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Imported Hides and Skin Diversion: A Threat to Public Health and Food Safety in Nigeria

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Abstract

Africa is in short supply of protein due to poverty and cultural practices, which in turn encourage demand and consumption of other meat products such as hides and skin. International trade in hides and skin is more valuable than that of meat. Importation of hides and skin into Nigeria is estimated to cost over 111.8 billion naira between 2018 and 2022. This study was conducted to find out the volume of imported hides and skin within the second quarter of 2024, establish if these imported hides and skin are being diverted for consumption purposes and the public health implications. A scheduled visit was conducted to selected terminals at the major seaport in Lagos, Nigeria to witness the examination of hides and skin. Data on the volume of importation of hides and skin was also obtained from relevant government agencies present at the seaport. A visit to Ijebu-Igbo was also embarked upon to ascertain the chain of distribution of some imported hides and skin. Results showed an increased volume of hides and skin being imported into Nigeria. This also shows an increased investment in this sector. The hides and skin being imported into Nigeria are imported without a permit. Imported Hides and skin were found to be diverted to different processors located in Ijebu-Igbo. This is then processed and redistributed all across Nigeria. Consumption of such uncertified hides and skin has public health implications. Unhealthy hides are a medium for the spread of zoonotic diseases such as foot and mouth disease, anthrax and lumpy skin disease. The consumption also exposes consumers to the chemicals used to process these hides. Although the government, concerned organizations and individuals have mounted a campaign against the habit of hides and skin consumption, consumption is still on the rise and this poses threat to the leather manufacturing industry. An effective monitoring system should be out in place to prevent continuous diversion.

Introduction

Hide is the raw skin of mature animals of larger kinds, such as cattle, horses, and other large animals. Skin, on the other hand, is the hide of fully grown animals of smaller kinds (Adem and Yildiz, 2019). Hides and skins are end products of animal production, although more accurately they are by-products, and they are important and valuable resources (Leach and Wilson, 2009). Cowhide, popularly known as "Ponmo" or "Canda" in Nigeria and "Wale" in Ghana, is a highly sought-after meat product in many parts of Africa (Okiei et al., 2009). In Nigeria, animal skin, either attached to the meat or consumed alone, is often enjoyed as a delicacy in meals, with cow skin or cowhide being a common choice (Tijani and Ajayi, 2016). Thus, many individuals in Nigeria and Ghana seek meat substitutes to supplement their protein-deficient diets. Despite Sub-Saharan Africa being a significant contributor to livestock production, there is a shortage of meat due to poverty and cultural practices that promote the consumption of alternative meat

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products like hides and skins (Leach and Wilson, 2009; Woko, 2019). However, the National Agency for Food and Drugs Administration and Control (NAFDAC) has issued a cautionary warning on consumption of hides and skins in Nigeria due to potential chemical contaminations (in the course of processing) that could pose health risks to consumers (NAFDAC, 2019). The presence of toxic substances and pathogenic contamination in meat is a major concern for public health and food safety (Forsythe, 2020).

The international trade in skin, hides, and leather is more valuable than that of meat (Zungum et al., 2020). They are processed into finished leather, which is then used to make footwear, garments, furniture, vehicle upholstery, and other products with both household and industrial applications (Chemonics International Inc., 2002). Nigeria is recognized as one of the countries with the highest quality of hides/skins, according to the National Bureau of Statistics (NBS). A total of N114.844 billion was spent on importing this commodity over four years. According to Volza Grow Global, importers and buyers of hides and skins source these by-products from 70 countries, with Tanzania being the top exporter, followed by Madagascar and Italy. The leading importer of Hides and Skin into Nigeria is Sharaf Eldin Trading Company Ltd with 165 shipments, followed by Toasis Cargo Express Limited with 131 shipments, and The Spirit Venture with 104 shipments (Volza Grow Global Report, 2023).

According to Biosecurity New Zealand (2007) in a publication titled "Import Risk Analysis: Hides and Skin from Specific Animals," the greatest risks associated with imported hides and skin are the agents of foot and mouth disease and anthrax. Despite the benefits linked to livestock products and by-products, hides and skin have long been recognized as a pathway for the transmission of food-borne diseases due to their high-water activity, high protein content, and nearly neutral pH, which provide ideal conditions for bacteria to thrive and survive (Jaja *et al*., 2018).

