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Invited paper presented at the 5th International Conference of the African Association of Agricultural Economists, September 23-26, 2016, Addis Ababa, Ethiopia

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Characterization of consumers' purchase and consumption behaviour for chicken in Nairobi, Kenya: Targeted insights for value chain positioning

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A Paper Submitted for Oral Presentation at the 5th Conference of the African Association of Agricultural Economists, United Nations Conference Centre, Addis Ababa – Ethiopia, September 26 – 29, 2016.

Abstract

Understanding consumer desires is important for effective positioning of goods and services in various market segments. Comprehensive analyses of chicken consumers' behaviour are limited in the literature; with none in the Kenyan market. This study assessed chicken consumers' preferred purchase outlets, forms of chicken purchased, frequency and timing of consumption in the peri-urban areas of Nairobi city, Kenya. A random sample of 200 chicken consumers was interviewed at various purchase and consumption places using structured questionnaires. Qualitative methods were applied in the data analysis. Results showed that most respondents buy chicken from roadside markets than other outlets, broilers are preferred to local chicken, consumers prefer fresh slaughtered chicken rather than other forms such as live or cooked, and over two-thirds of the consumers buy chicken less frequently - after a week or longer duration. Further, more than three-quarters of respondents reported that they consume chicken at home compared to when in transit or while away at work. Over two-thirds of the consumers considered cleanliness of place of sale and the seller, price and accuracy of the quantity offered as the main issues that they are concerned with when making purchase decisions. More than half of the consumers also reported that they preferred naturally reared chicken without growth hormones/stimulants. These findings offer useful insights for chicken producers and traders to provide chicken with acceptable features, in the right quantities and timing that fits within consumers' desires. This will enhance consumer safety and satisfaction, as well as ensure responsible business practices.

Key words: Chicken, consumer, purchase, behaviour, Kenya.

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1. Introduction and Problem Statement

Today's agri-food entrepreneurs operate in dynamic value chain arrangements that increasingly require the actors from production, distribution and other levels to consciously make timely and economically rewarding decisions based on the consumers' buying behaviour. The success of commodity value chains can no longer be left to entirely depend on supply response mechanisms, but rather recognizing consumer needs and purchase behaviour as the drivers of the market systems. Boonlertvanich (2009) defines buying behaviour as the decision processes and actions of people regarding the buying and use of products to satisfy their wants. Understanding purchase and consumption behaviour offers important scope for marketers to effectively target how they position their products and services in relevant market segments. This is critical for enhanced functioning of commodity value chains by establishing and maintaining exchange relationships that satisfy consumer needs. As noted by Sharma and Lal (2012), "taste, behaviour and preference of consumers cannot be ignored because consumers are the 'Kings' of market".

In recent times, food purchase behaviour of consumers in developing and emerging economies in Africa and Asia have changed due to an increase in per capita disposable income, global interaction, information and communication technologies, urbanization, education and increased consumer awareness on healthy food habits, movement of households towards higher income groups, changes in lifestyle and family structure (Pingali, 2007; Ali et al., 2010). For example, Tambi (2001) found that in Cameroon, there was a positive correlation between chicken consumption and income and that smaller sized families were more likely to consume more chicken meat. A growing consumer preference for shopping convenience is fostering the growth of modern retailing, which demands greater efficiency, quality and safety standards in the food supply chain. In order to effectively capture the opportunities in urban markets and value chains for traders and suppliers, companies need to be aware of the opportunities open to them so as to reposition themselves profitably within the competitive arena, thus ensuring their ability to create value (Bertazzoli et al., 2011).

With increased urbanization and emerging preference for convenience foods, chicken consumption has grown as an important source of proteins and a key delicacy for many peri-urban consumers. Though slightly expensive than other meat substitutes such as beef and pork, chicken consumption is considerable due to cultural and religious observances and due to improved purchasing power in peri-urban households. It is therefore, important to understand how and where consumers obtain the chicken so as to enable various value chain actors to appropriately plan their investments in order to effectively position their activities to reap beneficial economic outcomes. This is so critical in ensuring optimal economic returns from participation in the chicken value chain especially trade by small-scale entrepreneurs. However, a great depth of the available literature focuses more on chicken production and general trade, while targeted insights on consumer purchase behaviour are limited. Studies on food purchase behaviour have investigated determinants of frequency of purchase, choice of shopping outlets, price and non-price aspects of shopping in commodities such as vegetables, wine, beef (see for example, Chikkamath et al., 2012), but none on chicken. Against this backdrop, the present study characterized consumer purchase and consumption behaviour for chicken in Nairobi, for effective value chain positioning. This is essential in formulating market strategies that beat cut-throat competition and enhance business efficiency (Sharma and Lal, 2012). Focusing chicken distribution and trade where consumers want it could also offer considerable

income opportunities for many poor peri-urban households and individuals to improve their livelihoods.

