INSIDE: FOOD SAFETY



BULLETIN

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ABOUT UNBS

- 1. A member of International Standardisation Organisation(ISO)
- 2. Associate member of the International Electrotechnical Commission
- 3. National Enquiry Point for Technical Barriers to Trade(TBT) and Sanitary and Phytosanitary (SPS) measures. Agreements of World Trade Organisation(WTO) and secretariat to the National **TBT/SPS** Committee
- 4. Codex Alimentarius Commission Contact Point and Secretariate to the National Codex Committee
- 5. International Accredited laboratories by South African National Accreditation System. to offer ISO 90019(Quality Management System) and ISO 22000(Food Safety Management System)
- 6. A member of African Organisation for Standardisation(ARSO)
- 7. A member of International Organization of Legal Metrology (OIML)
- 8. A member of The International Bureau of Weights and Measures
- 9. Coordinator for the East African Community(EAC) SQMT activitie



IN THIS ISSUE OF

THE STANDARDS

UNBS and other

stakeholders in

BULLETIN, We update

you on the efforts by

addressing standards

practices along the

requirements and safety

global food supply chain.

elcome to yet another issue of our Quarterly newsletter where we share with you a number of developments that transpired in the standards arena in the last segment of the financial year.

Uganda National Bureau of Standards (UNBS) has put in place the basic quality infrastructure to support enterprise productivity through provision of Training and Advisory Services to build their capacity to implement quality standards and facilitate access to markets, which are currently, dependant on the safety and quality of the products.

In this issue of the Standards Bulletin, We update you on the efforts by UNBS and other stakeholders in addressing standards requirements and safety practices along the global food supply chain. This year's World Food Safety day run under the theme; "Safe food now for a healthy tomorrow."

When it comes to food safety, we all win or lose. This is because everyone is a key player in the Food supply chain either as a producer, processor, transporter,

distributor, and retailer or most importantly as a consumer.

At every point in the chain, there are hazards that can cause contamination and everyone involved at the various stages has a responsibility to keep the food safe.

On 20th May 2021, Uganda through UNBS joined the rest of the World to commemorate the World Metrology Day under the theme"Measurement for Health". To mark the day, UNBS demonstrated how equipment calibration and verification is conducted to ensure accuracy of medical equipment in different parts of the country. Accurate measurement results are key in timely and correct treatment and therefore has direct effect on the safety and health of patients especially during this period of the COVID-19 pandemic.

As the standards watchdog, we reaffirm our commitment to offer quality services with a view of protecting the public against consequences of faulty measurements and substandard products and ensuring that the quality of Ugandan products is a guarantee for both domestic consumption and export.

For comments or feedback, email; info@unbs.go.ug.

Sylvia Kirabo Head, Public Relations and Marketing

Executive Director's Foreword

With a fast-growing economy, a burgeoning middle class and complex supply chains, Uganda also faces a growing array of food safety challenges. Despite the industry's best efforts, food related recalls have become regular occurrences in food chains across the country and within the regional markets. More than half of all foodborne outbreaks in the country are associated with poor food handling. Food safety involves efforts and compliance with procedures that are put in place to ensure that food is safe, from farm to fork. These efforts include ethical safety steps in handling, preparation and storage. Of major importance are the environment and personal hygiene, pest control, removal of waste, and cleaning programmes to minimize the risk of foodborne diseases along the food value chain.

In Uganda, and all over the world, governments continue to pass laws and regulations to prevent unethical practices that could support the spread of foodborne illnesses from unsafe food production. That's why standards for identifying, preventing, controlling and monitoring foodborne pathogens and microbial parasites are clearly needed to help achieve acceptable quality assurance in the food industry and its value chain.



Mr. David Livingstone Ebiru - Executive Director Uganda National Bureau of Standards.

Uganda standards are inevitably the main tool for addressing today's food challenges. They enable safe practices along the global food supply chain, from sound agricultural methods to layout specifications for the end products. This global trend has prompted the Uganda National Bureau of Standards (UNBS) in collaboration with its stakeholders, to set limits and requirements that are geared towards sustaining food quality and global best practices. Of the over 4000 standards developed, adopted and harmonised by UNBS, some 3 000 are related to food. At UNBS, we review existing food standards, develop new ones and evaluate areas of contention surrounding new market needs. But regulation is only as good as the resources available to investigate and enforce it, , so Uganda Standards allow for traceability via labelling, proactive food safety systems and regulatory compliance.

