Communique on the Stakeholder Validation Workshop of the Market Survey and Regulatory Gap Assessment of Hermetic Storage Technologies (HSTs) in Kenya

29th May 2018, InterContinental Hotel, Nairobi Kenya

On 29th May 2018, the Eastern Africa Grain Council (EAGC) hosted a Grain Sector Stakeholders Validation Workshop of the Market Survey and Regulatory Gap Assessment of Hermetic Storage Technologies (HSTs) used in the grain sector in Kenya. The workshop was one of the next steps of the initiative launched by EAGC in January 2018 expected to lead to develop standards for HSTs.

A wide range of industry stakeholders were represented at the validation workshop, which was held at the InterContinental Hotel in Nairobi. Amongst the stakeholders present included manufacturers and distributors of hermetic technologies, users of hermetic technologies, government Ministries, Departments and Agencies, research organisations and development partners. The validation workshop sought to share findings and seek stakeholder inputs on the market survey and regulatory gap assessment of HSTs in Kenya, build consensus on the proposed development of standards for HSTs and agree on the modalities for developing the standards.
BACKGROUND

Hermetic Storage Technologies (HSTs) are air-tight storage products that prevent oxygen and water from the atmosphere from penetrating and circulating within the storage device whilst allowing carbon dioxide to build up. In turn, this facilitates good storage of dry agricultural commodities by preventing survival and multiplication of pests without the use of pesticides. Common HSTs include hermetic bags, metal silos and plastic grain containers.

HSTs are playing a crucial role in the fight against post-harvest losses, particularly in grain commodities. It is estimated that over 1.5 million units of hermetic bags have been sold to farmers in Kenya to date, with users benefitting from much lower post-harvest losses, improved quality of stored commodities and higher incomes. As the market for HSTs expands, there is increased risk of sub-standard products entering the market, which may undercut genuine suppliers of HSTs, and undermine proper grain storage by farmers and aggregators. Consequently, industry stakeholders have called for development of standards for HSTs and a regulation that enforces adherence to the Standards.

EAGC heeded the industry’s call and launched the initiative to develop standards for HSTs in Kenya. The process commenced with a stakeholder inception workshop in January 2018 in Nairobi, which produced broad consensus amongst stakeholders on the need for standards and agreed on a series of key milestones in pursuit of the Standards. The first undertaking agreed upon with stakeholders was to compile evidence to support the case for development of the standards. This led EAGC to commission a market survey and regulatory gap assessment of the HST sub-sector in Kenya. The survey was conducted by between March and May 2018, culminating with this stakeholder validation workshop.

A. Opening Remarks by EAGC

In his opening remarks, EAGC Executive Director, Mr. Gerald Masila: THANKED participants for taking part in the validation workshop. APPRECIATED stakeholders for their commitment to the process which will benefit the entire grain sector. POINTED out that the purpose of the workshop was to receive the findings of the survey which EAGC was tasked to undertake to build a case for HST standards in Kenya. MENTIONED that the meeting that the process of developing HST standards is a trailblazing initiative which has no precedent anywhere else in the world. This has generated significant interest amongst regional and global level stakeholders, with EAGC now engaging stakeholders outside Kenya on the possibility of escalating the process to regional (East African Community) and international levels.
REITERATED that stakeholders in Kenya are privileged to set the pace with respect to HST standards for the rest of the world to follow.

B. Presentation of findings of Market Survey and Regulatory Gap Assessment

The Market Survey and Regulatory Gap Assessment of HSTs was contracted to Agile Consultants Limited. The assignment entailed:

- Documenting the variety and range of HSTs in the market, and identifying the main players
- Assessing demand and supply dynamics of HSTs
- Identifying the quality parameters used to assess hermetic properties of storage products
- Assessing user perceptions of quality of different HSTs
- Analysing the legal and regulatory framework for HSTs to identify gaps which may be filled by the proposed standards for HSTs.

Mr. Ben Mwongela, the lead consultant of the assignment shared findings of the survey, which are summarised below:

- There are three main categories of HST products in the market today, these being hermetic bags, metal silos and plastic grain containers. Of these categories, hermetic bags were deemed to be the most dominant product category, with metal silos and plastic grain containers enjoying far smaller market shares.

- Popularity of hermetic bags was mostly due to their much lower purchase price (lower initial outlay) compared to metal silos and plastic containers, despite the latter products having much greater durability and representing higher return on investment.

