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FRAUDULENT FOOD PRODUCTS OUTBREAK IN SOUTH AFRICA: A CONUNDRUM FOR FOOD CONTROL AUTHORITIES

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ABSTRACT

The concept of food fraud or food adulteration has become increasingly important in recent years, as it not only serves as a means for perpetrators to make quick money but also poses significant risks to consumer health. This threat is often fuelled by the use of unmonitored or unregulated ingredients. The rise in food fraud can be attributed to various factors, including the demand for specific food products, inadequate monitoring of food production, poor border management for food control, and the opportunities presented by free trade and entrepreneurship. To gain insights into the extent of food fraud, a review of reported cases from 2015 to 2024 was conducted, focusing on well-known cases in South Africa during this period. The review also examined the products typically implicated in food fraud, and identified the responsible authorities tasked with regulating the manufacturing, handling, and distribution of these products in South Africa. The findings indicate that food fraud is on the rise, with fraudsters becoming increasingly adept at concealing the illegitimacy of their products. While food adulteration may involve the use of uncertified ingredients, the most fraudulent activities occur in uncertified facilities and during processing steps. One of the challenges in controlling food fraud is the fragmentation of regulations and responsible authorities for enforcing these regulations. Over 94% of regulatory requirements identified in six regulatory authorities were found to be duplicated in some way, resulting in an unclear mandate for the industry. To address this issue, a new approach is needed to centralize food control plans in South Africa. This approach should facilitate proper recording, investigation, and resolution of complaints. Additionally, unified regulations, capacity building for authorities, and consumer awareness plans are necessary. A similar approach to the blitz inspection by bringing together food authorities, consumers, and the industry in a single forum to conduct inspection and enforcement and act against food fraud. While this is a good proactive response, however, keeping its momentum could not always be available.

Key words: Foods fraud, regulations, illegal, adulteration, food, facilities, food control, fragmentation



INTRODUCTION

Globally, the issue of food fraud remains one of the significant threats to human society and public health at large [1, 2]. The view is that this problem is growing from time to time [2]. This growth has been seen in the past few decades, gaining prominence [3]. While this phenomenon was previously linked with the specific forging of non-food international brands, this scandalous behavior has moved to food production and interlinked processes [4]. In describing these phenomena, counterfeit foodstuff can be any food product that has been repackaged and sold but claims to be from another brand name [3]. This paper seeks to unpack the ideology of food fraud in the context of South Africa [5]. Many food researchers have worked and published some papers addressing the issue of food fraud specifically in the African context [5, 6].

To unpack this, a question should be asked: "What is a fraudulent food product or fake food as it is affectionately known in South Africa?" The response to this question could not be far from an academic analogy and the conclusion that "fake food" is food that is not food. Ambiguous as it may sound, the term has been widely used and has a level of linkages to the idea of fraud, criminality, transgression, counterfeiting, deceit, scam, and many other dishonest deeds [6]. The World Health Organization states that food fraud involves intentional adulteration, substitution, addition of specific ingredients, tampering, and misrepresentation of food product information. In all, it is the idea of the science of deception versus the science of detection [7, 8]. While all this is generally done to gain money, the direct consequence may include jeopardizing consumer health, where harm could be concealed in a product to be ingested by a non-suspecting consumer [9].

At the international level, several food fraud cases have been reported. These reports would generally be from specific news channels or farming organizations or even key stakeholders, as was the case around 2023 when investigative journalist Kay (2023) exclusively reported on the issue of mass food fraud and safety scandals that engulfed the British farming community. The report goes on to highlight the impact of these diabolic acts and how they stood to destroy the farming economy of Britain [10, 11]. Ironically, this report details a similar *modus operandi* that was reported around the mid-2000s, termed the horse meat scandal in Europe. This scandal was centered around customer deceit, where specific products not correctly labeled were sold to consumers as other products. In this case, beef meat was contaminated with other meats from other animals, including horse, donkey, game and any other meat types [10, 12]. Traces of this contamination were found in some meat products, both raw and processed, including sausages, patties, biltong, and many other meaty products. This scandal had caught many food authorities by surprise [13].