Whether it is food safety or compliance, concerted efforts are needed to elicit change, from farmers to manufacturers to individuals who transport, store and sell food. Take, for instance, food security. A lot of effort is being put into addressing food safety challenges, such as foodborne pathogens, spoilage organisms and their toxins. For this reason, many food companies in Uganda are now using US ISO 22000 for food safety management systems and adopting the Hazard Analysis and Critical Control Points (HACCP), a food

production monitoring system aimed at preventing contamination at the earliest stages. What's more, manufacturers and food industry experts continue to curb inordinate practices such as the use of low-quality and raw materials, undeclared additives and food fraud. A unified food quality and safety system is needed particularly in countries with weak and fragmented food control systems - to achieve good-quality food that's safe for consumption. But much more remains to be done. There is a need to address emerging viruses and antimicrobial resistance organisms, develop improved methods for identifying genetically modified organisms and increase the effectiveness of compliance along the food chain. While many hurdles still need to be overcome, Uganda's food opportunities look bright. Despite the setbacks, the country's agricultural sector is still considered to be the strongest and most developed branch of its economy. Uganda's tropical climate makes it easy to grow almost all crops in the region. And with Uganda standards and UNBS's work with various stakeholders, the country's products are poised for competitiveness in local, regional and international markets. I am pleased to present this final issue of our Quarterly newsletter of the financial year 2020/2021. We have made great strides in ensuring that standards across various sectors are available for use and we continue to work with all stakeholders to ensure quality everywhere.

Mr. David Livingstone Ebiru Executive Director

Good Agricultural Processes For Maize Production

By Hakim Mufumbiro Principal Standards Officer



Maize is the most important grain crop in Uganda and is produced throughout the country under diverse environments. Successful maize production depends on the correct application of production inputs that will sustain the environment as well as agricultural production. These inputs are, inter alia, adapted cultivars, plant population, soil tillage, fertilisation, weed, insect and disease control, harvesting, marketing and financial resources. In developing countries, maize is consumed directly and serves as a staple diet for some 200 million people. Most people regard maize as a breakfast cereal. However, in a processed form it is also found as fuel (ethanol) and starch. Starch in turn involves enzymatic conversion into products such as sorbitol, dextrin, ascorbic and lactic acid, and appears in household items such as beer, ice cream, syrup, shoe polish, glue, fireworks, ink, batteries, mustard, cosmetics, aspirin and paint.

Buyers, especially supermarkets and produce distributors, have

begun requiring their vendors to be audited by a third party to certify that they follow Good Agricultural Practices to minimize the risk of microbial contamination on their produce. Aflatoxins are regularly found in improperly stored staple commodities such as cassava, millet, rice, sorghum, wheat, sunflower seeds, sesame seeds, groundnuts, and maize, among others. When contaminated food is processed, aflatoxins enter the general food supply where they have been found in both pet and human foods, as well as in feedstock for agricultural animals. Animals fed contaminated food can pass aflatoxin transformation products into eggs, milk products, and meat.

Following best practices outlined below for reducing microbial contamination ensures that the food that you sell to the public will not cause harm or illness for consumers. Reducing the risk of contamination before it occurs is the best way to minimize the risk of illness in the public.

• Seed quality

It is recommended to source seeds from registered suppliers and licenced by Ministry of Agriculture, Animal Industry and Fisheries. For example maize seed should comply with US EAS 821:2014, Maize seed - Requirements for certification. The quality attributes to look out for include but not limited to moisture content, purity of seed, inert matter and germination percentage.

Seed handling and storage

The seeds and planting material should be handled carefully and stored in a clean hygienic place at preferably ambient temperatures. The seed is stored when dry enough at a moisture content of maximum 13%. Appropriate handling and storage ensure extended viability of the seed.



Planting and care

It is advisable to plant improved/certified seeds of the same variety and apply the recommended spacing for the specific crop and put the specified number of seeds in one hole. Spacing specifications are provided on the bag containing the seeds or can be provided by the agriculture officer or an extension worker. Apply the recommended common fertilizer types and pesticides when required in the quantities as specified on the labels. For maize it is required that weeding is done when the plants reach knee height.

Harvesting

The right time for harvesting maize is when the stalks should be dry and the maize cobs/leaves facing down. Should avoid harvesting in the rain and the cobs should be placed on tarpaulins immediately after harvesting.

Drying

Maize should be dried on tarpaulins, canvas, mats or in cribs. Mechanical driers may also be used whenever available. During the drying process, the maize should be covered from rain.

