

A CRITICAL REVIEW OF THE SIGNIFICANCE OF FOOD LABELLING DURING CONSUMER DECISION MAKING

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OPSOMMING

In literatuur word voedselaankope gewoonlik voorgedhou as minder kompleks vergeleke met die aankoop van ander huishoudelike kommoditeite. Hierdie literatuuroorsig toon dat die kompleksiteit van voedselaankope waarskynlik misken word omdat die faktore wat verbruikers se voedselaankope beïnvloed in onlangse jare meer intens geraak het. Daarby word voedselaankoopbesluite merendeels in die winkel en binne 'n beperkte tyd geneem, wat druk op die besluitnemingsproses aansienlik verhoog. In hierdie literatuuroorsig word die beperkte besluitnemings tyd, verbruikers se verhoogde vereistes ten opsigte van die tipe en kwaliteit van voedselprodukte, die oorweldigende verskeidenheid voedselprodukte waaruit verbruikers kan kies, sowel as prominente wêreldneigings waarmee verbruikers daaglik in die media gekonfronteer word, in ag geneem met betrekking tot verbruikers se behoeftes en vereistes ten opsigte van voedsel-etikettering en die probleme wat verbruikers ondervind en wat hulle daarvan weerhou om rasonale besluite te kan neem. Eksterne faktore wat verbruikersbesluite tydens voedselaankope bemoeilik en selfs verwar word bespreek met inagneming van persoonlike faktore wat verbruikers se behoefte aan produkinligting en vermoë om produkinligting te interpreteer en te evalueer, beïnvloed. Die belangrikheid van produkinligting tydens die verbruikersbesluitnemingsproses word bespreek om aan te toon dat voedselkeuses waarskynlik moeiliker is as wat algemeen aanvaar word. Die tipe en beskikbaarheid van produkinligting sowel as die formaat van voedsel-etiketete impliseer duidelike uitdagings vir

die voedselindustrie, veral as die diversiteit van die Suid-Afrikaanse mark in ag geneem word. Voorstelle vir navorsing met klem op verbruikersopvoeding word gemaak om verbruikers te begelei tot meer realistiese verwagtinge omtrent voedsel-etikettering en om etikette tot hulle voordeel te gebruik ten einde ingeligte voedselkeuses te maak.

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INTRODUCTION

Point-of-sale communications seem to be the most effective instrument to inform consumers in terms of whatever information producers wish to provide to potential buyers (McEachern & Warnaby, 2008). With an increased move towards self-service retailing, the packaging of products nowadays is designed to limit the input of sales personnel at the point-of-sale (Kuvykaite *et al*, 2009). With regard to food purchasing, food labels have hence probably become the most important and most influential factor during consumer decision making (Peters-Teixeira & Badrie, 2005) because most of the information that consumers require, such as branding and product ingredients, are printed on product labels (Kole *et al*, 2009) that are prominently attached to the packaging, or form an integral part of the packaging. Food labels hence perform an important communicative function by providing consumers with information to select the most suitable product alternative during the pre-purchase decision-making phase (Van der Merwe *et al*, 2010; Dimara & Skuras, 2005).

Generally, food purchases are regarded as routine purchase decisions which require low involvement and limited external search for information (Adamowicz & Swait, 2011), suggesting that not all consumers necessarily consult information on food labels. However, contrary to other purchases, consumers often have to choose several items within a very short period of time during food purchasing excursions. Consumers who are more involved in a food purchasing task, for whatever reason, become more involved in the selection of suitable products and subsequently evaluate packaged food products more carefully, paying more attention to label information to reduce uncertainty and to increase product credibility (Silayoi & Speece, 2004). Some consumers may even demand additional information, such as quality guaran-

tees and an indication of the country of origin when purchasing food products (Dimara & Skuras, 2005). Consumers also tend to study the labels of products with a more complex nutritional composition more carefully than products with which they are more familiar and which they find easy to interpret (Graham & Jeffery, 2012). Contrary to the traditional school of thought, food purchasing may therefore become more demanding and require more meticulous consideration processes during decision making.

This literature review firstly focuses on the communicative value of labels on food products, before the significance of food labels during different stages of a consumer decision-making process is discussed, in an attempt to address gaps in literature in terms of the way in which labelling could enhance our understanding of the general misconception of the complexity of food purchases, during the entire decision-making process. Reasons for the growing complexity of food purchases are discussed, such as health, environmental and value for money issues that may result in a more watchful approach throughout the consumer decision-making process, and the structure of modern retail environments where the array of products in a store at any given time can be overwhelming and where confusion is fuelled by a continual change of products due to global influences and imports. Although care has been taken to include the most recent literature in this review, a few classic sources with authority were also included for the sake of comprehensiveness.