Research institutions instigated research within their countries. Subsequently, in South Africa, the same results were found by Cawthorn, and Steinman [14]. The investigation by Hoffman found that some products sourced at different retailers had traces of contamination by either product. While the ideology of "food is food" is profound in Africa and African cultures, most consumers in South Africa felt cheated by the industry, and the online circulation of images that suggest illegal production exacerbated the situation. As a result, striking changes had to be made to regain consumer trust [14].

In a study by Mahlangu *et al.* [15], it was evident that consumers are placing high trust in authorities to ensure that the food produced is safe and fit for human consumption. This trust moves beyond issues of safety but also includes issues of ethics and integrity [16], which are not always the priority of some businesses but more of an enforced reaction [17]. While South Africa has some of the best regulations in food production and control, similar to many low and middle-income countries, the applicability and enforceability of laws by authorities continue to be challenging [18]. A typical example is the issue of the term "fake or fraudulent food products" and its context, a term generally used by consumers but not holding much ground as food cannot be an imitation of its nature. Hence, in South Africa, the observance of observable or detectable safety hazards and labelling issues remained the angle for a reaction by food authorities. In these instances of quality, Environmental Health must transfer the duties of further investigation to another authority [19, 20]. Typically, if an example of meat control is given, an abattoir is controlled by Veterinary Public Health and regulated under the Meat Safety Act in the sub-directorate of the Department of Agriculture [20]. However, once carcasses are loaded onto the meat vehicle and transported to a butchery, the mandate of the Municipal Health Services, R638, and other linked regulations kicks in, and the authority is changed. This change is technically challenging as some abattoirs would have a processing plant that is in a way controlled by Environmental Health and other food authorities. In many instances, these changes lead to confusion and poor food processing facilities enforcement strategies, resulting in a systemic poor application of monitoring food facilities [21, 22].

To present a proper argument, figure 1 of this paper clarifies the typical processes of food production and possible areas where adulteration could occur in an ordinary food production line. While it is accepted that contamination could come from anywhere in the production line [23], it is during ingredient mixing that intentional adulteration is likely to occur [24].

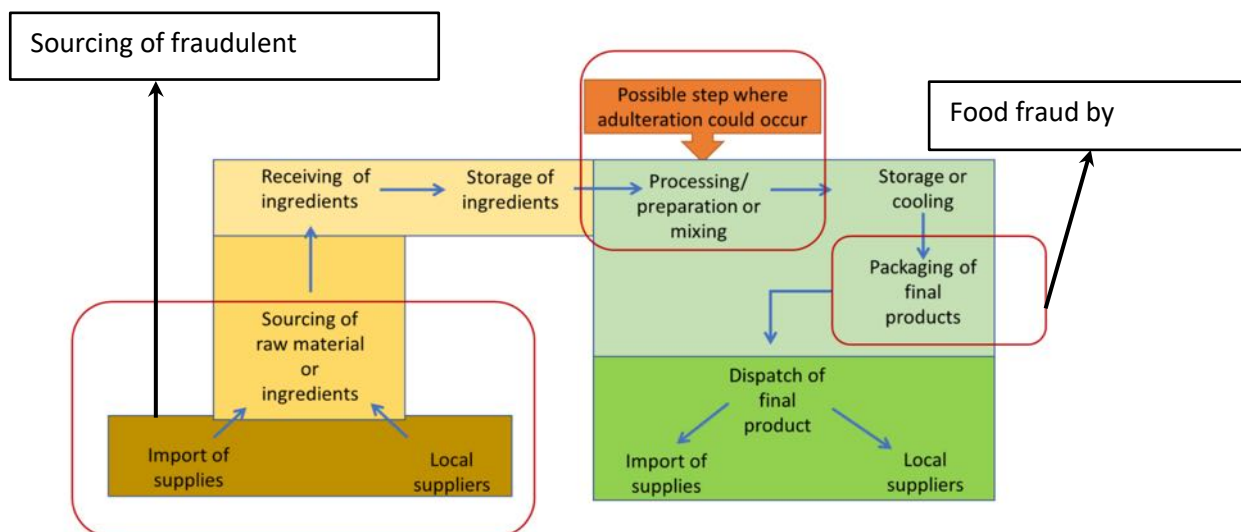


Figure 1: A typical food production line and the area where adulteration could take place and influence the final product [24]

