Uganda Industrial Research Institute

biotechnology & vaccine facilities

- Engineering Workshops-Maintenance of carpentry shop, foundry shop, textile shop, welding & fabrication shop, machining shop, electrical shop
- Overhauling of water system Phase II of overhauling the water system at UIRI Campus

Actual Outputs Achieved in Quarter:

- Completion of acquisition of a service and maintenance provider for the high- tech laboratory instruments in order to expand the range of services offered.
- Refurbishment of the Mbale Meat Processing Plant is complete
- Routine civil works maintenance for UIRI pilot plants is ongoing
- Roof finishes, wall finishes, painting to improve the outlook of the northern UIRI side is at procurement level
- Repairs works at Bamboo plant , UIRIPartitioning works with MDF boards and repairs to windowsPartitioning works will reduce dust from the bamboo section getting into the weaving section.Requisition at procurement
- Refurbishment of UIRI meat processing Plant including remodeling, introduction of new footbath, drainage channel, replacing of internal and external doors to enable the plants attain UNBS inspection standards is ongoing
- Internal Painting of Dairy, Bakery, Meat Plants and external selected buildings are under way aimed at improved sanitary conditions in preparation for attaining UNBS inspection standards.
- Proposed supply and Installation of wood cabinets in Vaccine Laboratory is underway
- Installation of wooden cabinets to create more storage space for consumables in the microbiology was completed
- UIRI ICT Team is undertaking site planning, design of website structures, content development, uploading of content and site publishing for Ministry of Trade, Industry and Cooperatives (MTIC) Website
- Annual Equipment Calibration Service Contract for the Vaccine Production Unit equipments is now place with Mainlabs c.c. from South Africa
- Procurement of Recertification of Air Handling Unit for the Vaccine Production Unit is on going
- Micro biology section
- One working table for the micro biology laboratory was fabricated and completed
- Dairy section
- Construction of changing room for dairy section staffhas been completed and handed over
- The engineering maintenance team undertook a survey to rectify power problems at Lira Peanut Research Centre and Nabusanke Fruit Juice Plant.
- All Institute pilot plants are running in order and are fully functional as routine preventive general maintenance and autonomous maintenance of the pilot plants is carried out on a regular scheduled basis.
- UIRI Internet network has been extended to the pilot plants and non-networked areas. Necessary equipment were procured and wireless access point set up and configured for the non-networked areas
- ICT team continues to carry out monitoring and evaluation for maintenance and servicing of UIRI ICT equipment on a regular scheduled basis

Reasons for Variation in performance

Most maintenance works are on hold due to 1.8bn release shortfall

Vote: 110 Uganda Industrial Research Institute

QUARTER 4: Outputs and Expenditure in Quarter

Planned and Actual Outputs in Quarter (Quantity and Location)	Expenditures incurred in the Quarter to deliver outputs <i>UShs Thousand</i>
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Vote Function: 0651 Industrial Research

Development Projects

Project 0430 Uganda Industrial Research Institute

	Total	15,369
	<i>GoU Development</i>	<i>15,369</i>
	<i>External Financing</i>	<i>0</i>
	<i>NTR</i>	<i>0</i>
	GRAND TOTAL	570,948
	<i>Wage Recurrent</i>	<i>260,386</i>
	<i>Non Wage Recurrent</i>	<i>165,083</i>
	<i>GoU Development</i>	<i>145,480</i>
	<i>External Financing</i>	<i>0</i>
	<i>NTR</i>	<i>0</i>

Vote: 110 Uganda Industrial Research Institute

Checklist for OBT Submissions made during QUARTER 1 of following FY

This is an automated checklist which shows whether data has been entered into the areas which are required for a complete quarterly submission. It does not verify the quality of the data that has been entered. A complete checklist is therefore a necessary, but not sufficient condition for a satisfactory submission to MoFPED.

Project and Programme Quarterly Performance Reports and Workplans (Step 2)

The table below shows whether output information, and where relevant donor and ntr data has been entered into the required areas for the quarterly performance reports and quarterly workplans under step 2.

Output Information

Vote Function, Project and Program	Q4 Report
0651 Industrial Research	
○ <i>Recurrent Programmes</i>	
- 01 Headquarters	Data In
○ <i>Development Projects</i>	
- 0430 Uganda Industrial Research Institute	Data In

Donor Releases and Expenditure

NTR Releases and Expenditure

Vote Function, Project and Program	Q4 Report
0651 Industrial Research	
○ <i>Recurrent Programmes</i>	
- 01 Headquarters	Data In

Vote Performance Summary (Step 3)

The table below shows whether information has been entered into the required fields in the vote performance summary tables for each vote functions under step 3.1:

Vote Function	Perf. Indicators	Output Summary	Actions
0651 Industrial Research	Data In	Data In	Data In

The table below shows whether data has been entered in the fields for key variances in budget execution under step 3.2:

The table below shows whether data has been entered into the vote narrative fields under step 3.3:

	Narrative
Narrative	Data In