2. Methodology

This paper is based on consumer survey data from a random sample of 200 chicken consumers in peri-urban areas of Nairobi, Kenya. Informal settlements were excluded from the study due to insecurity challenges during the period of survey. Likewise, the high-end ‘urban’ estates were omitted due to difficulty in getting willing respondents. Therefore, the study focused on the middle segment of urban dwellers – the peri urban category. Ideally, the chosen consumer category comprises a growing middle-income population that represents diverse features of urbanization including changing tastes and incomes; hence providing a potential market for a more rewarding agri-food trade. The respondents were interviewed using structured questionnaires in residential areas, restaurants and other trading and consumption centres. Some of the main variables on which data was collected are: socio-demographic characteristics such as gender, education and income levels; purchasing behaviour including main purchase outlets, chicken form and variety, frequency and timing of consumption and; key aspects considered by consumers when buying chicken.

Qualitative methods were applied in the analysis of the data. These include percentage frequency distributions, cross tabulations and graphs. Specifically, the analysis entailed: gender disaggregated tabulation of purchase behaviour; graphical illustration of main purchase outlets, preferred places for chicken consumption and relative importance of various aspects of chicken handling and; cross tabulation of the main forms of chicken purchased and purchase outlets, and income-based timing of consumption.

3. Results and Discussion

3.1 Consumers’ Socio-demographic Characteristics and Purchase Behaviour for Chicken

Four-fifths of the respondents were Christians and slightly more than half were males (Table 1). In each of the post-primary education levels; secondary, mid-level college and University, there were about 30% of respondents. Nearly half of the respondents had average monthly income levels ranging from Kenya shillings 20,000 to 50,000 (1USD\$ = KES100 at the time of survey).

Table 1: Socio-demographic characteristics

Characteristic	Percentage of respondents (n=200)
Religion	
None	17.5
Christian	81.0
Muslim	1.5
Gender	
Male	58.0
Female	42.0
Education	
Primary	6.6
Secondary	31.0
Mid-level college	28.9
University	33.5
Monthly household income (Kshs)	
<20,000	35.5
20,001 – 50,000	46.0
>50,000	18.5

Source: Survey Data (2015).

Results on consumers' preferred purchase outlets, chicken variety, form, units and frequency of consumption are presented in Table 2. Despite the much documented rapid growth of supermarkets for agri-food trade in urban areas of Kenya, street and/or roadside open air markets are still the most preferred purchase outlets for chicken in the capital city, Nairobi. Slightly more men buy chicken from roadside markets, supermarkets and hotels while women mainly purchase from kiosks and butcheries. More men buy broilers, while women generally buy more of the local chicken. Demand for the relatively more nutritious chicken of local variety (44% of all respondents) is slightly lower than that of broilers, perhaps due to changing urban lifestyles in preference for time-saving easy to cook food.

In terms of the preferred form of chicken, over two-thirds of women buy fresh slaughtered chicken, while about half of the men purchase roasted chicken. In the pooled sample, most respondents prefer fresh chicken meat (46%) and live chicken (31%) than the pre-cooked form and this shows that consumers do not trust food cooked elsewhere other in their homes. Compared to other forms of meat that are increasingly consumed more by urban residents in restaurants (the popular roast meat – *nyama choma*), chicken appears to be mainly consumed at home. This notion is reinforced by the finding that up to 52% of the respondents normally buy full chicken rather than pieces. Part of the driving force for this is the African cultural belief whereby chicken meals are expected to show evidence of a '*complete chicken*' with all edible parts present to distinguish chicken from wild birds such as owls that are associated with misfortunes. The observation that nearly 70% of the respondents take a minimum of one week to consume chicken can be attributed to the high cost of chicken when purchased as 'a whole' compared to other substitute meats like beef that can be bought in relatively smaller units of one kilogram or even a quarter kilogram.

