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TBS, the Home of Standards

The Minister for Industry and Trade, Hon. Prof. Kitila Mkumbo (second left, seated) and the Permanent Secretary of the Ministry, Mr. Dotto James (left, seated) pose with members of the TBS Board of Directors on July 8, 2021. To the Minister's left is the Chairperson of the Board, Dr. Fenella Mukangara and TBS Director General, Dr. Athuman Y Ngenya.

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Industry, Trade Minister inaugurates TBS Board of Directors

By Neema Mtemvu

The Minister for Industry and Trade, Hon. Prof. Kitila Mkumbo has inaugurated the newly appointed Tanzania Bureau of Standards (TBS) Board of Directors.



Prof. Kitila Mkumbo

Prof. Mkumbo made the inauguration at a function held at TBS headquarters, Ubungo, Dar es Salaam, on July 8, 2021.

Speaking during the function, the Minister said the Board members were appointed after meeting the required criteria, thus the Government expects them to meet its expectations.

"You will be working on behalf of the government, thus make sure that TBS Management is implementing what is required for the benefit of the shareholders and the country at large," he insisted, urging the Board to perform its duties according to relevant laws and regulations so as to realize the Bureau's contribution in stimulating trade and economic development.

He said that the Board plays a crucial role in the development of standards and implementation of standards-related issues, hence integrity among its members is highly expected. He further said the Board should make sure that the Bureau performs its statutory obligation without interference.

On the other hand, Prof. Mkumbo hailed the Bureau for performing its functions as required and vowed continued Government support in ensuring that the Bureau fully implements its statutory mandate.

Speaking during the event, the Chairperson of the TBS Board of Directors, Dr. Fenella Mukangara, thanked President Samia Suluhu Hassan for appointing her and vowed to extend maximum cooperation to TBS Management and help Small and Medium Entrepreneurs (SMEs) to realize their dream.

Earlier, the Permanent Secretary of the Ministry of Industry and Trade, Mr. Dotto James asked the TBS Board and Management to introduce in-house training so as to improve efficiency among the Bureau's staff.

He said workers of the standards body should be able to cope with technology development, hence tailor-made training was highly needed.

After launching the Board, Prof. Mkumbo and his delegation including Board members visited various TBS laboratories to observe testing and calibration activities.

The 11-member Board was appointed in June, 2021 by respective appointing authority, the President of the United Republic of Tanzania (for the Chairperson) and the Minister for Industry and Trade (for other members). The Chairperson of the Board is Dr. Fenella Ephraim Mukangara while the Secretary is Dr. Athuman Yusuf Ngenya, who is also the TBS Director General.

Members are Mr. Kalumuna Prosper Benedicto, Mr. Timothy Twalib Mmbaga, Dr. Nandera Ernest Mhando, Dr. Catherine Canute Joachim, Dr. Eliapenda Elisante Mariki, Mr. Shaban Ahmed Kabunga, Mr. Hussein Suphian Ally, Ms. Magdalena Ludovick Utouh and Ms. Aneth Jackson Mathania.



The Minister for Industry and Trade, Hon, Prod Institution and Second left, seated, and the Permit ment Second view file Ministry, Mr. Dotto, James (J. Chargerson of July, 2020) The Ministry, Mr. Dato, James (J. Chargerson of the Board, Dr. Fenelle Makanger Chargerson of the Board, Dr. Fenelle Makanger and TBS Director Generation, L. Athuman Nr. Negerson Collaborate with TSS Collaborate with TSS Heamment the government

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Address

Tanzania Bureau of Standards Ubungo Area, Junction Morogoro/ Sam Nujoma Roads, P.O.Box 9524, Dar es Salaam TANZANIA.

Contacts:

Tel +255 2224 50298 + 255 2224 50206 + 255 2224 50949 Telefax: + 255 2224 50959 Email: info@tbs.go.tz Hotline: 0800 110827 Website: www.tbs.go.tz

Government officials urged to collaborate with TBS

By Mussa Luhombero

Government officials in Lindi Region have been urged to work closely with the Tanzania Bureau of Standards (TBS) to make sure cashew nut processors produce high quality products that meet the required standards.

The directive was issued recently by the Lindi Regional Commissioner, Ms. Zainab Terack, while opening training to cashew nut processors.

"The regional authority believes that the training to cashew nut processors is a fundamental initiative for enhancing industrialisation through agriculture, business and manufacturing that would ultimately boost economic growth," she said, urging officials under her jurisdiction to provide maximum cooperation to TBS officials in ensuring the quality of products for sustainable development.

She added that the training had come at the right time as the government is emphasizing industrialisation to create more jobs and make high quality goods that will compete in the regional and global markets.

The RC noted that the training provided by the government

institutions is proof of its commitment to enhancing investment in the industrial sector to increase the country's exports, particularly of cashew products.

News in Brief

Ms. Zainab commended TBS for organising the training for small scale processors calling it to be sustainable.