THE COMMUNICATIVE VALUE OF FOOD LABELS

Food labels as a communication tool

In terms of food products, purchase decisions are predominantly concluded in-store (Ampuero & Vila, 2006), and food labels as well as pack-

aging play a vital role at the point-of-sale to communicate information about products that may assist and convince consumers to select particular products (Ali & Kapoor, 2009; Dimara & Skuras, 2005; Silayoi & Speece, 2004). Apart from the functional protective value of packaging, packaging per se – which includes the labelling dimension of the packaging – has in recent years become increasingly important as a marketing tool, for example to indicate status and quality (Rundh, 2005). Internationally, companies are subsequently spending more money on food packaging (style, type and design) than on advertising as part of their marketing strategies (Hoffman *et al*, 2005:299).

Visual elements, such as graphics, colour, size and the shape of packaging, as well as informational elements, such as the product information printed on labels or packaging and technologies used, can potentially influence consumers' product decisions (Silayoi & Speece, 2004). Notwithstanding considerable attention devoted to the visual qualities of food labels to ensure that they draw attention and enhance the image of products in the presence of multiple competitors on the shelves of stores, some authors are of the opinion that the informational value of food labels is still predominant during consumers' decision-making (Peters-Teixeira & Badrie, 2005).

Information provided on food labels

A label is printed material that is either printed on the packaging itself, or attached to a product's container (Regulations relating to the labeling and advertising of foodstuffs, 2010). Some labels are attached to the food packaging (e.g. bottles or boxes) while others are more elaborate, purposely designed graphic material that become an integral part of the package (e.g. printed on a tin, a box or a bag). Consumer-orientated food labels have a strong practical dimension (Hoffman *et al*, 2005:300) in communicating important information to consumers.

The revised labeling regulation (R146) for South Africa that has applied since March 2012 is enforceable for national and international food manufacturers that are sold in the country and aims to facilitate food purchasing decisions by preventing misleading and ambiguous messages (Regulations relating to the labeling and advertising of foodstuffs, 2010).

Consumers' perception of food safety is related to their trust in the food industry and confidence in a government's protective regulations (Fotopoulos & Krystallis, 2003). Unfortunately, in the past, some South African manufacturers have confused consumers with misleading information on food labels (Steenkamp, 2007; Macanda, 2005), for example indicating that a product is "95% fat free" while a 5% fat content is not actually regarded as a low fat product (Macanda, 2005). To prevent this, labelling regulations that specify minimum requirements in terms of the disclosure of food ingredients, the specification of nutritional information and health claims (Regulations relating to the labeling and advertising of foodstuffs, 2010) are therefore now required and enforced to protect consumers, especially vulnerable consumers who do not have the ability or resources to query information without considerable effort. The following mandatory information is displayed on food labels:

- the name and address of the manufacturer; country of origin of the product and the ingredients or materials used in the product by means of an ingredient list (Regulations relating to the labeling and advertising of foodstuffs, 2010; Whitney & Rolfes, 2008:55; Hoffman *et al*, 2005:300).
- the expiry date (Regulations relating to the labeling and advertising of foodstuffs, 2010) and product grading, if applicable, according to governmental prescriptions (Hoffman *et al*, 2005:300).

- directions for use and serving suggestions (Regulations relating to the labeling and advertising of foodstuffs, 2010; Hoffman *et al*, 2005:300).
- caution about possible ingredient or product misuse (Hoffman *et al*, 2005:300) and the presence of allergens as a safety precaution (Regulations relating to the labeling and advertising of foodstuffs, 2010).
- the net contents of the product in weight or volume (Regulations relating to the labeling and advertising of foodstuffs, 2010; Whitney & Rolfes, 2008:55).
- a barcode (Regulations relating to the labeling and advertising of foodstuffs, 2010; Hoffman *et al*, 2005:300)
- nutritional information and approved health and nutrition claims (Regulations relating to the labeling and advertising of foodstuffs, 2010; Whitney & Rolfes, 2008:58-59).

Some food products also indicate ethical trade and organic information (Annunziata, *et al*, 2011). Under the revised labelling regulation in South Africa, claims such as “nutritious”, are now prohibited on food labels; compulsory information about food allergens has become more stringent; and strict conditions and standards apply in terms of conditions of food manufacturing in the country (Regulations relating to the labeling and advertising of foodstuffs, 2010; Booyesen, 2007:55; Steenkamp, 2007) to create an equal policy for all products that focuses on facts and averts confusion (Steenkamp, 2007). Since food labels can now be trusted to provide more truthful, accurate and consistent information, the South African Department of Health uses label information as a strategy in educating consumers to prevent obesity (Booyesen, 2007:55).