- There are two main parameters used to determine the hermetic properties of HSTs, these being the Oxygen Transmission rate (OTR) and the Water Vapour Transmission Rate (WVTR). These are the rates at which oxygen and water vapour respectively pass through a product or barrier over a period of time. These parameters are predominantly used for hermetic bags; therefore, there is need to identify parameters which may be used to measure hermetic properties of metal silos and plastic grain containers.
• Amongst hermetic bags, there is significant variation amongst different bags with respect to hermetic properties as determined by the OTR and WVTR. Furthermore, not all products undergo efficacy trials by the Kenya Agriculture and Livestock Research Organisation (KALRO) or the International Centre for Insect Physiology and Ecology (ICIPE), since these trials are mostly for research purposes and are not mandatory. This proves that the development and implementation of standards would significant support the standardisation of the quality and properties of hermetic storage products.

• There are currently no regulations governing the manufacture and distribution of HSTs in Kenya. The absence of any form of regulation of HSTs affects the entire HST sector; users are vulnerable to purchasing sub-standard products wrongly being marketed as hermetic products, while the regulatory vacuum exposes manufacturers and distributors to counterfeits and regulatory challenges as observed when the plastic bag ban was first introduced in 2017.

• Furthermore, the lack of standards means that there is no metric by which to measure the quality of HSTs, leaving a significant loophole for unscrupulous practices. For instance, some traders sell conventional plastic bags as hermetic bags, while in some instances bags used for packaging sugar are utilised as hermetic bags for grains. If such practices are left unregulated, the uptake of genuine HSTs to combat post-harvest losses will be seriously undermined.

• Beyond the regulatory gap with respect to HSTs, there is significant need to invest more in awareness creation of HSTs, both to encourage uptake and to promote proper use of such products. It was noted that several myths continue to exist among farmers regarding HSTs, including the misconception that HSTs can convert poor quality grain into good quality grain (for instance by “removing” aflatoxin), or that any plastic bag qualifies as a hermetic storage bag.

The consultants also pointed out some crucial information gaps, such as the limited availability of technical information about HSTs and the size of the HST market, and called for manufacturers and researchers to avail such information to complete the study.
C. Remarks by the African Organisation for Standardisation and Kenya Bureau of Standards on the proposed development of HST standards

Dr. Reuben Gisore, Technical Director at the African Organisation for Standardisation:

- **PRAISED** EAGC for taking the initiative to pursue the development of HST standards;

- **WELCOMED** the fact that the proposal to develop standards for HSTs is demand-driven and is originating from the industry, which will ensure ownership of the standards by industry and will facilitate their implementation;

- **ADVISED** stakeholders that the proposed standards for HSTs should be able to guarantee the quality of goods for a minimum period of time, and recommended that stakeholders should be clear on how many standards they require and for which products.

Ms. Agnes Mdzomba, Standards officer at the Kenya Bureau of Standards (KEBS):

- **INFORMED** stakeholders that KEBS is a willing partner in the process of developing the proposed standards for HSTs.

- **POINTED OUT** to stakeholders that the standards development process is a scientific process guided by principles and procedures informed by international best practices.

- **CALLED** on stakeholders to provide the necessary technical data and scientific analysis from their respective institutions in order to inform the standards development process.

- **NOTED** that the Standards development process will be spearheaded by a Technical Committee established in line with the guidance of the Kenya Bureau of Standards (KEBS). Therefore, the private sector through EAGC will nominate technically-competent personnel to serve on the Technical Committee.
Mr. Geoffrey Kiganiri, Extension and Facilitation Input Specialist at the USAID Kenya Crops and Dairy Market Systems Development Activity:

- **WELCOMED** the process of developing HST standards, noting that the initiative consolidates the significant gains made by the now-completed USAID Kenya Agricultural Value Chain Enterprises (KAVES) project in promoting the uptake of hermetic storage products in Kenya.

- **CALLED FOR** the market survey to document the impact of adoption of HSTs on farmers’ incomes and reduction of post-harvest losses, so as to solidify the case for development of HST standards.

- **EXPRESSED** the commitment of the USAID KCDMSD Activity to support the process of developing HST Standards, and expressed willingness to support industry stakeholders in efforts to promote uptake of HSTs, reducing post-harvest losses and other initiatives relating to development of crop and dairy value chains.