Speaking on behalf of the Nachingwea District Commissioner at the training to cashew nut processors, the District Community Development Officer Ms. Lilian Mwaipungwa said the training would help produce quality products for exports and fetch more foreign exchange.

The TBS Research and Training Manager, Mr. Hamisi Mwanasala told the training participants that the Bureau will make sure cashew processors produce products that meet national and international standards.

On her part, the TBS Southern Zone Manager, Ms. Amina Yasin said the training had been offered by the Bureau in collaboration with other government institutions including Small Industries Development Organisation (SIDO).



We commend the government's decision on motor vehicles DI

Tanzania Bureau of Standards (TBS) commenced Destination Inspection (DI) of imported used motor vehicles in April, 2021, being implementation of the Government's directive on ensuring that imported used motor vehicles are inspected in the country.

For more than a decade, the Bureau had been using Pre-shipment Verification of Conformity to Standards (PVoC) to ascertain the quality of used motor vehicles imported from various countries. The programme was performed in collaboration with internationally recognized PVoC partners obtained by tender, including Japan Auto Appraisal Institute (JAAI), Quality Inspection Services (QIS), East Africa Automotive Service Company Limited (EAA) and Jabal Kilimanjaro Autoelect Mech. Inspection.

During its implementation, PVoC helped curb the importation of substandard used motor vehicles, thus helping mitigating the risk of accidents caused by substandard vehicles and saving the environment by reducing the among of unwanted emissions affecting air quality produced by smoking vehicles.

Despite the good intentions of implementing PVoC as a way of complementing the poorly developed national quality infrastructure for vehicle inspection at the time, the programme had its limitations, including delays in the inspection process which could lead to problems with the shipment and/or increased costs for the exporter. The biggest limitation, however, was the externalization of funds and denial of business and employment opportunities for Tanzanians. The latter prompted the Government to build domestic capacity to ensure that all imported used motor vehicles are inspected domestically.

Since the commencement of destination inspection of imported used motor vehicles in April, 2021 and as at September 30, 2021, a total of 18,136 vehicles have been inspected. Moreover, as of August 3, TZS 3.9 billion had already been collected from the inspection service. This contrasts sharply with TZS 1.3 billion equivalent to 30 percent, which would have been collected in the same period under PVoC, as 70 percent would have gone to vehicle inspection agents.

This means that destination inspection has resulted in increased government revenue apart from other benefits such as employment of local inspection engineers and technicians and increased opportunities for local garages working on vehicles that fail to meet the requirements of the standard. Moreover, the current arrangement has improved customer expectation on the actual inspection of the vehicles and the turnaround time of the process.

We commend the government's move to ensure that all imported used motor vehicles are inspected locally. As noted, destination inspection for imported used motor vehicles does not only ensure the quality of the vehicles, but provides jobs for Tanzanians because the vehicles that would have been examined at the point of shipment in the country of origin are now inspected in Tanzania. This is in line with the Government's policy and in the interest of the society and the economy as it creates and keeps jobs and revenue in the country. Further, we advise TBS Management to keep on improving the destination inspection process so as to ensure that in the end all the challenges and bottlenecks identified during the process are eliminated to the maximum satisfaction of the customers.

As noted by the Minister for Industry and Trade, Prof Kitila Mkumbo (MP) after touring one of the vehicle inspection centres near the Dar es Salaam Port recently, the decision to conduct vehicle inspection locally using Tanzania Bureau of Standard (TBS) was a bold one. We commend the government for its decision and TBS Management for the faithful implementation of the directive.

"To beat your competition, make quality your mission"

Mwanza entrepreneurs urged to certify their products

By Staff Reporter

ntrepreneurs in Mwanza Region have been urged to obtain certification of their products from the Tanzania Bureau of Standards (TBS) as way to expand local and international markets.

The TBS Marketing Officer, Ms. Deborah Haule made the appeal recently while speaking to entrepreneurs who participated in the East African Trade Exhibition that ended in the region.

She also used the opportunity to lodge an appeal to participants on the need to register business premises for food and cosmetics to meet legal requirements.

She said the aim for TBS participation in the exhibition was to bring closer services to entrepreneurs and business people as well as provide education on standards and quality that would enable them to produce high quality goods to compete in global markets.

"Pursuant to the East Africa Community agreement, manufacturers from one Partner State who produce goods that have met quality standards can penetrate the whole regional markets without any impediments," she said.

For small scale manufacturers, she said the government has made arrangements for them to obtain registration for their goods without any costs for three years.

"For small scale manufacturers to qualify for this government arrangement, they must obtain an introductory letter from the Small Industries Development Organization (SIDO) and send it to TBS for the registration process to start," she added.

Ms. Haule said TBS recognises the contribution from entrepreneurs and this is why it is continually providing education on production of goods that meet required standards.

On his part, the Senior Food Safety Officer at TBS, Mr. Donald Mkonyi called upon business people to make effective use of TBS services to register premises for food and cosmetic products.