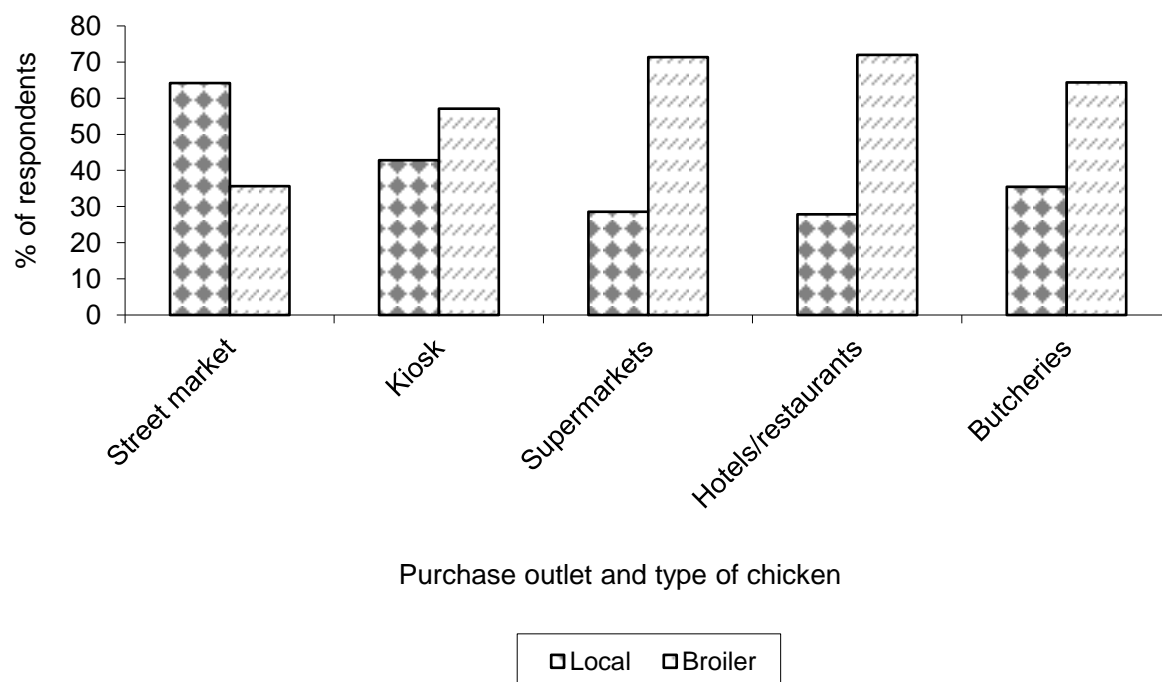
Table 2: Gender-disaggregated consumer purchasing behaviour for chicken in Nairobi, Kenya

Characteristic	Percentage of respondents		
	Male (n=116)	Female (n=84)	Pooled sample (n=200)
Purchase outlets			
Street/roadside markets	33.62	28.45	35.0
Kiosks/grocery shops	8.62	9.48	10.5
Supermarkets	12.93	5.17	10.5
Hotels/restaurants	24.14	12.93	21.5
Butcheries	20.69	22.62	22.5
Chicken variety			
Local	37.93	52.38	44.0
Broiler/grade	62.17	47.62	56.0
Form of chicken bought			
Live chicken	13.2	8.3	30.5
Roasted chicken	46.3	11.4	11.5
Fresh slaughtered chicken	14.5	70.3	46.0
Boiled/stewed/fried	26.0	10.3	12.0
Units of chicken bought			
Quarter kilogram	18.97	10.71	15.5
Half kilogram	20.69	22.62	21.5
One kilogram	13.79	8.33	11.5
Full chicken	46.55	58.33	51.5
Frequency of chicken consumption			
At least daily	0.0	1.19	0.5
At least weekly	35.34	22.62	30.0
After a week or more	64.66	76.19	69.5

Source: Survey Data (2015).

Food consumers care more about purchase outlets and are usually guided in their choices by their perception of freshness, existence of a good relationship with retailers, competitiveness of the price and desire for a pleasant shopping environment (Chamhuri and Batt, 2013). In Kenya, the survey results show that peri-urban consumers mainly purchase local chicken variety from street/roadside markets, while hotels, supermarkets, butcheries and kiosks are the main purchase outlets for broilers (Figure 1).

Figure 1: Main purchase outlets for different chicken types



Source: Survey Data (2015).