From this figure, manufacturers could source counterfeited raw materials from both local and international suppliers. The onus is on the secondary manufacturer to verify the compliance of ingredients as specified [24]. This onus is further passed on to the brand to ensure compliance with food safety management systems to provide standardized food safety assurances and customer satisfaction [25]. As a country, South Africa has sufficient requirements that food facilities must comply with. These requirements range from primary to tertiary production, encompassing Good Hygiene Practices (GHP), Regulations controlling the handling of food products and the use of a food safety management system (FSMS) [14, 26]. These standards and regulations clearly outline the roles that food business operators must play to ensure the production and processing of safe meat products. In general, food-producing businesses across the supply chain (from farm-to-fork) are required to establish and implement a documented FSMS. This includes policies and procedures, hazard control plans to identify potential hazards (biological, chemical, and physical) that may be introduced during production, implementation of mitigation measures, and monitoring the effectiveness of these measures to reduce identified hazards to acceptable levels or eliminate them before the product reaches the consumer [27]. However, adulterated food products are typically manufactured in unmonitored or illegal facilities [28]. While this may be the case in most instances, it is not always clear to consumers. The risks associated with such manufacturing practices pose a significant health threat to unsuspecting consumers [4].

Food adulteration ramifications

The glaring implication is the potential impact on consumer health [4]. As stated, it is expected that authorities and Environmental Health Practitioners (EHPs) should identify these products and investigate them for possible contamination, focusing not only on the safety of the product but also its genuineness [29, 30, 31]. While food control is based on the fundamental responsibility of ensuring food availability, accessibility, and utilization, the ultimate responsibility lies with the manufacturer to ensure that all products are safe for human consumption. This includes ensuring that the facilities where the products are produced are registered and have a valid Certificate of Acceptability from the Municipal Health Services [32]. The responsibility for histological testing falls outside the scope of environmental health, as it is the manufacturer's responsibility to properly label ensure food products and ensure swift tracing when needed. However, EHPs and other authorities still play a role in ensuring product compliance with labelling regulations and proper handling of the products at processing plants or points of sale [33]. Correctly stated by Mahlangu *et al.* [15], food products should be correctly labelled, and this will aid processes of traceability and verification where needed, in most cases lack of resources result to incapacitated in investigation by EHP [34]. This then places the onus on consumers to be aware of what they are purchasing, although it can be a significant request considering that consumers generally place a great deal of trust in authorities to ensure acceptability [35]. To worsen the situation, in South Africa there are multiple regulations governing the handling and control of food products, which may be enforced by various food authorities. These fragmentations of laws can lead to inconsistencies in enforcement and subsequent confusion to the industry. This review focuses on recently reported or suspected adulterated or fraudulently produced products, the regulatory authorities responsible for their control, and the nature of the responsibilities outlined in applicable legislation or mandates.

MATERIALS AND METHODOLOGY

This review focuses on the suspected cases of food adulteration reported in popular social media complaint platforms in South Africa from 2015 to 2024. The author revisited social media pages that had reported these cases, recorded the nature or types of products implicated and presented this in table 1. It is important to note that in many cases, Environmental Health Practitioners (EHPs) and other food agencies may have taken action to remove these products if deemed necessary. Therefore, the specific outcomes of these complaints, their investigations (if any), and their conclusions are not known to the author. As specified in the scope of practice of EHP, the purpose of an investigation would typically be to identify any safety hazards that may pose a risk to consumers. It is important to clarify that this report does not

validate any complaints or claims. Instead, it aims to document the nature of adulteration in specific food products in South Africa and the challenges it poses to authorities and consumers in general. Table 1 provides an overview of the types of suspected food products, their respective categories, and the responsible authorities mandated with monitoring and controlling their production. Further on table 2, the nature of regulatory duplications found in food regulation applicable to common food regulations in South Africa.

RESULTS AND DISCUSSION

The results of this study cover three important aspects of reported food fraud cases in South Africa from 2015 - 2024. The first aspect focuses on classifying the types of products that have been adulterated or suspected to have been adulterated in South Africa over the past ten years. The report indicates that the majority of suspected products are processed and ready-to-eat, including perishable items like meat and milk that were suspected to have been adulterated, fraudulently made or contaminated in one-way or another in South Africa. Table 1 provides a list of suspected counterfeit or adulterated products in South Africa that were reported in social media pages such as X (formerly twitter), Facebook, Tiktok by users in South Africa during the study period. This list is not exhaustive, and It could have left out other products that were not reported on any social media platforms.