"I call upon business people to register food and cosmetic premises that would give consumers assurance on the safety of goods preserved and sold," he said.

Mr. Mkonyi added that all the registration services for food and cosmetic premises are being provided online, thus providing opportunity for more entrepreneurs to access them.

"When you buy a product always look for the TBS mark which assures you of quality, reliability and safety"

TBS equips farmers with skills to remove toxins on cassava

By Mussa Luhombero

Tanzania Bureau of Standards (TBS) has equipped cassava farmers and consumers in Kilindi District, Tanga Region, with skills on how to process and remove toxins from cassava for the safety of consumers.

Officials from TBS recently in Kilindi offered training to largescale farmers of cassava and consumers on the safety and quality of cassava products.

The TBS Quality Control Officer, Ms. Ashura Katunzi-Kilewela said among other things, cassava farmers and consumers were sensitised on the presence of natural toxins in cassava and how they can make it safe for consumers.

"Although cassava is an important food crop, it is affected by the natural toxins that emanate from chemicals produced by the plant itself called cyanide," said Ms. Ashura.

According to Ms. Ashura, the amount of cyanide chemicals in cassava varies depending on the type of cassava concerned and its taste.

"For example, cassava with a small amount of cyanide chemical has a sweet taste, while that with more cyanide chemical has a bitter taste," noted Ms. Ashura.

Some of the factors contributing to the increase in the number of natural toxins in cassava are the type of cassava cultivated, the weather condition of the area where the level of cyanide in cassava increases more during the dry season and also the type of soil in which cassava is cultivated.

"The amount of cyanide chemical in cassava varies between one area and another depending on the type of soil of the agricultural area even if the seed used is of the same type," explained Ms Ashura.

Commenting on the effects of cyanide poisoning, the TBS Chief Food Safety Officer, Dr. Candida Shirima, said the consumer could get health complications from natural cyanide poisoning after eating cassava-based foods with high cyanide chemicals.

News in Brie

Dr. Shirima went on to advise the locals on how to reduce the toxins found in the crop which is by soaking the cassava in water and as a result, the toxin dissolves in the water. It is recommended that it should be soaked for three to five days.

She advised farmers to change the soaking water of the cassava every two days to remove the cyanide chemical more efficiently. She urged farmers and consumers to make sure they dry it after soaking.

"Cassava should be washed and dried on top of the sheds with the best solar dryer until it dries well and is ready for other steps such as grinding," said Dr. Shirima.

Areas that produce the crop in large quantities and the most affected in Kilindi District are Songe district headquarters, Kwamwande, Kwadiboma, Nkama, Mvungwe, Kigunga, Gombero, Kibirashi, Mafulira, Kikunde and Chamtui. **News in Brief**



Entrepreneurs, industrialists urged to acquire TBS mark

By Neema Mtemvu

ntrepreneurs and industrialists have been encouraged to acquire the standards mark of quality from the Tanzania Bureau of Standards (TBS) to avoid unnecessary business impediments and expand market outreach for their products.

The call was made by the TBS Food Safety Officer, Mr. Barnabas Jacob, who recently paid a visit to entrepreneurs and industrialists in various parts of Liwale District in Lindi Region.

The officer used the opportunity to provide necessary information on the need for entrepreneurs and industry owners to acquire quality marks that will help them penetrate wide markets.

"We call upon all entrepreneurs to acquire TBS standards mark as a way to go beyond business impediments," he said.

He said the micro, small and medium entrepreneurs (MS-MEs) are required to have an introductory letter from the Small Industries Development Organisation (SIDO) as an important prerequisite for initiating the certification process.

Mr Jacob emphasised that the quality standard mark is being provided free of charge to MSMEs because all the costs are paid by the government, being part of the efforts to nurture local entrepreneurs to grow and access domestic and foreign markets.

During the visit, the officer and his colleagues also conducted preliminary inspection of various industries being part of the procedure for granting of the TBS standards mark.

Mr Jacob mentioned some of the industries that were inspected as sunflower and cashew nut processing industries as well as maize milling machines and bakery making machines.

"We reached all the industry owners and urged them to acquire TBS quality standards mark," he said.



TBS Inspector Mr. Buliro Magesa collects market samples for analysis in Liwale District, Lindi Region.

Government earns 3.9 billion in vehicle inspection



The Minister for Industry and Trade, Hon. Prof. Kitila Mkumbo (second right) receives explanations on inspection of imported used motor vehicles during a familiarization tour at an inspection facility in Dar es Salaam.

By Gladness Kaseka

he government has collected 3.9 bn/- since it started destination inspection for imported used motor vehicles in April this year.

The Minister for Industry and Trade, Prof Kitila Mkumbo (MP) said this in Dar es Salaam recently, after touring one of the vehicle inspection centres near the Dar es Salaam Port. He said under the former vehicle inspection system which was done in country of origin, the government would have received only 30 percent of the amount and 70 percent gone to vehicle inspection agents.