A cross tabulation of the purchase behaviour (Table 3) shows that up to two-thirds of chicken purchased from supermarkets, kiosks and butcheries is pre-slaughtered; possibly to provide greater convenience to relatively busy shoppers. This finding can be explained from two viewpoints: first, with more women entering the workforce, the tight working schedules of most peri-urban consumers and the many hours they spend on heavy traffic snarl-ups that characterize Nairobi city leave them with limited time for food preparation at home. This finding is consistent with the observation of Geuens et al. (2003) that supermarkets and hypermarkets provide convenience for shoppers in terms of ample parking space, proximity to other shops, extended trading hours and wide product variety. Second, flashy urbane lifestyles, restrictive by-laws on waste disposal and lack of adequate space make chicken slaughter in peri-urban residential areas less attractive; hence the high preference to buy already slaughtered chicken.

Table 3: Form of chicken purchased

Form of chicken	Place of purchase (% of respondents, n = 200)				
	<i>Street/roadside</i>	<i>Kiosk</i>	<i>Supermarket</i>	<i>Hotel</i>	<i>Butcheries</i>
<i>Live</i>	60.00	19.05	9.52	0.00	28.88
<i>Roast</i>	4.29	4.76	4.76	39.53	2.22
<i>Slaughtered fresh</i>	32.86	71.43	85.71	13.95	66.66
<i>Boiled/stewed/fried</i>	2.86	4.76	0.00	46.51	2.22

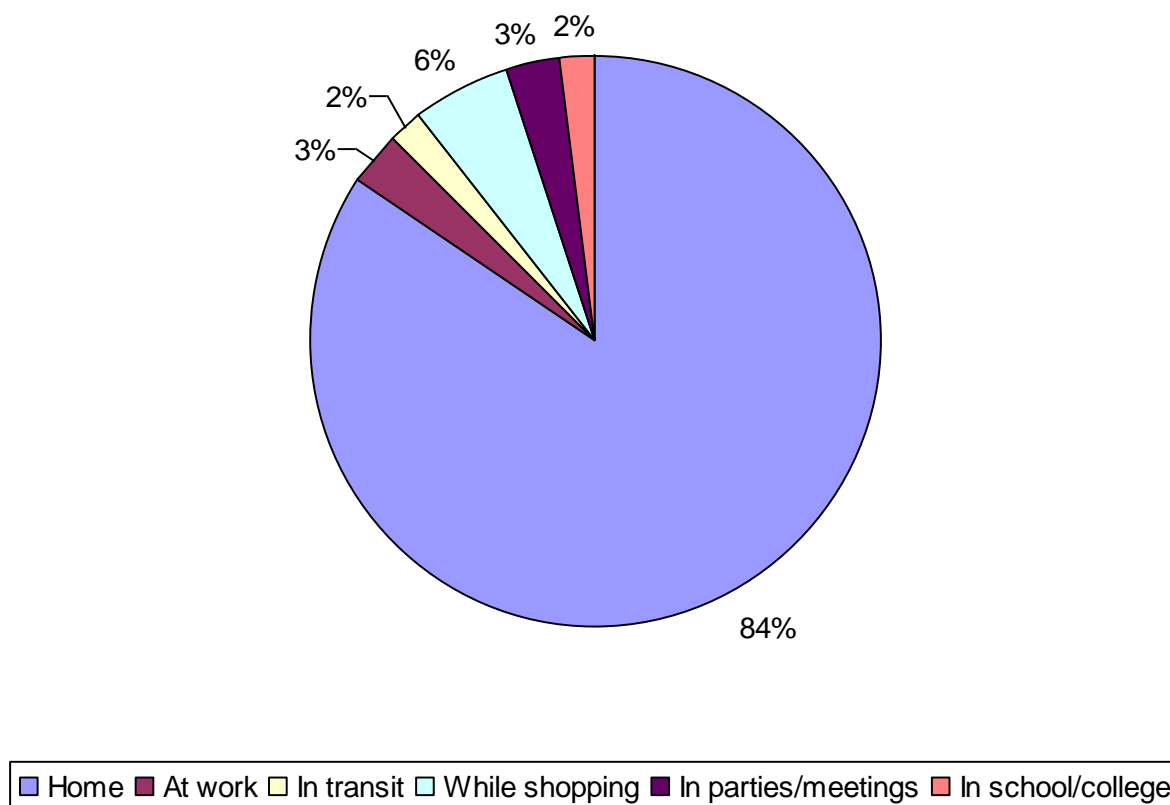
Source: Survey Data (2015).