The second aspect of the results highlights the authorities responsible for manufacturing and controlling these products. The table presented is not exhaustive, but it demonstrates the fragmented nature of product control in South Africa. Different authorities and inspection bodies are responsible for overseeing fraudulent products. The third aspect of the results examines the extent of regulatory fragmentation and its application in the South African context, as presented in table 2. There are not less than six authorities or agencies responsible for food control monitoring and compliance checking in South Africa. These authorities are responsible for overseeing not less than eleven regulations in food control with over 300 common compliance requirements being asked. From the results (26) Twenty-six regulatory requirements are linked to fraudulent food production controls and they are controlled by different authorities thus leading to total fragmentation of the intention of the legislature when drafting these laws. It is worth noting that there is a significant overlap in requirements, with over 94% of the regulations duplicated by other food agencies.

The breakdown of food fraud-related mandates reveals that various authorities focusing on specific aspects such as food fraud and defense, control of nonconformities in products and processes, the addition of preservatives, food additives, food colorants, sweeteners, packaging and labeling, product

specifications, product recall, rework, inspection, contamination prevention and control, and pesticide residue limits where working in silos. When looking at the fragmentation of laws it is clear that the processes of enforcement could be complex. To give a whole picture, other duplicated requirements pertaining to structural compliance, personal hygiene, transportation, training, water, and energy requirements, among others were also observed and are included in table 2.

The production process of food production depends on the type of product being manufactured and the specific steps generally as specified above in figure 1. However, the safety and quality of the product is solely dependent on the inputs and outputs from these basic steps. This is supported by Akhmetova *et al.* [37], where their investigation revealed that the final product is a result of specific occurrences or the lack thereof during the manufacturing process. Cabrera *et al.* [38] supports the idea that product ingredients may contain inherent hazards that can be addressed through pre-required processes and basic quality control at the factory level. However, in an environment where there is no monitoring or compliance control, hazards can be introduced via incoming ingredients, which can impact the safety of the product for human consumption [28].

It is important to note that unmonitored environments play a significant role in food fraud or food adulteration [39]. A similar investigation by Pesulima *et al.* [40] confirmed that food authorities have a crucial role to play in monitoring and controlling food production. Overall, these studies highlight the importance of monitoring and compliance control in ensuring the safety and quality of food products. It must be noted that in some parts of South Africa, specifically Gauteng province and many other Provinces, Environmental Health continues to conduct blitz (sting) or joint operation inspections at suspected food facilities. However, to keep up with challenges, the dedication of resources to blitz or inspection may not be sufficient and sustainable. As the same professionals must still continue with other scope of practice responsibilities of EHP as tasked [39]. It is learned from this investigation, that almost all food products could be adulterated and fraudulently manufactured. While the responsibility of ensuring food, control is with food authorities, the entire food stakeholders must play a meaningful role in curbing these challenges.

Food adulteration control

The findings of this review are further supported by Djekic, and Jambrak [41], who found that adulteration in food facilities mostly occurs during the processing stage, though the description of adulteration processes could be extended to sourcing of already contaminated ingredients. As depicted in figure 1, adulteration can also occur through mislabelling and product counterfeiting, depending on the specific product being produced [42]. The act of adulteration involves bypassing certain steps

in the food production process, omitting specific ingredients, or adding ingredients that are not typically used in the manufacturing of that particular food product [43]. A concerning aspect of adulterated food is that it often lacks a process step that could remove the safety hazard introduced [44]. The purpose of adding these adulterants is to deceive or gain an advantage over the consumer, making the processing step an important control point for authorities during routine inspections [26].