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Prof. Mkumbo said the decision to conduct vehicle inspection locally using Tanzania Bureau

of Standard (TBS), has earned the government 3.9 billion Tanzania Shillings in just a short period of the implementation of the new system.

ews in Brief

"About 11, 179 vehicles have been inspected between April to August this year and 7,707 met the required specifications and those below standards were sent to the local garages for maintenance," he said.

He said the exercise was going well and that he was happy that TBS was keenly and seriously implementing the initiative which, he noted, had employed a good number of youths in the inspection process and in the garages where maintenance of vehicles that have not met quality requirements is done.

"We urge vehicle importers to report all shortcomings as they have been doing and the government through TBS will take immediate action to address them," he noted. Speaking at the site, the TBS Imports and Inspection Manager, Eng. Saidi Mkwawa said the government would have received only 1.3 bn/- if vehicle inspection was conducted outside the country. He added that the saving of 2.7bn/- shows how TBS is committed in implementing the government's directives aimed at improving business environment and boosting revenue collection.

Eng. Mkwawa said vehicles with some technical faults were sent for maintenance in the local garages thus providing jobs and incomes to Tanzanians.

Before the commencement of destination inspection of imported used motor vehicles, the exercise was being done outside the country through designated agents under the Pre-shipment Verification of Conformity to Standards (PVoC) programme.

"Misuse of TBS quality mark is a criminal offence punishable under the Standards Act No. 2 of 2009"

News in Brie

TBS employees encouraged to participate in sports



The Director of Quality Management Mr. Lazaro Msasalaga (left) leads members of his directorate in celebration after winning a tug of war during the TBS sports bonanza held at the University of Dar es Salaam playgrounds.

By Rhoda Mayugu

anzania Bureau of Standards (TBS) employees have been encouraged to participate in various sports as a way to maintain their fitness especially during this period of the spread of coronavirus.

The call was made by the Chairperson of the TBS Board of Directors, Dr. Fenella Mukangara, while opening the TBS sports bonanza that took place at the University of Dar es Salaam playgrounds.

Dr. Mukangara said sports are important both for employees' health and as a way to improve work relations thus reducing stress. "During my tenure as the Board Chairperson I will make sure the TBS sports bonanza takes place every year to maintain and improve the health of the employees and reduce stress," she said.

She commended the TBS management for giving priority to making sure that the bonanza is conducted despite budget constraints particularly on sports activities.

She also used the opportunity to encourage TBS employees to get COVID-19 vaccination as a way to support the government efforts to fight the pandemic in the country.

tor General Dr. Athuman Ngenya said the sports bonanza was the second to be implemented by the standards watchdog and that it is helping employees to improve their health and work relations.

"Without good health, there are no standards, thus this is a unique opportunity for employees to exercise so as to keep themselves fit, particularly during this period of the pandemic," he noted.

On their part, TBS employees in attendance commended the TBS management for organising the sports bonanza as it is very important for their health and improvement of work relations.

On his part, the TBS Direc-

Public servants urged to support war on substandard products



TBS Food Safety Officer, Mr. Barnabas Jacob enlightens public servants in Nachingwea on product safety and quality.

By Neema Mtemvu

The Tanzania Bureau of Standards (TBS) has urged public servants to develop knowledge on substandard products so as to become good ambassadors and support the government in uprooting them from the local market.

The urge was issued by the TBS Food Safety Officer, Mr. Barnabas Jacob during a training to public servants to impart them with education on the side effects of using counterfeit cosmetics with poisonous ingredients.

The training was organised by the Bureau with

the aim of equipping public servants in Nachingwea to become ambassadors in the community by helping identify and prohibit the use of substandard goods especially cosmetics.

Apart from giving them education on proalso informed hibited cosmetics. TBS the public servants the standards on watchdog's obligations in the country.

Some of the public servants who participated in the training came from the Tanzania Electric Supply Company Limited (TANESCO), Tanzania Revenue Authority (TRA), Tanzania Commercial Bank (TCB), TTCL Corporation and the National Identification Authority (NIDA).

"The education provided by TBS intended to equip public servants with sufficient knowledge on how to identify quality and counterfeit goods particularly on prohibited cosmetics," Mr. Jacob said, adding that TBS alone cannot easily reach and provide education to all citizens on how to identify quality and substandard goods, thus it is by creating ambassadors like the public servants that awareness may reach the whole population.

During the training, public servants were informed on various short- and long-term side effects that may be contracted by using prohibited cosmetics with poisonous ingredients. Some of the side effects mentioned include skin itching, swelling, problems in reproductive organs and skin cancer. Furthermore, the poisonous ingredients in cosmetics may also affect the liver, kidneys and new-borns.

News in Brie

Mr. Jacob said the education provided to public servants was well received and that the recipients pledged to become good ambassadors to their families, neighbours and the whole community.