About 60% of chicken bought from street markets is live chicken. As expected, nearly half of chicken purchased from hotels is pre-cooked and ready to eat. Up to 86% of chicken purchased from supermarkets is usually in fresh form. This finding accords with the suggestion of Berdegue et al. (2005) that consumers perceive fresh food in a clean and tidy supermarket to be safer and of relatively higher quality than the same product in an unclean and disorganized market.

3.2 Chicken Consumption Behaviour

Over four-fifths of respondents consume the chicken they purchase at home while the rest consume it at various places including in transit, at work, in learning institutions such as schools and colleges, and in parties/meetings (Figure 2).

Figure 2: Preferred place of chicken consumption



Source: Survey Data (2015).

Nearly all consumers (90%) consume chicken during normal meal times, while the rest only consume chicken when drinking alcohol or during festive seasons. Further, the majority of consumers take chicken together with main cereal meals that are maize meal (*ugali*), chapati and chips (Table 4).

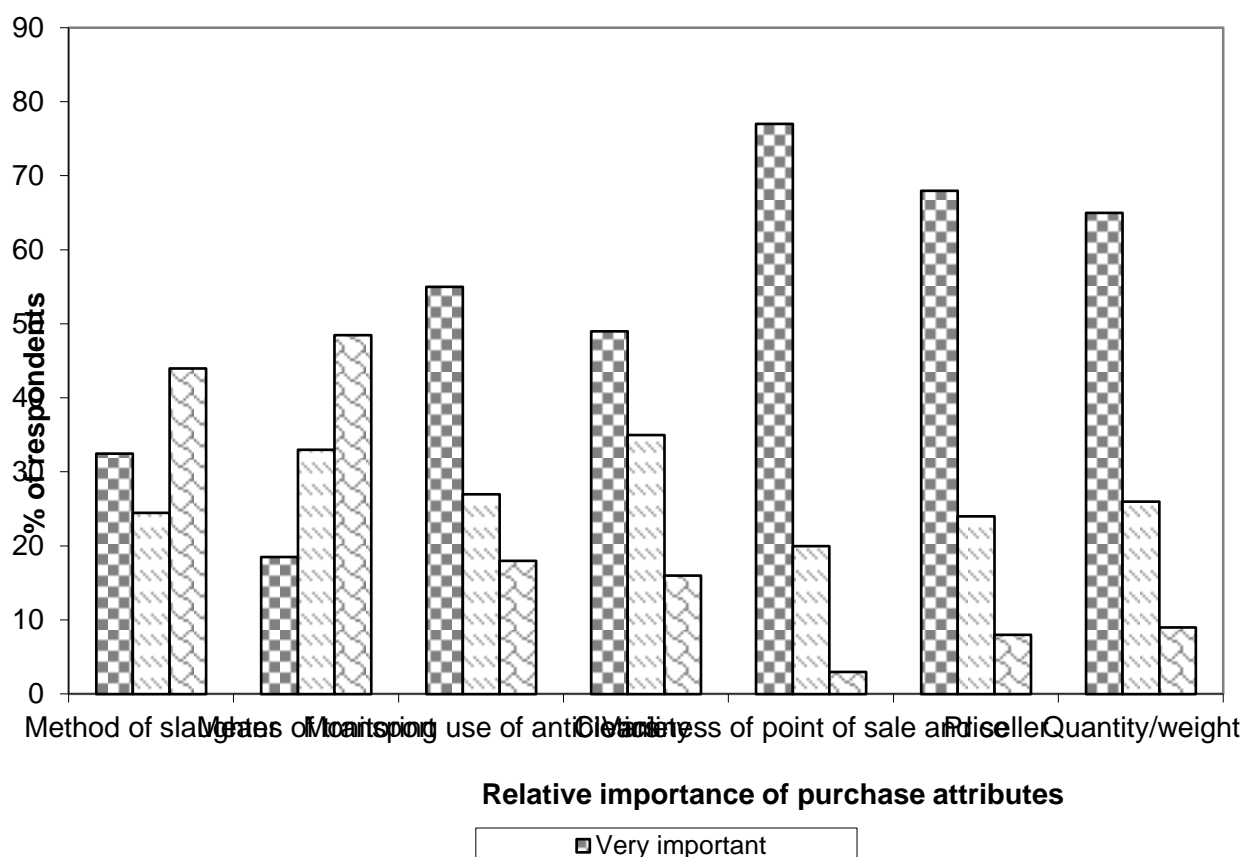
Table 4: Income-based food timing and preference by chicken consumers