It is imperative for food authorities to regularly conduct inspections, clarify and address these fraudulent and dangerous practices [40]. While adulteration can occur even in registered facilities, it is assumed that registered facilities have more at stake as they are regularly inspected and audited to ensure product safety and quality [41]. In such facilities, suspected contamination events would result in a coordinated product recall exercise, which is costly for the organization. This is why formal companies invest a significant amount of money in Food Safety Management Systems such as FSSC, HACCP, and ISO [45]. In the case of unregistered facilities, consumers are the only witnesses to the authenticity of the product [45, 46]. In other instances, authorities rely on community tip-offs and complaints to become aware of the existence of such facilities and to take necessary actions to shut them down and press criminal charges against the perpetrators [46].

Similar to many countries, South Africa has different stakeholders that are mandated to control the manufacturing of various food products [47, 48]. However, as highlighted in table 2, the fragmentation in law application processes and adulteration prevention has significant impacts to the food sector [49]. The ramifications of fragmented food laws have been well-documented, and the findings consistently point to a confusion among consumers and the industry [50]. Another challenge identified by this review is that different authorities may inspect and certify the same facility by applying different legislation, leading to inconsistencies and contradicting requirements, the question that hangs is whose mandate is it anyway [51].

Consumers' awareness and responses

Consumers are continuously urged to report suspected illegal practices of food fraud. While the campaign to educate consumers on important front-of-pack (FOP) product labelling information and packaging are well-intended, food fraudsters are becoming sneakier [15]. They package a product in a way that even a trained person may not detect that it is fraudulent [3]. Furthermore, consumers often do not know where to report such cases [17]. The phone number provided on the package could be non-existent, as it is an illegal product after all. Instead of formally registering a complaint, many consumers turn to social media to share their challenges [13, 52]. This shifts the focus of authorities to verifying the authenticity of these reports rather than immediately investigating the case. In cases of illegal operations, culprits may relocate their operations before any blitz (sting) operations could have been conducted [52].

This paper presents a response plan that can be adopted by food control stakeholders. This plan involves the collaboration of industries, authorities, and consumers in addressing these challenges. While this collaboration has been achieved in many parts of the world through the creation of food control committees since the early 2000s, the effectiveness of these committees is difficult to measure [53, 54].

Theoretical model for food control plan

Figure 2 illustrates a theoretical model for the control processes of food production in a typical food processing plant in South Africa. This model identifies stakeholders and role players in food processing plants, similar to many middle-income countries [54]. This model integrates the necessary levels of food control in a food processing plant and the collaboration of the identified role players is a fundamental response to controlling and monitoring adulterated food in South Africa. Figure 2 depicts three pillars of the food control triangle in South Africa: (1) Industries - where product authenticity is clarified during stakeholder meetings to guide other committee members on what is real and what is not; (2) Consumers - including stakeholders and role players in food production processes. With proper collaboration and frequent communication among industry stakeholders and the forum itself, policy directions to improve the identification, evaluation, and control of hazards found during slaughter can be enhanced; (3) Authorities - the enforcers whose message should be clear regarding food law enforcement. It is essential for the industry to drive these forums to address issues of fraudulent and adulterated food products. The collaboration of these committees would increase awareness, training needs, and stakeholder capacity. The government's role should be to oversee and facilitate the efficiency of outputs.