Animal hides and skins are typically processed fresh, salted, or tanned for preservation. These methods are effective for extended periods as long as the curing or drying process is done properly and storage and transit conditions do not compromise the preservation (Prokopov, 2007). Hides are commonly shipped in wet-salted (brine-cured), dry-salted, or dry forms. According to Grömer et al. (2017), hides are primarily used for footwear, upholstery, and leather goods, while skins are used for clothing such as coats, gloves, leather goods, and footwear. However, the risks associated with the seaport transport of hides and skins include overheating due to delays, wetting from damaged containers, and mechanical damage from contact with contaminated metal surfaces, all of which can be caused by bacterial activity. Preservation refers to a range of procedures used to prevent spoilage of hides and skins, extend their shelf life, and prepare them for export purposes (Bailey, 2003). Effective preservation is essential for maintaining the quality of hides and skins, as poor preservation can lead to deterioration regardless of their initial quality (Lech, 2004). There are two main methods for processing and preserving hides and skins: curing and drying. Curing can be done through wet-salting or brine-curing. Wet-salting involves salting the hides and stacking them to allow the salt to absorb over a month. Brine-curing, a more common and faster method, involves immersing the hides in a mixture of salt and glycolipid surfactant for 10-16 hours. Once the hides or skins are fully cured, they are ready for export (Kesarwani *et al*., 2015).

The 1990 annual reports from the National Leather and Shoe Corporation indicate that 77.8% of the hides purchased by tanneries were air-dried, while 4.4% were wet-salted and 17.8% were fresh (Kebede, 2017). The wet salting method was the preferred choice among farmers for preservation. Demand is steadily increasing throughout the year, attributed to the rising value of hides and skins in both domestic and international markets (Kebede, 2017).

Even though Customs does not prohibit the importation of hides and skins, it is the Department of Veterinary and Pest Control Services (DVPCS) that is responsible for ensuring that these imports are in proper sanitary condition. The department specifies all sanitary requirements necessary for safe importation. Thus, the objectives of this study were to (i) assess the volume of imported hides and skins at selected seaport terminals and (ii) verify if these imported hides and skins are being processed for consumption.

Materials and Methods

The study were carried out at Apapa seaport in

Apapa Local Government of Lagos State, Nigeria and Ijebu Igbo in Ijebu North Local Government Area of Ogun State. Apapa seaport is located on Latitude 6°27′N and Longitude 3°22′E while Ijebu-Igbo is located on Latitude 6°58′N and Longitude 4°00′E.

Five (5) major seaport terminals that perform container inspections in large volumes were selected at Apapa seaport. The terminals included AP Molar, Tincan Island, Port and Cargo, Sifax, and Medlog Terminals. Information on the importation of hides and skins was sourced from the Nigeria Customs Service and simultaneously compared with data from other governmental agencies present at the seaport. In contrast, the investigation at Ijebu-Igbo sought to verify the application of certain imported hides and skins and to examine the distribution chain. Furthermore, an inquiry was conducted with the DVPCS to determine how many permits have been issued to importers of hides and skins and to comprehend the conditions under which an import permit can be issued.

Results

An enquiry made to the Department of Veterinary and Pest Control Services (DVPCS) revealed that no importer has successfully applied and issued a permit to import this animal by-product. This indicate that all the imported hides and skin, imported within this period are without an import permit. It was also established and revealed that the end usage condition for which a permit will be issued will be for leather production only. A chat with one of the importers on why they refused to apply for the permit revealed that the conditions stated by the department were too ambiguous and unrealistic such that no imported can meet such requirement.

Quantitative data presented in Table 1 summarize the number and type of imported hides and skin containers received at various seaport terminals in Apapa, Lagos State. A total of 167 containers were documented, comprising both 20-foot and 40-foot dry hide containers. Notably, AP Molar terminal recorded the highest number, with 63 containers, of which only 1 container was wet salted, while 62 were dry hides. Similarly, Tincan Island terminal received 42 containers, including 10 wet salted and 32 dry hide containers. Other terminals such as Port and Cargo, Sifax, Medlog, and GMT also received varying volumes of dry and wet hides. These container volumes, measured in cubic meters, correspond to standardized 20-foot and 40-foot container dimensions.

Visual inspection of the imported hides and skin at various seaport terminals revealed different preservation methods. As shown in Fig. 1, the wet salted hides were examined at the terminal, exhibiting significant moisture retention and often stored under inadequate hygienic conditions. In contrast, Fig. 2 illustrates air-dried hides and skin, which were often poorly packaged and lacked traceability regarding their source and processing history.