Storage

Hygiene should be maintained in stores for maize as this helps in keeping away insects and vermin. The maize should be stored while dry enough at a maximum moisture of 13.5% to ensure it remains of the right quality and safety as well as extending its shelf life.

Transportation

The transportation vessels/vehicles should be clean and not used for other purposes such as transporting animals and building materials

Products of maize that UNBS can certify and their relevant standards

- US EAS 44:2019, Milled maize (corn)
- products Specification
- US EAS 768:2019, Fortified milled maize
- (corn) products Specification
- US EAS 230:2001, Maize bran as
- livestock feed Specification
- US EAS 232:2001, Maize gluten feed Specification

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Tests required

- Acid insoluble ash
- Aflatoxins B1
- Arsenic (As)
- Cadmium (Cd)
- Escherichia coli
- Fat acidity
- Lead (Pb)
- Moisture content
- Salmonella
- Staphylococcus aureus
- Total aflatoxins
- Total ash on as-is basis
- Total plate count
- Yeast and moulds
- Crude fibre
- Crude protein

Additional tests required for fortified maize flour

- Total iron
- Vitamin A
- Zinc

Requirements for export

- The maize and processed products should be Certified by UNBS
- Certificate of origin
- Phytosanitary Certificate for maize grains
- Export licence issued by Uganda Export Promotion Board



Storing and managing food in a warehouse.

Measurements For Health



By Leatitiah Namubiru Manager Legal metrology

Uganda through the Uganda National Bureau of Standards (UNBS) joins the world to celebrate the World Metrology day, under the theme; Measurement for Health. Metrology, the science of measurement,

as a field of technical and scientific activity, has a key role in all sectors of society. In the health sector, due to the inherent risk of life, metrology is necessary to measure quantities as accurate as possible. Medical decisions are often based on medical measurements. The healthcare system uses measuring instruments to prevent, diagnose, and treat diseases. Due to the importance that health equipment hold, it is essential to prioritize their accuracy and reliability for the wellbeing of individual patients. A sound measurement system is an essential element in achieving an efficient healthcare policy for Uganda in line with NDP111 Objectives and the Uganda National Bureau of Standards mandate of enforcing standards in protection of public health and safety. Essential factors for an efficient measurement system are:-

- Traceability to the International System of Units, such as mass, temperature and length (scientific metrology)
- Regulated measurements and measuring instruments (legal metrology)
- Confidence in testing and measurement results via certification, standardization, accreditation and calibration (industrial metrology).

There is need to monitor the metrological traceability of health instruments to make them suitable for use in terms of reproducibility and repeatability. It is vital that the health instruments conform to agreed standard specifications, producing the same results, independent of where the measurements are made. Health instruments should demonstrate compliance with metrological traceability chain through the evidence of their certificates of calibration/ verification based on voluntary or policy regulation, respectively. These certificates can only be valid if issued by a national metrology body (UNBS).

Guidelines and regulations that cover medical equipment and methods can only be enforced if the measurements used to verify their compliance are accurate, traceable to internationally agreed reference measurement standards, and performed using approved and correctly calibrated instruments. The International Bureau of Weights and Measures (BIPM) maintains international reference facilities to ensure the comparability of the national measurement standards maintained by UNBS in the National Metrology Laboratories. The International Organization of Legal Metrology (OIML) works with the Legal Metrology Department of UNBS to develop harmonized regulations on health care instruments. The regulation requires the implementation of legal metrological control, but it can also be viewed as a voluntary act, in the case of calibrations. Several OIML recommendations such as OIML R 114 (1995) for clinical electrical thermometers and R 26 (1978) for medical syringes exist just to mention but a few.



Participants at World Metrology day Celebrations - in Mbale

The Importance of Metrology in the health sector

a. Protection of human life

Proper practice of medicine requires a comprehensive understanding of metrology. Through statistical quality control techniques, metrology ensures that medical practitioners minimize the time used to carry out analytical tests and ensure that they receive accurate results. It also lowers the costs incurred from reworks hence improve hospital efficiency and faster diagnosis. Healthcare professionals rely on accurate health-related measurements to identify diseases and prescribe treatments that are effectively, safe, and cost effective. Through metrology, patients receive the right amounts of various doses, preventing fatal incidents due to overdose. Every health-related measurement follows a predefined method; measurements can be simple such as body temperature, heart rate and blood pressure or how much active principle a tablet should contain.