In the meantime, TBS conducted an inspection on various shops to remove substandard goods from the shelves.

TBS urges engineers to participate in standards development



TBS Head of Buildina and Construction Laboratory Mr. Mahona William educates a visitor to the TBS pavilion on TBS functions during the 18th Annual Engineers' Day exhibition held in Dodoma.

Viwango e-newsletter

News in Brief

By Staff Reporter

anzania Bureau of Standards (TBS) has appealed to engineers to take active part in the setting of standards for various goods produced in the country.

The appeal was made by the TBS Inspector, Mr. Domisiano Rutahala at the 18th Annual Engineers' Day exhibition held in Dodoma recently.

"Engineers play an important role in the production of goods in the country, therefore, their participation in setting standards by sharing their knowledge will benefit not only the organization but the nation as well," he said, adding that engineers are thus supposed to participate in the process of standards setting in order to bring a common understanding of national standards prepared for the various products produced in the country.

Mr. Rutahala went on to clarify that the process of setting standards normally involves different stakeholders from relevant sectors who meet to set national standards and later the standards that have been set are uploaded on the TBS for commenting. He called upon engineers to participate in the important process to benefit the nation. Speaking on the benefits of standardization, Mr. Rutahala said they include bringing equality in the business arena, facilitating trade between countries and protecting the health and safety of consumers.

Annual Engineers Day is an event organized annually by the Engineers Registration Board (ERB) as a way to recognize the role of engineers in national development. This year, the event was held from September 1 to 3 at Dr. Jakaya Kikwete Convention Centre, Dodoma. The theme of the event was "The Impact of Fourth Industrial Revolution on Infrastructure & Industry for Sustainability of Middle-Income Economy".

Tanzania Bureau of Standards uses the event to disseminate knowledge and sensitise participants and visitors on the importance of standards in the social economic development of the nation.



TBS officers educate visitors to the TBS pavilion on TBS functions during the 18th Annual Engineers' Day exhibition held in Dodoma.

TCCIA calls on SMEs to go for certification, registration



TCCIA President Mr. Paul Koyi (third right) issues a standards mark licence to manufacturer during a grant of licence ceremony at TBS headquarters in Dar es Salaam

By Rhoda Mayugu

S mall and medium entrepreneurs have been urged to certify their products and to register premises for the non-manufacturing, selling, distribution and preservation of food and cosmetic products as stipulated by the laws.

The call was made by the President of the Tanzania Chamber of Commerce, Industry and Agriculture (TCCIA), Mr. Paul Koyi, during a grant of licence ceremony held recently at TBS headquarters Ubungo Dar es Salaam, after presenting licences and certificates to 227 manufacturers whose products have met the requirements for certification.

News in Brief

He said manufacturers and business people are obliged to observe the country's laws and regulations to boost the quality of goods.

News in Brief

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He urged entrepreneurs to certify and register their products at TBS as a way to abide by the laws, to support the industrialisation agenda and to be able to compete in global markets.

Mr. Koyi said for the 227 entrepreneurs securing licences and certificates was a great performance and that it will boost productivity in their business.

"With this initiative, you will become good ambassadors for TBS which will encourage more entrepreneurs to acquire certification as a way to adhere to the legal requirements," he said. He said in three years, the government had spent over 715 m/- supporting small scale entrepreneurs to meet the required quality standards.

He commended TBS for putting a conducive environment for entrepreneurs as well as evaluating their growth every three years of being financed by the government. The evaluation then informs decision on whether or not to continue getting government.

On his part, the TBS Director General, Dr. Athuman Ngenya said the licences and certificates were provided to 227 entrepreneurs who registered their goods and met the required standards.

He said the manufacturers who received licences and certificates for using TBS quality mark standards are divided into three groups namely large scale, medium and small-scale manufacturers.

Dr. Ngenya said the certificates and licences will increase consumers' confidence in the use of domestic goods as well as penetrate easily regional markets.



TCCIA President Mr. Paul Koyi (second right) charts with manufacturers during a grant of licence ceremony at TBS headquarters in Dar es Salaam. He is flanked by the TBS Director General, Dr. Athuman Y Ngenya.

TBS sensitizes SMEs on certification and registration



The Acting Head of the TBS Western Zone Mr Rodney Alananga enlightens visitors of the TBS pavilion during the National SIDO exhibition held in Kasulu, Kigoma.

By Staff Reporter

ntrepreneurs from various regions have received awareness education on procedures to certify their goods under the free certification programme, registration of business premises and cosmetics.

They got the opportunity from officials of Tanzania Bureau of Standards during the National SIDO Exhibition officially opened by the Vice President of the United of Tanzania, Dr. Philip Mpango and held in Kasulu District, Kigoma Region. During the exhibition, TBS officials provided services in the business clinic booth under Tanzania Trade Development Authority (TANTRADE), which aimed to serve the entrepreneurs more quickly and conveniently.