Table 1: Volume of imported hides and skin in both 20-footed and 40-footed containers from selected seaport in Apapa

Terminals	Number of containers of imported hides and skin	Number of wet salted containers (20ft container volume (cm^3)	Number of dry hide containers (40ft container volume (cm^3)
AP Molar	63	1	61
Tincan Island	42	10	33
Port and Cargo	15	2	13
Sifax	3	0	3
Medlog	24	5	19
GMT	20	0	20

Fig 1: Wet salted hides and skin examination at one of the seaport terminals.

Fig 2: Air-dried hides and skin examination at one of the seaport terminals.

Further investigation into the distribution and processing chain revealed that these imported hides and skins are purchased from wholesalers in Lagos and then transported to Ijebu-Igbo in Ogun State for further processing (Fig. 3). Upon arrival at processing sites, the hides are subjected to a singeing process similar to that employed for locally sourced hides (Fig. 4). This step involves burning off residual hair and surface impurities to prepare the hide for human consumption.

Fig 3: The hides purchased from the sellers in Lagos and transported to Ijebu-Igbo, in Ogun state for processing.

Fig 4: The locally sourced hides subjected to the singeing process

Following singeing, the hides are either dried and cut into smaller pieces for resale or soaked in water for 24 hours to rehydrate them, producing a fresh, ready-to-consume product (Fig. 5). This processing step enhances palatability and consumer appeal. The final product is marketed in two distinct forms: wet singe hides (Fig. 6) and dry singe hides (Fig. 7), each catering to specific consumer preferences across southwestern Nigeria and beyond.

Fig. 5: Singed hides ready for sale either dry or pre-soaked in water to obtain a fresh, ready-to-consume hide.

Fig. 6: Singed wet hide

Fig. 7: Singed dry hide

Discussion

A total of 175 containers of hides and skins were imported through the seaport at selected terminals. This record only includes the documented ones, as some are being smuggled in illegally. The data shows a high volume of hides and skins being imported into Nigeria. These findings support the 2023 Q2 publication of the NBS on the continuous increase in investment in hides and skin imports, with ₦10.887 billion spent in 2018, ₦23.342 billion in 2019, ₦29.692 billion in 2020, ₦36.099 billion in 2021, and ₦11.824 billion in the first quarter of 2022. Nigeria continues to invest significant amounts in importing hides and skins despite being known for having some of the best hides and skins for export. In a conversation with one of the importers of hides and skins about why they have not applied for the permit, it was revealed that the conditions set by the department were too vague and unrealistic for any importer to meet. One of the conditions is that the imported hides and skins must be used solely for leather production and tannery purposes. The importer mentioned that the hides are mostly sold to customers, primarily located in Ijebu-Igbo, and processed into the popular 'Ponmo Ijebu'. The visit to Ijebu Igbo revealed that a significant portion of hides and skins are being diverted from leather production to processing for consumption. This aligns with a 2019 publication by the National Agency for Food and Drug Administration and Control (NAFDAC), which highlighted that hides

and skins were being sold as edible animal skin products known as Ponmo. It was noted that some of these hides and skins were illegally imported and redirected to merchants who reprocessed them before selling to the public (NAFDAC, 2019).

The public health risks associated with imported hides and skins stem from their consumption. Eating hides and skins meant for leather production raises the likelihood of exposure to animal diseases like foot and mouth disease and anthrax, as documented by Biosecurity New Zealand (2007). Recently, outbreaks of lumpy skin disease (LSD) affecting animal hides and skins have been reported in Asian countries such as Bangladesh, India, China, Nepal, Bhutan, Vietnam, Myanmar, Sri Lanka, Thailand, Malaysia, and Laos, raising significant concerns (Azeem et al., 2022). The World Organization for Animal Health (WOAH, 2022) reported 49 LSD outbreaks in Libya between April 2023 and April 2024. There is a caution against consuming ponmo due to the potential presence of hidden diseases in the animals slaughtered for their hides and skins. Animals are sometimes treated with chemicals like drugs and vaccines, which may not completely metabolize before slaughter. Consequently, consuming such hides as ponmo could lead to ingesting harmful substances retained in the animal's skin (Tijani and Ajayi, 2016).

Conclusion

The high volume of imports of hides and skins into Nigeria has led to a large volume of consumption of cattle skin, known as 'ponmo' or 'kanda,' in the country. This consumption trend is detrimental to the hides and skins industry, which generates at least $3 billion annually in foreign exchange for Nigeria. The diversion of hides and skins from leather production to local consumption by Nigerians is causing a decline in the availability of raw materials for the leather industry. The widespread consumption of hides and skins is driven by their affordability and accessibility, leading to their diversion from industrial use. This diversion poses a threat to public health and the leather industry's production capacity. Efforts should be made to prevent the diversion of hides and skins to safeguard public health and support the leather industry.

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