b. Preventative health care

Healthcare plans increasingly include preventive actions in their policies, as opposed to merely disease treatment. Many costly and disabling conditions, such as cardiovascular diseases, cancer and diabetes are linked by common avoidable risk factors, while others can be prevented through vaccination. A preventive healthcare plan that relies on accurate measurements and medical procedures can dramatically reduce the cost and demands on healthcare systems hence having a positive impact on the economy's GDP.

c. Patient's Comprehension

Metrology instruments in healthcare allow patients to see and express what's going on in their bodies. For instance, temperature guns used to screen COVID-19 negative and positive patients.

d. Control of outbreaks

International trade and travel increase the risk of spreading diseases that threaten human health. The World Health Organization (WHO) published the International Health Regulations (IHR), a set of global rules designed to prevent and respond to acute national, regional and global public health risks that have the potential to cross borders and threaten the health of people worldwide. It is essential that countries have infrastructures and equipment that can monitor and measure these health risks in order to ensure the wellbeing of their people and to prevent and control the spread of global pandemics.



Verification of weighing equipment by the UNBS Metrologists

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e. Road safety.

Speed limits and alcohol restrictions are only possible through metrology, which protects the health and safety of drivers and other road users.

f. Food Safety

We are only as safe as the food we eat. Metrology makes it possible for consumers to receive quality food products by determining the nutritional value of various products, leading to better overall public health.

UNBS LEGAL REPORT FOR CONCLUDED CASES IN COURT - APRIL - JUNE 2021

S/N	REF	OFFENCE	ACCUSED	REMARKS
1.	E/004/2021	Manufacturing for sale non-con- forming cosmetic products to with Zero pimples	Okello Steward	Convicted on his own plea of guilty and sentenced to a caution and payment of destruction costs of UGX 216,030/=
2.	E/003/2021	Illegally applying UNBS distinctive mark(Q) on their products without a valid permit	Agaba Frank	Convicted on his own plea of guilty and sentenced to fine of UGX 10 million and destruction costs of UGX 3.1million.
3.	E/363/2017	Being in possession for sale of Non-conforming products to wit energy saving lamp of Cixing brand	Jagram Gujar	Acquitted on the basis that the accused had a Certificate of Confor- mity for the commodities before court issued by the agents of UNBS.
4.	E/298/2020	Failure to present imported consign- ment for physical inspection	Owor Andrew Stephen	Convicted on his own plea of guilty and sentenced to a fine of UGX 20 million.
5.	E/112/2021	Failure to present imported consign- ment for physical inspection	Odama Vincent	Convicted on his own plea of guilty and sentenced to a caution.
6.	E/34/2021	Failure to present imported consign- ment for physical inspection	Senfuma Isima	Convicted on his own plea of guilty and sentenced to a caution.



UNBS seizes over 600 cartons of Sahara Tangawizi tea and Sahara Mchuzi mix tealeaves packed by Malcom Ssema Business Solutions Ltd in Mutundwe, for grossly under quoting the weight on the product packaging.

LIST OF UNBS CERTIFIED MILLERS AND TRADERS OF MAIZE FLOUR AND GRAIN AS AT 26TH JUNE 2021

CERTIFIED PRODUCT(S)	HOLDING COMPANY	PRODUCT BRAND(S)
Composite Flour	NUMA FEEDS LIMITED	Numa Soya Maize
Fortified Milled maize	SUNRISE COMMODITIES AND MILLERS UGANDA	Flour, Sunrise Brand
Fortified Milled maize	GRAINPULSE LIMITED	GRAINPULSE LTD- FORTIFIED MAIZE FLOUR
Fortified Milled maize	GRAINPULSE LIMITED	Fortified Maize Meal-Tamasha
Fortified Milled maize	MANDELA MILLERS LIMITED	Fortified supreme maize flour
Fortified Milled maize	AFRO-KAI LIMITED	Fortified Maize flour - Meal Life
Fortified Milled maize	PAN AFRIC IMPEX (U) LTD	АНОС
Maize flour	NUMA FEEDS LIMITED	Numa Power Maize
Maize flour	THE JOSEPH INITIATIVE LIMITED - KASASE	Joseph Initiative Maize flour
Maize flour	JERODI TRADING COMPANY LIMITED	Jero Foods
Maize flour	KAMWENGE COMMUNITY DEVELOPMENT PROJ- ECT LIMITED	KAMWENGE PRIDE
Maize flour	MBALE MAIZE FLOUR LIMITED	Mbale Maize Flour
Maize flour	NANSAKA DISTRIBUTORS	Nansaka Maize Flour
	NYANJA SUPER FINE MILLERS LIMITED	NYANJA
Maize flour	KRISHNA MILLING AND PRO LIMITED	Krishna Millers
Maize flour	K BLESSING MILLERS LIMITED	K.blessing
Maize flour	MBALE INVESTMENT GRAIN MILLERS LIMITED (MASANAFU - WAKASANKE BRANCH)	Mbale Fine Flour
Maize flour	MBALE INVESTMENT GRAIN MILLERS LIMITED (KAWEMPE BRANCH)	Mbale Fine Flour
Maize flour	MBALE INVESTMENT GRAIN MILLERS LIMITED (NATETE BRANCH)	Mbale Fine Flour
Maize flour	FB GRAIN MILLERS - SMC LIMITED	FB GRAIN MILLERS
Maize flour	MUGULUSI SUPPLIES LIMITED	MUGULUSI MAIZE FLOUR