Speaking during the exhibition, the Acting Head of TBS Western zone, Mr. Rodney Alananga, counselled entrepreneurs to adhere to the production procedures and safety protection in order to avoid losing markets or being found with substandard products. He urged entrepreneurs to contact TBS offices any time they need professional assistance.

On her part, the TBS Head of Public Relations and Marketing, Ms. Gladness Kaseka, said the organization provides education and various training through dialogue, seminars, campaigns, exhibitions, radios, televisions and social media.

"This is the beginning, the organization would make sure that education on standards reaches every stakeholder at the ground level," she said.

She said apart from Kasulu, similar campaigns have been conducted in Kakonko and Kibondo districts in Kigoma region and in over 70 districts in Tanzania.

According to her, education and training to the public are offered free of charge under the sponsorship of the government through TBS and that the plan is to reach the whole country. On her part, the TBS Marketing Officer, Ms. Deborah Haule, urged entrepreneurs whose products are uncertified, to apply for the free opportunity through SIDO, in order to be recognized as SMEs since most of their products fall under compulsory standards, hence are needed to adhere to the Standards Act.

Acitizen identified as Abdallah Shaban, applauded efforts made by TBS to ensure that different stakeholders become aware with standards issues so that they can access local and foreign markets.

However, he asked TBS officials to ensure that market surveillance particularly in rural areas is done so as to protect consumers against substandard and undesirable goods.

On their part, the entrepreneurs requested the government to ease the availability of packaging materials which have been a long-time challenge.

More than 700 SMEs attended this year's exhibition where they got an opportunity to display their products namely maize flour, water, juice, groundnuts, cosmetics, cooking oil, soap, cashew nut, wine, rice, furniture and different machines.

TBS warns traders on toxic cosmetics business

By Deborah Haule

anzania Bureau of Standards (TBS) has warned traders selling banned products like toxic cosmetics in the local market insisting onleavingnostoneunturnedtoendthemalpractice.

TBS Officer, Mr. Elisha Meshack said in Kasulu District, Kigoma Region recently that few unscrupulous traders hide banned products including banned toxic cosmetics in their handbags or the dustbins near their shops and if a customer appears then he is given the product by code.

"We will not remain silent on the issue of supply-

ing banned products, especially cosmetics," Mr. Meshack warned, noting that TBS will not hesitate to take appropriate action against all those found to be selling banned products, as it is illegal.

He said since the methods they are using have already been identified, the Bureau will ensure that a few fraudulent traders who sell code-banned cosmetic products are prosecuted in accordance with the law.

Mr. Meshack said that TBS officials came to realise the evil tactics used by unethi-

cal traders after conducting an audit on retail stores, wholesalers, distributors, supermarkets, restaurants and elsewhere that was in line with the provision of education.

He said the audit was part of the Bureau's strategy to better manage its responsibilities by ensuring products quality and protecting the health and safety of Tanzanians and all consumers.

"We conduct inspections and provide education to retailers and distributors of various products especially food and cosmetics to ensure citizens are provided with quality and safe products," said Mr. Meshack.

Commenting on the inspection, many citizens supported TBS's move to conduct inspections and provide education to the public, as the act of traders secretly selling banned goods is an indication that education has reached them and they know they are breaking the law.

"We are pleased with the work being done

by TBS, as even consumers of cosmetics products now know what kind of products are not required in the local market," said Joyce Edward, a resident of Kibondo.

She said the inspection would be a nod to traders who have been selling expired food and cosmetics products as well as cosmetics containing toxic ingredients.

Another citizen who identified himself as Naftary Elisha, said: "I thank TBS for coming because by doing this I believe we citizens will avoid fraudulent sellers because they take advantage of our ignorance or illiteracy and sell us products that are of poor quality and expired, I suggest this exercise to be sustainable so that this habit stops completely."

TBS has been conducting inspections in all regions, which goes hand in hand with the registration of premises dealing with food and cosmetics products to ensure the health and safety of citizens are protected.



TBS Inspector, Mr. Elisha Meshack takes market samples for analysis in Kasulu District, Kigoma Region

Ensuring quality and safety of cassava and its products



Ashura Katunzi-Kilewela

assava (Manihot esculenta C) is a perennial crop that has been earmarked as a staple food crop in Africa due to its high resilience and adaptability to a wide range of ecological conditions in sub-Saharan African countries, including Tanzania. The crop is also associated with a strategy for food security. Cassava leaves are consumed as a vegetable meal, and roots are processed in different forms, which can be eaten in raw, boiled, fried or processed to different types of cassava flour. The cassava flour can be processed in various forms, including porridge (uji), stiff porridge (ugali) and bakery products. In Tanzania, cassava roots commonly processed are traditionally by using two methods, either soaking or fermentation. The traditional processing techniques, which involve soaking or fermentation, take an average of 10 to 12 days to process cassava flour, depending on the weather conditions during drying. The soaking method involves peeling, washing and soaking on average of 3 to 5 days. During this period, soaked water is recommended to be changed on average between 1 to 2 days, followed by sun-drying for 5 to 7 days.

