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Investigating consumer perceptions towards red meat classification

The South African carcass classification system for lamb, mutton, beef and goat (in use since June 1992) is based on the *Agricultural Product Standards Act, 1990 (Act 119 of 1990) R 342 – Regulations Regarding the Classification and Marking of Meat.*

The carcass classification system could be viewed as a common language for all role-players in the value chain. It is an essential part of efficient animal production and plays a role in meat price determination. It also forms a basis for the utilisation of price differences and assists the industry in maximising consumer satisfaction through more consistent and specifically defined meat quality.

From a consumer perspective the red meat classification system could enable consumers to select meat that aligns to their needs and preferences according to the characteristics within a specific class.

The classification system
The South African carcass classification system for lamb, mutton, beef and goat involves the recording of carcass mass, fat content of the carcass, carcass conformation and damage, animal age, and the gender of the animal in the case of bulls in the B and C grades.

The classification method based on the age of the animal and fatness of the carcass, is summarised in *Table 1*. Animal age is generally linked to expected eating quality, usually ranging from A (most tender), to AB (tender), B (less tender), and C (least tender).

Estimates from the Red Meat Abattoir Association's (RMAA) slaughter statistics show that, on a carcass-weight basis for beef and mutton/lamb, A2-class meat is the most popular option (69 and 63% of total carcass weight), indicating a dominant market preference for lean meat from young animals. In the case of beef, C2-class meat (lean meat from old animals) and A3-class meat (medium-fat meat from young animals) share second position, each contributing 10%. For mutton/lamb, the second most popular class is A3

(medium-fat meat from young animals) (14%), followed by C2 (lean meat from old animals) (7%).

In 2016/17 the South African red meat industry funded a comprehensive consumer study to investigate the red meat buying behaviour of and perceptions among the South African low-income (marginalised), middle-income and high-income (affluent) consumers in the Western Cape (sample size n=750; n=250 per socio-economic sub-group). Stratified sampling reflected the income, ethnic and age groups of the South African population in the Western Cape.

The focus of this article is specifically on consumers' knowledge, usage and perceptions pertaining to red meat classification across the socio-economic spectrum.

Meat quality perceptions
As mentioned, one of the functions of the red meat classification system is to assist the red meat industry in maximising consumer satisfaction through more consistent and specifically defined meat quality. Using an open-ended question format, respondents were asked to describe the term 'quality meat'. Consumers viewed quality meat mainly in terms of freshness, appearance (meat and

fat colour, no blood), cleanliness and, in some cases, higher prices.

Overall, less than 5% of consumers spontaneously mentioned red meat classification when defining quality meat, ranging from only one marginalised respondent, to nine affluent respondents and 25 middle-income respondents.

Importance of classification
When purchasing red meat, certain factors dominate consumers' decision-making, with a strong focus on:
- Food safety (expiry date, clean meat with no blood).
- Appearance (visually appealing, colour of meat and fat).
- Affordability (price).
- Organoleptic appeal (taste, flavour, eaten by all in family, tenderness, juiciness).
- General quality (quality guarantee).
- Fattiness (fat-to-meat ratio).
- Convenience (easy to prepare).

It is interesting to note that a number of the attributes that are important to red meat consumers cannot usually be evaluated at the point of purchase, such as taste, flavour, tenderness, juiciness, no additives/preservatives, nutritional value, naturalness, country of origin, animal