Maize flour	KISAKYE AGRO PRODUCE LIMITED	KISAKYE AGO PRODUCE LIMITED
Maize flour	PRIME GRAINS - SMC LIMITED	PRIME MAIZE FLOUR
Maize flour	WANI LOLU INVESTMENT (U) LIMITED	Wani Lolu
Maize flour	TALIAN COMPANY LIMITED	Talian Classic Maize Flour
Maize flour	GWT (U) LIMITED	GWT MAIZE FLOUR
Maize flour	NAMBALE SUPER MILLERS LIMITED	Simba Maize Flour
Maize flour	AGAHIKAINE GRAINS LIMITED	Amaani
Maize flour	OLYMPIC MILLING LIMITED	Olympic Maize Flour
Maize flour	AFRO-KAI LIMITED	MEAL LIFE
Maize flour	MAGANJO GRAIN MILLERS LIMITED	Maganjo maize flour
Maize flour	KABOGAMBE (KKB) MAIZE MILLERS LIMITED	Kabogambe Maize Flour
Maize flour	KABOGAMBE (KKB) MAIZE MILLERS LIMITED	Kalungi Maize Flour
Maize flour	KIKA INVESTMENTS POULTRY AND ANIMAL FEEDS LIMITED	Gramineae Maize Flour
Maize flour	EGRET INVESTMENTS LIMITED	Egret Investments Limited Maize Flour
Maize flour	NEW FORT VIEW HOTEL CO. LIMITED	Too maize flour
Maize flour	GRAINPULSE LIMITED	Maize flour
Maize flour	D.KALERE GENERAL SUPPLIES LIMITED	D.K Maize Flour
Maize flour	MILLING IS US (U) LIMITED	DAILY MEAL
Maize flour	LINK N GLOBAL COMMODITY (U) LTD.	AVAADA
Maize flour	MILLY MAIZE MILLERS	MIRE
Maize flour	MADFA DISCOUNT CENTRE	M.M
Maize flour	NDURWA MILLERS UGANDA LIMITED	Ndurwa Flour
Maize flour	NANZIGA MILLERS ASSOCIATION LTD	Nanziga Millers
Maize flour	BEMBABAZI MILLERS	Talemwa Maize Flour
Maize grains	MANDELA MILLERS LIMITED	Supreme white maize grains
Maize grains	AFRO-KAI LIMITED	White maize grains
Maize grains	SUNRISE COMMODITIES AND MILLERS UGANDA LIMITED	SUNRISE
Maize grains	THE JOSEPH INITIATIVE LIMITED	Joseph Initiative Maize
Maize grains	ASILI FARMS MASINDI LIMITED	Asili Farms Maize Grain
Maize grains	B & S GROUP OF COMPANIES LIMITED	B&S PRODUCE
Maize grains	APONYE (UGANDA) LIMITED	Aponye White Maize Grain
Maize Grit	GRAINPULSE LIMITED	Granulated Maize meal (Maize Grit)



December 2020 - UNBS bids farewell to Ben Manyindo. The former Minister of Trade, Industry and Cooperatives, the National Standards Council and Staff of UNBS held a farewell party for the former Executive Director Dr. Ben Manyindo as he retired from service.



The UNBS Deputy Executive Director-Standards Ms. Patricia Ejalu UNBS hands over copies of simplified guidelines for the fishing industry to the Ag. Directorate of Fisheries Resources Ms. Joyce Ikwaput Nyeko The guidelines were developed with support of the Commonwealth Standards Network (CSN), a project funded by the UK's Foreign, Commonwealth and Development Office.