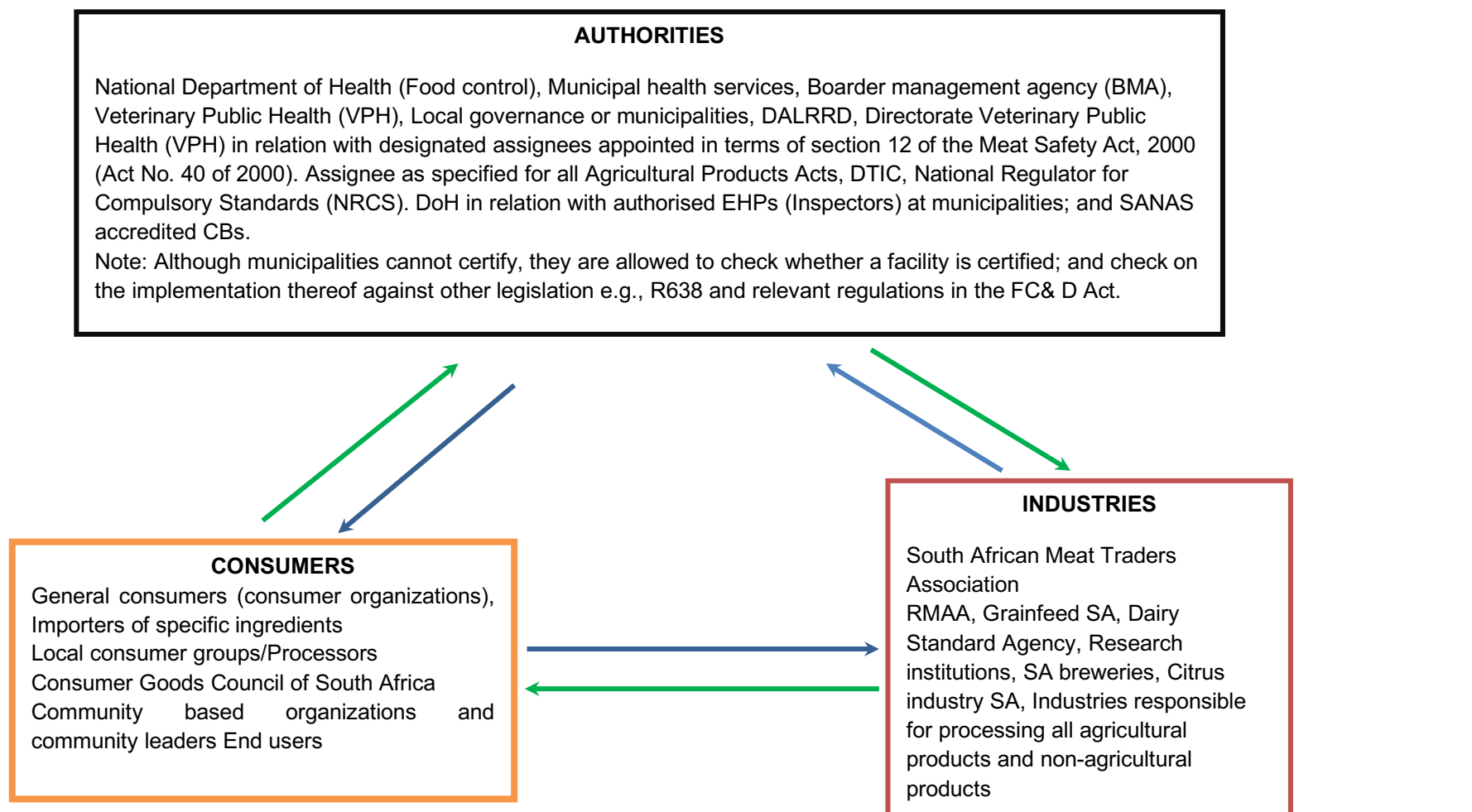


Figure 2: Theoretical model of food control in South Africa, an approach similar to the one health plan of the World Health Organisation (WHO) [22,55

CONCLUSION AND RECOMMENDATIONS FOR DEVELOPMENT

Food fraud risk assessors and the coordinated approach aimed at balancing and optimizing the acceptance of products and the health of people, the environment, and animals by preventing, predicting, detecting, and responding to health threats. However, these good deeds framework must be by proper enforcement and secondary trading monitoring at all spheres of government. This paper recognizes the absence of animals but the presence of a host industry where fraudulent food products are produced. Similar to the one health concept, collaboration among the industry, authorities, and consumers is crucial in addressing the issue of food fraud. Figure 2 illustrates the structure of response, referred to as forums, in a triangular manner. The figure emphasizes the continuous sharing of information in both directions. The paper highlights that the fragmentation in the enforcement and application of regulations may contribute to the poor management and monitoring of fraudulent food production. Proper enforcement of food regulations by all authorities, along with a clear understanding of the roles played by food stakeholders in the forums, is necessary to address the root causes of fraudulent food production in South Africa and uphold food control mandates.

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AUTHOR'S CONTRIBUTION

DVN conducted the review.

Ethics statements

The investigation is a review and thus did not requires any ethical clearances.

Funding

None

LIMITATION OF THIS INVESTIGATION

The investigation relied on social media reports and videos that were posted during a specific period. This could mean that the legitimacy of the reports could not be verified and followed up. The study did not consider formal complaints registered to the food authority. The review, however, points to significant flaws like food control in South Africa. The following studies are identified for further investigation:

- Investigation on the histological surveillances of suspected and implicated food products.
- Authorities' capacity building and surveillance to identify, detain and remove susceptible products from the food chain.