In the fermentation technique, after peeling and washing, the roots are fermented in heaps covered by grass or any material to ensure enough heat is developed until the roots are adequately fermented. Afterwards, they are scrapped to clean the outer surface, followed by sun-drying for 5 to 7 days. After sun drying, dried cassava is milled to process cassava flour.

Currently, there is a modern method of machines to grate or slice cassava roots into small pieces. The grated cassava is in mash forms and needs pressing to remove excess water. The grated cassava is prepared by machines, dried by using sun on average of 1 to 3 days depending on weather conditions. The advantage of modern technology is that it takes a shorter time to get safe and quality cassava flour.

Feature article

Naturally, the cells in the cassava plant have a chemical compound known as cyanogenic glycosides. When ingested in the human body, cassava roots or leaves with a higher composition of these compounds produce a toxic compound known as cyanide. This cyanogenic glycosides compound in cassava is influenced by several factors, including the time of harvest, weather conditions, type of soil and type of cassava variety planted. Delayed harvesting, mainly during drought conditions, is reported to increase the cyanide content. Likewise, different soil characteristics in other areas and cassava variety planted result in varying amounts of cyanide in cassava

Generally, cassava is grouped into two groups; sweet and bitter varieties based on the cyanide content. The sweet varieties are recommended for direct consumption of cassava roots either by boiling, frying or eating raw. However, the bitter varieties are recommended for proper processing before consumption, especially cassava flour production. Adequate processing of cassava flour is crucial to ensure the quality and safety of the products, especially when the crop is of bitter variety or harvesting has been delayed.

Among the roles and mandates of the Tanzania Bureau of Standards (TBS) is to ensure the general public consumes safe and quality products through regulatory activities. This is partly implemented through provision of awareness and training to different stakeholders, including farmers and the general public. Taking this into consideration, farmers in over 20 villages in Kilindi district were recently visited in their respective areas and trained on farming, harvesting, processing, and preserving cassava and its products. The need arose due to concerns raised by the District Medical Officer (DMO) in Kilindi regarding suspected illness and possible deaths due to consumption of cassava which

had higher cyanide contents.

All preparatory steps before both the soaking or fermentation process and drying afterwards were emphasized to be appropriately followed. The cyanide is water-soluble and volatile. Hence proper care during processing using traditional techniques was emphasized. The modern methods of using either grater machines for processing cassava roots and later use of solar drier or local techniques of using sun drying were expounded. On the other hand, in preparing cassava leaves (kisamvu), farmers were informed of the means of ponding. Later on, boiling is still suitable to reduce the toxic compounds in the cassava leaves. Still, the pots should be left open for the first 20 to 30 minutes to ensure all the poisonous compounds evaporate with steam during the boiling process.

Consumption of cassava roots or leaves with high cyanide content may result in short-term effects, including vomiting, dizziness, stomach ache, breathing difficulties, chest and/or heart pain and occasionally death. Long-term exposure to small doses causes health effects primarily to children and women in production age and causes weakening of leg muscles resulting in tropical ataxic neuropathy and konzo (leg paralysis).

Feature artic

In view of the explained underlying health effects which may be caused by cyanade, farmers of cassava are urged to consider proper agricultural techniques using improved varieties resistant to diseases and with less cyanide content production. They are also advised to harvest timely and ensure adequate processing of cassava flour from bitter cassava varieties.

Cassava is a rich, affordable source of carbohydrates. It can provide more calories per acre of the crop than cereal grain crops, making it a beneficial crop in Tanzania and other countries in Africa. The farmers and general public are urged to continue farming and consumption of cassava crops and their products, while taking cognizance of best farming practices to avoid potential health hazards.

* Ms. Ashura Katunzi-Kilewela is a Quality Assurance Officer at Tanzania Bureau of Standards.

Feature article





Cassava roots

"Quality is remembered long after the price is forgotten. Always use TBScertified products"

Use of kerosene smoke in ripening of fruits and impact on the safety of the ripened banana



Dr. Joseph T. Mwashiuya

Fruit ripening is the initiation of fruit senescence which is a genetically programmed highly coordinated process of organ transformation from unripe to ripe stage to yield an attractive edible fruit (Adane et al., 2015; Islam et al., 2018; Maduwanthi and Marapana, 2019). It is an irreversible phenomenon involving a series of biochemical, physiological, and organoleptic changes (Maduwanthi and Marapana, 2019). These changes include variation in carbohydrate content, increment of sugar content, changes in colour, texture, aroma volatiles, flavour compounds, phenolic compounds and organic acids. Fruit ripening is closely linked to ethylene, a phytohormone that triggers initiation of ripening and senescence (Maduwanthi and Marapana, 2019). Ripening of fruits occurs naturally or can be artificially induced.