E. General Observations and Recommendations by Stakeholders

The validation workshop was highly interactive, with stakeholders engaging actively with the findings of the survey and on the necessary next steps. In doing so, the stakeholders:

- **NOTED** that the absence of standards means that there is no legal or regulatory basis to declare sub-standard products as counterfeit, meaning that no remedial measures can be availed to affected parties nor give penalties to offenders. As such, the development of standards for HSTs is critical.

- **AGREED** to cooperate fully with the standards development process, with the goal of completing the standards development process within six (6) months.

- **ADvised** that, with respect to hermetic bags, the proposed standards should focus on the inner liner(s) rather than the outer bag since it is the inner lining(s) that determine the hermetic properties of the product.
• **POINTED OUT** other forms of HSTs which should be considered in the standards development process, including products such as cocoons or silo-bags.

• **AGREED** to develop the standards in part for the different hermetic technologies i.e. bags, metal silos, cocoons, plastic silos and silo bags so that all technologies are covered and standardised.

• **AGREED** that communication and messaging for the HST technologies needs to be developed as part of complementing the process of standardizing the HST industry.

• **CALLED FOR** the market survey to include a cost-benefit analysis of different classes of HSTs, so that end-users and policymakers are informed accordingly of the benefit and positive impact of HSTs.

• **PLEDGED** to provide EAGC with more information to estimate the market size of HSTs in Kenya, noting that this information will be critical in informing the reason for investing in standards for the sub-sector. EAGC will therefore prepare Non-Disclosure Agreements to preserve confidentiality of information provided by manufacturers.
THE WAY FORWARD

The following were agreed as next steps in the process of developing the Standards:

- EAGC to **SHARE THE DRAFT MARKET SURVEY REPORT** with stakeholders for their in-depth review. Stakeholders will revert with comments by 12th June 2018. EAGC will **FINALISE THE REPORT** by 19th June 2018.

- EAGC to **ENGAGE KEBS** to establish the Technical Committee. The Committee is expected to consist of 15-20 members who are technically-competent experts from the public sector, the private sector, research organisations and other competent bodies. EAGC will coordinate the private sector nomination process for inclusion in the Technical Committee.

- EAGC will **COMPILE THE NECESSARY TECHNICAL AND SCIENTIFIC DATA AND INFORMATION** on HSTs from industry stakeholders. This information will inform the Standards development process.

- Industry stakeholders will **SHARE WITH EAGC THEIR DATA AND INFORMATION** relating to market shares, which will enable EAGC to estimate the size of the HST market. EAGC will sign Non-Disclosure Agreements with all organisations which provide this information, so as to protect confidentiality and integrity of such information.

- EAGC to **ESCALATE THE STANDARDS DEVELOPMENT PROCESS** to the EAC secretariat and engage the other Partner states to initiate a similar process.

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Figure 1: a cross-section of stakeholders at the workshop

Figure 2: Mr. Gerald Masila of EAGC (left) with Ms. Agnes Mdzomba of KEBS (centre) and Dr. Reuben Gisore of ARSO (right) at the validation workshop
About the Eastern Africa Grain Council

The Eastern Africa Grain Council (EAGC) is a membership-based organization representing the grain sector in Eastern and Southern Africa. The Council exists to facilitate efficient, structured, profitable and inclusive grain trade in its 10 mandate countries, namely Kenya (Regional Headquarters), Uganda, Tanzania, South Sudan, Ethiopia, Burundi, Rwanda, Zambia, Malawi and the Democratic Republic of Congo.

EAGC draws its membership from grain sector value chain actors in its Member States, which include farmers, traders and processors. Support service providers and complimentary sectors such as agro-input suppliers, financial services and animal feed manufacturers also form part of the Membership.

In facilitating structured grain trade in the Eastern Africa region, EAGC provides trade facilitation services through the EAGC GSoko Grain Trading System; market and cross-border trade information through the Regional Agricultural Trade Intelligence Network (RATIN – www.ratin.net); pursuing appropriate policy reforms to support growth of structured grain trade through the Agricultural Trade Policy Advisory Forum for Eastern and Southern Africa (ATPAF-ESA); and capacity building of grain industry stakeholders through the Eastern Africa Grain Institute (EAGI).

For more information, please feel free to contact the EAGC Secretariat through the addresses below:

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**List of participants**

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