- Mandated authorities for the control and monitoring of different food products handling and distribution in South Africa.

Table 1: A list of the reported counterfeit or adulterated products in South Africa from 2015 - 2024

Suspected product	Category / type of a product	Nature of the product	Responsible authority
Milk	Dairy	Ready to eat (Liquid)	Dairy standards agency / Department of Health / Municipal health (MHS)
Honey	Natural products	Ready to eat (high viscosity)	Department of Agriculture Municipal MHS Assignees
Bottled Water	Natural product	Ready to consumer	DOH, Municipal MHS (Unclear)
Mayonnaise	Composite product (Many ingredients)	Ready to eat high viscosity)	Department of Health / MHS
Additives (salts and spices / flavorings / sources	Composite product, sources / solutes	Ready to eat additives	Department of Health
Beverages	Soft drinks	Ready to eat soft drinks	Department of Health
Processed meat	Composite product	Raw or cooked	Department of agriculture, Department of Health, NRCS
Meat red meat	Red meat laced with any other meat (undeclared)	Unclassified / raw and cooked	Department of Agriculture Veterinary Public Health
Medicinal	Specific products	Ready to eat pharmaceutical	/Pharmaceutical/Council of South Africa
Chips long necks	Crips	Ready to eat snacks	Department of Health/MHS
Canned stuff	Canned products	Ready to eat /	Department of Health Trade and industries Municipal Health

*Please refer to table 2 for a detailed overview of the duplicated requirements and their respective authorities

Table 2: A non-exhaustive comparative summary of meat processing legislation in relation to their control in South Africa

Regulations and specifications	R 1283	R 2410	R55	Only the Act	R638	R 908	Regulations concerning composition	Abattoir and slaughter regulations	VC 8019	VC9100	Only the Act
Focus	Quality	Quality	Quality	Consumer protection	General hygiene	Safety (HACCP)	Quality & safety	Safety	Canned Safety	Safety	Quality & safety
Act	APS Act, 1990			CP Act, 2008	FCD Act, 1972			MS Act, 2000	NRCS Act, 2008		BMA Act, 2020
Mandated authorities right	DALRRD, Directorate of Animal Production and Veterinary Services in relation with assignees			FSQA in relation NCC	DTIC, in relation with EHPs (Inspectors)	inDoH, Directorate of Health with authorised municipal	Food Control in relation with municipal	DALRRD, (Directorate of Veterinary Services) in relation with assignees	VPH)DTIC, in relation with NRCS		DHA, BMA
Requirements below											
Certification / approval	√	-	√	√	√	√*	√	√	√	√	√
Allergens control	-	-	-	-	√	√	-	-	-	-	-
Export and imports	√	√	√	√	-	√	-	√	√	√	√
Food defence	-	-	-	-	√	√	-	-	√	-	√
Food fraud	-	-	-	-	√	√	-	-	-	√	√
Limits for veterinary medicine in meat products	-	-	-	-	-	√	√	√	-	-	-
Limits of toxic / heavy metals in products	-	√	-	-	√	√	√	√	-	-	-
Limits of sodium in certain foodstuffs	√	√	-	-	-	-	√	-	-	-	-
Limits of preservatives and antioxidants	√	√	-	-	√	√	√	-	√	-	-