Artificial ripening of banana

There are modern and traditional technologies used in ripening of fruits.

a) Modern technology

In recent times, the use of artificial ripening agents has become widespread globally mainly due to the economic reasons (Maduwanthi and Marapana, 2019). The most popular artificial modern method for ripening of fruits practiced in developed countries is application of ethylene gas in ripening rooms. Modern banana ripening rooms are designed with techniques to control temperature, humidity and ethylene gas concentration and equipped with proper ventilation and exhausting systems. Banana combs are properly packed and kept in the rooms and then ethylene gas is supplied at proper temperature and humidity. Mostly "catalytic generators" are used to generate ethylene in commercial ripening rooms. The concentration of

ethylene required to enhance ripening is different for different commodities (Maduwanthi and Marapana, 2019).

Feature article

b) Traditional technology

Use of kerosene burners is one of the artificial traditional technologies applied in ripening of fruits especially in some African and Asian countries. In this case, the kerosene burners and many other traditional means are used to generate smoke in commercial scale banana ripening (Islam et al., 2018; Maduwanthi and Marapana, 2019). The bananas are mainly ripened in air-tight rooms, smoked for 72 hours using kerosene burners (Mebratie et al.. 2015). Smoke is known to accelerate ripening because it is composed of acetylene, ethylene and other unsaturated compounds, which accelerate the ripening process.

Safety and quality of banana ripened by kerosene burners

a) **Quality of the ripened banana**

Feature article

Banana fruits ripened by kerosene burners may form black scars on the peel and have low-quality sensory or organoleptic attributes (Islam et al., 2016; 2018; Maduwanthi and Marapana, 2019) compared to the naturally ripened ones. Similarly, they are likely to have low levels of vitamin C as compared to the naturally ripened banana (Adane et al., 2015; Islam et al., 2018).

b) Safety of the ripened banana

Despite of the fact that use of kerosene burners' technology is widely applied in ripening of banana in many places, there is no scientific evidence so far on impact of the technology on safety of the ripened banana.

Impact of the technique on safety of the people working in the ripening premises

Kerosene smoke accelerates the ripening process, primarily due to the presence of acetylene, (C2H2), ethylene (C2H4) and sulfur dioxide (SO2). Studies are silent on the food safety hazards associated with these contents of kerosene smoke. On the other hand, direct consumption of the acetylene gas generated from this technique might reduce oxygen supply to the brain, the situation that can lead to prolonged hypoxia (Islam et al., 2016). In addition, inhalation of sulfur dioxide

(4 – 6 ppm) for 10 minutes decreases airway conductance of a healthy person and acute exposure to high concentration of sulfur dioxide can cause pulmonary injuries which sometimes lead to death. In this case, impact of the use of the kerosene smoke technology in ripening of banana on health and safety of people working in the ripening premises need to be assessed.

Legislation aspects on use of artificial traditional ripening techniques

The following legislative aspects of artificial ripening were observed in other studies (Mebratie et al., 2015; Islam et al., 2018; Maduwanthi and Marapana, 2019):

a) Artificial fruit ripening is a complex issue, especially for the developing countries, where farmers apply unregulated artificial ripening techniques to satisfy local and international demand.

b) Some developing countries such as India, Bangladesh and other South Asian countries have sufficient legal framework to control artificial fruit ripening. In spite of having strict laws and acts, the inclination toward the use of artificial ripening agents is dominant among farmers and the vendors. do not have specific laws to regulate artificial fruit ripening. As a result, most of these countries rely on the international standards on food safety for guidance. Unfortunately, there are no international regulations that manage artificial fruit ripening techniques.

d) Unlike the developing nations, the developed countries have proper guidance for the use of ethylene as ripening agent. These standards can be adopted by other countries or can be used to set up an international standard under the framework of the World Health Organization (WHO) and the Food and Agriculture Organization (FAO).

Conclusion and recommendations

Besides wide application of kerosene in fruit ripening in Africa and Asia. there is no sound scientific evidence so far concerning the impact of the kerosene smoke technology on safety of the ripened banana. In addition, existing legislation frameworks across the countries are silent on this practice. However, since the use of kerosene smoke in ripening of banana is in use in the country and despite the fact currently there is no known impact on the safety of ripened banana, there is need to continue with monitoring the practice.

c) Many African countries

Nonetheless, kerosene smoke

ripening is a complex practice that may endanger health of people working in the ripening premises due to likely exposure to sulfur dioxide and acetylene gases through inhalation. In this respect, assessment of the impact of the method on health of engaged workers should be carried out by relevant authorities such as Occupational Safety and Health Authority.

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Dr. Mwashiuya, J.T. (BSc. UDSM, MSc. UNESCO-IHE, TheNetherlands;Ph.D.UDSM) is a Senior Analyst at Tanzania Bureau of Standards.

"For safety and higher efficiency, always buy TBS-marked/certified electrical appliances"