Figure 1: Share of consumers in Western Cape study who check red meat classification when purchasing beef and mutton/lamb.
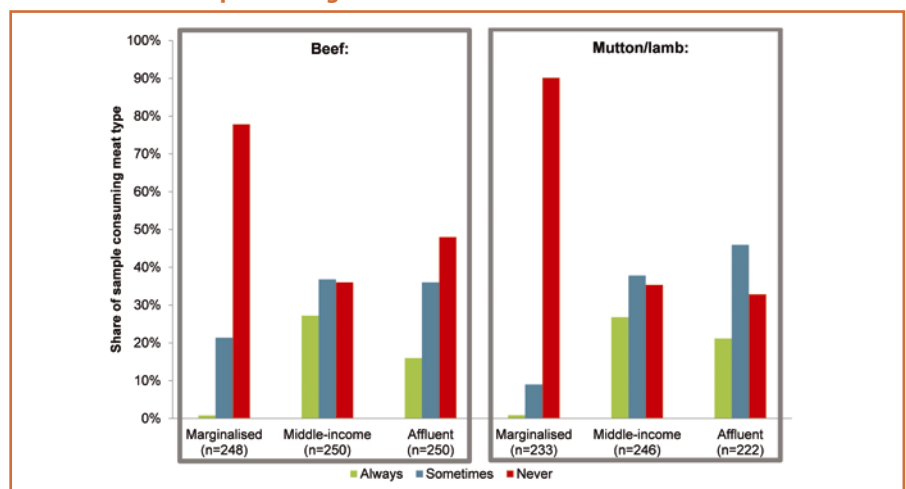
Table 1: Classification of beef, lamb, sheep and goat meat based on animal age and carcass fatness based on the South African red meat classification system.

Attribute	Class	Class definition	Visual indication on carcass
Age of animal	A	No teeth. Meat from a young animal.	**Purple:** AAA roller mark
	AB	One to two teeth. Meat from a slightly older animal.	**Green:** ABAB roller mark
	B	Three to six teeth. Meat from an older animal.	**Brown:** BBB roller mark
	C	More than six teeth. Meat from an old animal.	**Red:** CCC roller mark
Fatness of carcass	0	No visible fat	000 roller mark
	1	Very lean	111 roller mark
	2	Lean	222 roller mark
	3	Medium fat	333 roller mark
	4	Fat	444 roller mark
	5	Over-fat	555 roller mark
	6	Excessively fat	666 roller mark

breed and, to a certain degree, food safety. For these attributes, consumers must rely on a combination of previous product experiences and retailer/brand trust, or a quality guarantee during the purchasing decision.

Red meat classification ranked relatively low in the spectrum of red meat decision factors, with the share perceiving it as 'very important' ranging from only 2% of marginalised consumers, to 43% of affluent consumers and 62% of middle-income consumers (in the case of beef). Similar results were observed for mutton/lamb. Tenderness, which could be derived from the class of red meat, was important to particularly middle-income and affluent consumers.

Checking red meat classification

In general, middle-income and affluent consumers pay the most attention to red meat classification. In the case of beef, about two thirds of middle-income consumers and half of affluent consumers check the classification during the purchasing process. For mutton/lamb, about two thirds of middle-income and affluent consumers check red meat classification during the purchasing process.

However, the share of the various groups who indicated that they always check red meat classification when purchasing meat was relatively low, applying to approximately a quarter of middle-income and affluent consumers.

Understanding the system

While perceived knowledge levels generally increased in accordance with socio-economic status, less than 20% of the total sample indicated that they thought they possessed some knowledge of the South African red meat classification

system. Furthermore, less than 10% of the total sample were able to describe the classification system in their own words in a relatively accurate manner.

Despite a limited understanding of red meat classification, up to 16% of marginalised consumers and approximately half of middle-income and affluent consumers, indicated that they check classification during the purchasing process, although they don't understand the meaning of the South African red meat classification system.

Summary and recommendations

- Marginalised consumers generally had a very limited understanding of red meat classification and gave little to no attention to classification when purchasing red meat.
- Although middle-income and affluent consumers in the Western Cape possess a limited understanding of red meat classification, around two thirds of the sampled consumers check the grading/classification mark sometimes or often when buying beef or mutton/lamb.
- Consumers did not reveal a 'spontaneous' association between red meat classification and red meat quality, something that was evident from the results showing that less than 5% of consumers spontaneously mentioned red meat classification when defining 'quality meat'.
- When purchasing red meat, aspects such as the store where meat is purchased and a quality guarantee, seemed to be stronger indications of quality than the classification system.
- There is definitely a need for more consumer education regarding red meat classification in terms of both the

basic meaning of the different classes, as well as the quality characteristics associated with the different classes (based on solid scientific evidence). Consumer education could also focus on the association between red meat classes and particular cooking methods or dishes.
- More can be done by the industry to ensure that meat class is indicated on product labels, with an emphasis on honest and traceable actions through the supply chain. **SF**

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