



Chemical safety measures in food safety management

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Chemical safety measures are an important aspect of food safety management, as they are designed to ensure that the food we eat is free from harmful contaminants that could cause illness or disease. Some of the key chemical safety measures used in food safety management includes:

Hazard analysis involves identifying potential hazards that could be present in the food, such as pesticides, heavy metals, or food additives. Risk assessment involves evaluating the likelihood and severity of harm that could result from exposure to these hazards. Good agricultural practices used in farming and production to minimize the use of hazardous chemicals and ensure safe handling and storage of chemical products. Good manufacturing practices procedures used during the manufacturing and processing of food to ensure that chemicals are used safely and correctly. Hazard communication involves providing clear and accurate information about the hazards associated with certain chemicals, as well as instructions for safe handling and use. Regulatory compliance: Food safety regulations and guidelines are in place to ensure that chemical safety measures are followed and that the food we eat is safe (Jimenez-Carvelo, 2019).

This study seeks to provide insight into current deficiencies in food safety management systems (FSMS) in African food-processing companies and to identify possible strategies for improvement so as to contribute to African countries' efforts to provide safe food to both local and international markets. This study found that most African food products had high microbiological and chemical contamination levels exceeding the set limits. Relative to industrialized countries, the study identified various deficiencies at government, sector/branch, retail and company levels which affect performance of Africa. For instance, very few

companies except exporting and large companies have implemented. Various measures were proposed to be taken at construction of risk-based legislative frameworks, strengthening of food safety authorities, recommend use of and consumers' food safety training branch sector-specific guidelines and third-party certification retail develop stringent certification standards and impose product specifications and company levels improving hygiene, strict raw material control, production process efficacy, and enhancing monitoring systems, assurance activities and supportive administrative structures. By working on those four levels, companies could be better designed and tailored towards their production processes and specific needs to ensure food safety (Su & Sun 2018).

Recent food-borne outbreaks and cases of non-compliances to maximum residue limits of pesticides, indicated that food safety management systems (FSMS) in fresh produce chain are not yet performing in a satisfactory manner. However, the system output is not only dependent on the system design and operation but also on the context wherein it operates. The major context factors that create risk to decision-making in FSMS in the fresh produce chain have been defined in this study, and a tool was developed for their systematic analysis. The tool supports a differentiated assessment of context riskiness, enabling actors in fresh produce chains to take measures in their FSMS or reduce riskiness in the context. The tool can be used at primary production, processing, and trade, and can thus provide insights in the changes of context riskiness over the supply chain. It enables systematic analysis of the context in a product group, sector, or country (Longobardi et al., 2015).

Food safety has been a growing concern among European Union (EU) citizens over the last decades. Despite the

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fact that food has never been safer, consumers are considerably uncertain and increasingly critical about the safety of their food. The introduction of new principles, such as the primary responsibility of producers, traceability, risk analysis, the separation of risk assessment and risk management provided a more transparent, science-based system in Europe, which can help to restore consumers' lost confidence (Pauli et al., 2017; Vitali et al., 2018).

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