In spite of the difficulty to accommodate so

much information on a single, often fairly small product label, consumers are increasingly demanding more information about the food products that they consume (Singla, 2010; Teisl *et al*, 2008; Dimara & Skuras, 2005), such as products’ association with a geographic region, its traceability, and even methods of production (Dimara & Skuras, 2005). This exerts pressure on food manufacturers to design food labels that would address consumers’ concerns and curiosity in an easily understandable and readable format.

Consumers’ demands for product information

In recent years, the food and drink sector, which represents approximately 18% of all South African manufacturing sales, has come under increased pressure due to changing market demands and a need to accommodate innovative, novel and effective technologies (Lues & Lategan, 2006) with all the associated benefits according to international standards (Batrinou *et al*, 2008; Teisl *et al*, 2008). From a consumer’s point of view, however, it is not always easy to evaluate novel technologies and to know whether new production or treatment methods are safe or potentially threatening to their health (Batrinou *et al*, 2008; Teisl *et al*, 2008). The emergence of genetically modified (GM) foods is a recent example of technology that has evoked much debate (Radas *et al*, 2008; Teisl *et al*, 2008). Another food-related health and safety concern is the presence of allergens such as nuts in processed food, which might have fatal consequences if ingested by unaware, allergic consumers (Voordouw *et al*, 2006; Miles *et al*, 2006). Manufacturers across the world therefore have to exercise strict control over the contents of processed food products, the presence of certain products in the factory during manufacturing and related food content information on food labels (Newman & Cullen, 2002:65). Because South Africa is no different to the rest of the world in terms of concerns about food safety

and integrity, the South African food industry has to abide to strict legislation pertaining to food additives and labelling (Lues & Lategan, 2006; Van der Merwe & Venter, 2010).

Empirical evidence suggests that certain demographic segments of the market, such as higher income groups, tend to demand more information about food products (Ali & Kapoor, 2009; Lin & Yen, 2008; Dimara & Skuras, 2005). Du Plessis and Rousseau (2003:84) found that higher income South Africans are not only more informed and knowledgeable about food products in general, but they also tend to be fairly health conscious, probably because they are better educated. Most South African metropolitan consumers apparently consult food labels, specifically the ingredient lists, for quality and health information because they are conscious of the influence of food intake (and nutrition) on their health (Kempen *et al*, 2011). Consumers from lower socio-economic groups, on the other hand, do not use food labels to the same extent and therefore have a tendency to make less healthy food choices (Giskes *et al*, 2007). The information on food labels may be quite intimidating to less educated consumers, which explains consumers' interest in the easier to understand traffic light labeling system, which was introduced in the UK and Europe to make food label information easier to comprehend (Pettigrew *et al*, 2011). In this system colour coding is used so that shoppers can easily spot the healthiest food options, for example discriminating between foods with high, medium and low fat and sugar content. Even if consumers have no idea how much fat is regarded as a high or low content, the colour on the label will indicate that certain products should be chosen with caution.

THE SIGNIFICANCE OF FOOD LABELS DURING THE CONSUMER DECISION-MAKING PROCESS

Much has been published in recent years about the effect of time pressure on consumers' purchase decisions and the subsequent effect on households' food and grocery purchases (Jacobs *et al*, 2010; Kuvykaite *et al*, 2009; Mannell *et al*, 2006). Because an abundance of product information is available on the spot when food products are purchased and because consumers generally spend limited time to search for product information and to make purchase decisions, food purchase decisions are generally regarded as less complex than other product decisions. Most food products are chosen routinely or habitually by opting for familiar brands without necessarily attending to other product information – irrespective of whether the information is printed on the packaging itself, or attached to the packaging afterwards (Adamowicz & Swait, 2011). Although consumers are not expected to thoroughly investigate food labels every time a product is purchased, it is comforting to know that the information is readily available when needed.

A food purchase may, however, become a high involvement purchase (Kuvykaite *et al*, 2009) when a product is purchased for the first time (Peters-Teixeira & Badrie, 2005) or purchased for someone else who might have special dietary requirements due to health concerns. In such cases consumers inevitably have to rely on packaging cues, for example the size, materials used and colour (Kole *et al*, 2009); and on information on food labels, for example brand, ingredients and weight, to evaluate and identify the most suitable alternatives. Literature indicates that a consumer who evaluates products carefully according to pre-determined criteria follows a rational decision-making process which is based on objectively selected product attributes that would best satisfy their needs (Schiffman &

Kanuk, 2010:110). Food label information is an extremely important external stimulus for those who follow a rational decision-making process and who need to make informed decisions (Bosman *et al*, in press), for example in terms of the presence of allergens in a product.