Consumption aspect	% of respondents			
	<i>Income below Kshs 20,000 (n=71)</i>	<i>Income from 20,001-50,000 (n=92)</i>	<i>Income above 50,000 (n=37)</i>	<i>Pooled sample (n=200)</i>
<i>Preferred time for chicken consumption</i>				
<i>Normal meal time</i>	91.5	92.4	81.1	90.0
<i>When drinking alcohol</i>	4.2	2.2	10.8	4.5
<i>During festive season</i>	4.3	5.4	9.1	5.5
<i>How chicken is consumed</i>				
<i>As main dish with cereal e.g. ugali, chips, chapati</i>	94.4	94.6	86.5	93.0
<i>With beer/wine</i>	2.8	1.0	10.8	3.5
<i>Chicken only</i>	2.8	1.1	0.0	1.5
<i>With soft drinks e.g. water, soda</i>	0.0	3.3	2.7	2.0

Source: Survey Data (2015).

Consistent with the growing consumer concern for food safety and quality attributes, majority of respondents indicated their concern for such features in influencing their purchase decisions for chicken. In particular, three quarters of chicken consumers in Nairobi reported that cleanliness of the point of sale and that of chicken sellers was the most important feature that they consider when buying chicken (Figure 3). Cleanliness affects consumer willingness to shop at a particular outlet, the frequency and length of time spent shopping. Further, two-thirds of the sampled consumers indicated that price and quantity were ‘very important’. This could be because consumers will naturally want to minimize costs and maximize the utility from the product. However, half of the respondents considered method of slaughter and means of transporting chicken to place of slaughter/sale as being ‘not important’ in influencing their choice of chicken purchase outlets. This could be attributed to the fact that majority of the respondents were Christian or non-religious who may not put a lot of weight on *Halal* food. Also, animal welfare is not common knowledge in Kenya and this may explain why half of the respondents did not care how chicken was transported.

Figure 3: Relative importance of various aspects of chicken handling



Source: Survey Data (2015).

4. Conclusions and Policy Implications

This study assessed consumers' purchase and consumption behaviour for chicken in peri-urban areas of Nairobi where majority of middle-income consumers reside. The findings call for various interventions to ensure consumer-responsive practices in the chicken value chain. Considering the high preference for roadside markets than other outlets, there is need to formalize their design and equip them with requisite amenities. Roadside markets should be restricted to designated sites to prevent their proliferation into residential areas and other undesigned areas, thus reduce insecurity and uncontrolled waste disposal associated with unplanned market structures.

The peri-urban consumers have expressed concern for cleanliness of places where chicken is sold and the sellers. One important aspect that needs urgent policy intervention is the often dirty environment in which chicken is slaughtered in many roadside markets. Market users' associations and respective government agencies involved should prioritize investments in provision of appropriate slaughter places, water and sanitation services in such markets. To enforce compliance with prescribed sanitation practices, it is imperative that the National Environment Management Authority (NEMA) collaborates with various agents at the market-level to consistently monitor and penalize untidy slaughter practices and sales outlets. The Department of Health at both national and county governments need to develop and implement procedures for certification of traders' health to prevent transmission of foodborne illnesses by traders to consumers, especially those dealing with slaughtered fresh and cooked chicken.

Consumers reported the use of faulty weighing scales by traders, which means the consumers get less value for the money they pay. This is a serious offense that requires urgent action so as to restore consumer trust in trading practices. Stakeholder institutions such as the Consumer Federation of Kenya (CoFeK) and the Competition Authority of Kenya (CAK) should urgently

sensitize traders on the ethical trade practices and the value of fairness in value chains. Additionally, the Kenya Bureau of Standards (KEBS) should conduct regular impromptu monitoring of weighing scales used by traders to check compliance and enforce strict penalties to prohibit violations. Further, KEBS should establish a consistent system of testing chicken production processes to check use of growth hormones that would have adverse effects on the health and welfare of both chicken and humans. An assessment of purchase behaviour of rural chicken consumers would provide further insights on how to structure niche marketing in different localities.

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