UNBS received equipment to start mobile verification of outdoor measuring equipment such as railway wagons/ tankers, static tanks, underground tanks at filling stations, high speed flow meters, Deports and Aviation meters among others.





The new Mobile Prover unit

February 2021: The URSB Registrar General Ms. Mercy Kainobwisho pays a courtesy visit to the UNBS ED to discuss ways of strengthening collaboration between the two parties to better service delivery.



The UNBS and URSB Teams pose for a group photo after the courtesy visit.

Uganda Students win the 7th Continental African Regional Organization for Standardization (ARSO) Essay competition. The overall Winner Ms. Golda Desiree Abesiga from Makerere University Law School, and the 1st Runner up Mr. Steven Marvin Nsubuga from Kyambogo University, Department of Management and Entrepreneurship receive accolades from the UNBS Executive Director.



Winners of the 7th ARSO Continental Standards Essay Competition



The Minister of Trade, Industry and Cooperatives, Hon. Amelia Kyambadde together with the outgoing parliamentary committee on Tourism, Trade and Industry paid a courtesy visit to UNBS to ascertain the testing capacity of Uganda National Bureau of Standards (UNBS) testing labs.



Hon. Amelia Kyambbade swears in Mr. David Livingstone Ebiru as the 4th Executive Director of UNBS on 11th May, 2021 at Ministry of Trade, Industry and Cooperatives offices in Kampala.

Uganda through the Uganda National Bureau of Standards (UNBS) joined the rest of the world to celebrate the World Metrology day, under the theme; Measurement for Health. To celebrate the day, UNBS held demonstration camps on how equipment calibration and verification is done to ensure accuracy of medical equipment such as Clinical thermometers, Infrared thermometers, Blood pressure monitoring Machines and others in different parts of the country. The demonstration camps were held in Jinja, Mbale, Mbarara and Kampala





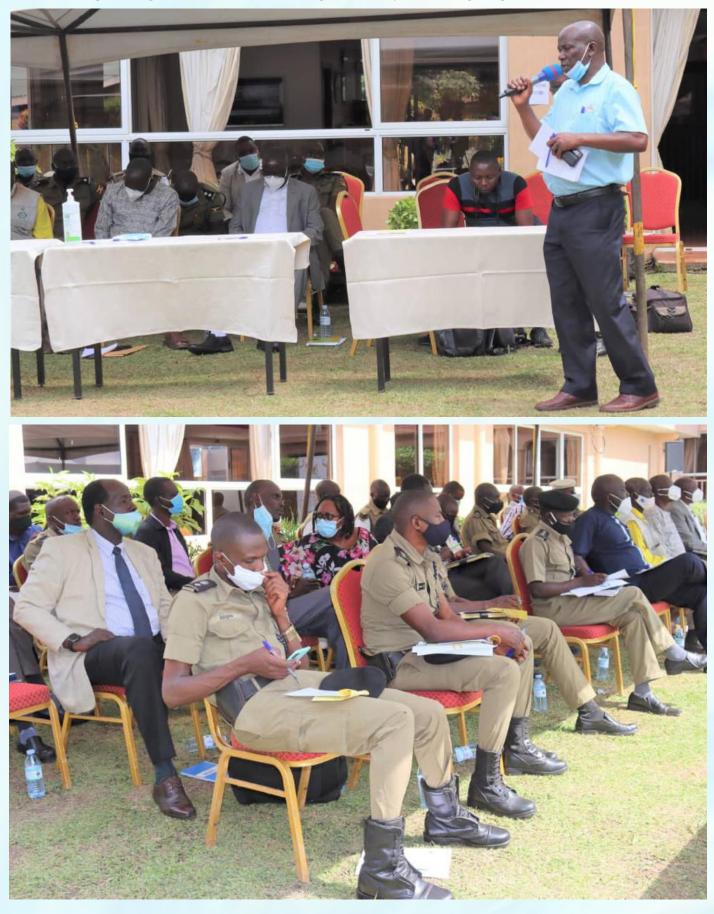








May: UNBS together with Ministry of Energy and Mineral Development held a consumer sensitisation campaign in Northern Uganda region under the Fuel Marking and Quality Monitoring Program.







Contemporation Toll-free 0800 133 133 133 0713227580

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OUR CORE VALUES

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