Regulations and specifications	R 1283	R 2410	R55	Only the Act	R638	R 908	Regulations concerning slaughter composition	Abattoir and slaughter regulations	VC 8019	VC9100	Only the Act
Focus	Quality	Quality	Quality	Consumer protection	General hygiene	Safety (HACCP)	Quality & safety	Safety	Canned Safety	Safety	Quality & safety
Limits of miscellaneous additives	√	√	-	-	-	√	√	-	-	√	-
Monitoring (Inspection, Measuring and Testing)	√	√	√	√	√	√	√	√	√	√	√
Packaging and labelling	√	√	√	√	√	√	√	√	√	√	√
Traceability and recall withdrawal of products	/√	√	√	√	√	√	√	√	-	√	√
Hazard control	-	√	-	-	√	√	√	√	√	√	√
High-risk areas	-	-	-	-	-	√	-	√	√	-	√
Limits to food colorants	√	√	-	-	-	-	√	-	-	-	-
Limits of pesticide residues	-	-	-	-	-	√	√	-	-	-	-
Limits of sweeteners	-	-	-	-	-	-	√	-	-	-	-
Specifications finished product	√	√	-	-	√	-	√	-	√	√	-
Contamination prevention and control	√	√	√	-	√	√	-	√	-	√	-
Control of product and process nonconformities	-	-	-	-	-	√	-	√	√	√	√
Specifications for processing raw- and packaging material	√	√	-	-	√	-	√	√	-	√	-
Rework	-	-	-	-	-	√	-	√	-	-	-
Shelf life and retention product	√	√	-	-	√	-	-	-	-	-	-



Regulations and specifications	R 1283	R 2410	R55	Only the Act	R638	R 908	Regulations concerning composition	Abattoir and slaughter regulations	VC 8019	VC9100	Only the Act
Focus	Quality	Quality	Quality	Consumer protection	General hygiene	Safety (HACCP)	Quality & safety	Safety	Canned Safety	Safety	Quality & safety
Verification procedures	√	-	√	√	-	√	-	√	√	√	√
Training / Competence	-	-	√	√	√	√	-	√	-	-	√
Air quality and ventilation	-	-	-	√	√	√	-	-	-	-	√
Assignee	√	√	√	-	-	-	√	√	-	-	-
Calibration, verification and control of monitoring and-measuring devices		-	√	-	-	√	√	√	√	√	-
Cleaning and sanitation	-	-	√	-	√	√	-	√	-	-	-
Construction and layout of buildings, buildings and workspace (environment, location)		-	-	√	√	√	-	√	-	√	√
Compressed air and other gases-		-	-	-	√	√	-	√	-	-	√
Dispatch & Transportation	√	-	-	√	-	√	-	√	√	√	√
Document management (Incl. records)	-	-	√	√	√	√	√	√	√	√	√
Emergency preparedness	-	-	-	-	-	√	-	√	-	-	√
General hygiene requirements	√	√	√	-	√	√	-	√	√	√	√
Internal audits	√	√	√	-	√	√	-	√	√	-	√
Lighting compliances	-	-	√	-	√	-	-	√	-	-	-
Machinery and equipment	√	√	√	√	√	√	-	√	√	√	√

Regulations and specifications	R 1283	R 2410	R55	Only the Act	R638	R 908	Regulations concerning composition	Abattoir and slaughter regulations	VC 8019	VC9100	Only the Act
Focus	Quality	Quality	Quality	Consumer protection	General hygiene	Safety (HACCP)	Quality & safety	Safety	Canned Safety	Safety	Quality & safety
Microbiological standards	-	-	-	-	√	√	-	√	√	√	-
Maintenance	-	-	√	-	√	√	-	√	-	-	√
Management responsibility	-	-	√	√	√	√	-	√	-	√	√
Personnel hygiene (facilities)	-	-	-	-	√	√	-	√	√	√	-
Pest management	-	-	-	-	√	√	-	√	-	-	-
Purchasing / Procurement	-	-	√	√	-	√	-	√	-	√	-
Receiving and storage control	√	√	-	√	√	√	-	√	√	√	√
Resource provision	-	-	√	√	√	√	-	-	-	-	-
Warehousing and management	-	-	-	√	√	√	-	√	-	√	-
Waste management	-	-	-	√	√	√	-	√	-	-	√
Water supply and quality	-	√	-	√	√	√	-	√	-	-	√

Acronyms: APS - Agricultural Product Standards; CP - Consumer Protection; FCD - Foodstuffs, Cosmetics and Disinfectants; MS - Meat Safety; NRCS - National regulator for compulsory specifications; BMA - Border Management Authority; FSQA – DALRRD – Department of Agriculture, Land Reform and Rural Development; Food Safety and Quality Assurance; NCC - National Consumer Commission; VPH – Veterinary Public Health; DTIC - Department of Trade, Industry and Competition; DoH - Department of Health; DHA - Department of Home Affairs; BMA – Border Management Authority. * This must be done by a SANAS approved Certification Body



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