Limited attention is devoted in literature to the fact that even in terms of food purchases, which is generally regarded as less complex purchase decisions, consumers subconsciously proceed through stages of problem-solving activities because mostly, food products are chosen from an array of alternatives of which some may even be harmful if consumers fail to notice the product content. The following section indicates the relevance of food labels during the subsequent stages of a typical consumer decision process to demonstrate the intricacy of food purchases.

Food labels and need recognition

An intricate combination of external and internal factors may influence and even instigate consumers' (food) product-related needs. External stimuli such as product logos, brand names, colours on packaging, types of packaging and labels may draw consumers' attention towards food products or cause apprehension and even rejection. When preparing a special meal for distinguished guests, generic brands are for example considered inferior to, and less acceptable than national brands (Wyma *et al*, 2012). This judgement occurs in the store, through media and even when visiting a friend's house. A product could be rejected even if it had never been used before, solely on the basis of its packaging. Internal, personal influences of a physical and physiological nature may further prompt a product need, such as hunger, low blood sugar levels, or mere curiosity when observing product displays in a store.

Product labels are therefore particularly important (Peters-Teixeira & Badrie, 2005) to initiate and address consumers' needs, while food packaging, which often integrates labelling infor-

mation as part of the container, provides strong promotional support and serves as a reminder at the point-of-purchase (Mullins *et al*, 2005:251).

External influences and consumers' labelling requirements

External influences, such as economic, marketing and socio-cultural factors, influence the products that are selected

Economic factors Economic factors *inter alia* refer to implications of consumers' purchasing power and general financial situation in terms of their consumer behaviour and purchase decisions. Lower income groups spend proportionally more of their household income on food than higher income groups (Du Plessis & Rousseau, 2003:93, 112) and might therefore experience increased levels of financial risk when purchasing food. When experiencing financial difficulty, consumers spend their money more cautiously, and are more inclined to seek quality guarantees and to demand value for money (Lamb *et al*, 2010:57). Product label information is very useful to reduce consumers' risk perception in this regard and to increase consumer satisfaction. Unfortunately, the same is not necessarily true for lower income consumers with lower education levels, who lack the ability to optimise product information that would enable them to make informed switches to more affordable, good value for money product alternatives (Lamb *et al*, 2010:54). Lower income consumers' non-use of more affordable generic food products (Wyma *et al*, 2012) illustrates this dilemma. Higher income consumers are inevitably more exposed to new products and product innovations because they have better exposure and easier access to stores and media and marketing influences (There is growth in healthy food and beverages, 2005).

Higher income consumers, who are mostly also more educated than lower income groups (Lamb *et al*, 2010:54), are more likely to choose more reliable food products, for example specific

brands and grades (Sanlier & Karakus, 2010); are probably more aware of product alternatives; are more likely to express pertinent product preferences and product demands; and would therefore most likely use food label information to direct their product choices (Lin & Yen, 2008; Dimara & Skuras, 2005).

Marketing related influences These influences originate from consumers' immediate contact with companies or products and their marketing endeavours such as personal selling, sales promotions and advertising (Kole *et al*, 2009). At point-of-sale, where all the products are displayed alongside one another, visible product information and graphics on food labels such as the product's name, brand, logo and colours communicate, amongst others, the image and quality of products and largely determine the success of products compared to competitors (Wright, 2006:431; Arnould *et al*, 2004:301). Over time, clever strategies have been developed to increase sales, for example the use of so-called kaleidoscope packaging, which implies frequent changes to a product's packaging to stimulate a demand for the packaging rather than the product. Children are often targeted in this way, for example when breakfast cereal manufacturers print different popular television characters on packaging to encourage children to collect them all (Lamb *et al*, 2010:261).

Marketing efforts are useful to communicate with consumers and are designed to influence and even instigate consumers' needs, while also influencing consumers' product decisions (what they purchase and why), as well as their product and store loyalty (Wright, 2006:431).

Socio-cultural factors Socio-cultural factors influence consumers' food purchase decisions in complex ways. The influence of social class and the family is discussed.

Social class, for example, limits the suitability of

products to those sanctioned as appropriate in terms of their social significance and their potential to support a consumer's lifestyle (Schiffman & Kanuk, 2010:358). Typically, label information such as the brand, origin of the product, price and quality would determine suitability. Logos and symbols on labels that signify information such as *organically grown*, might inspire consumers to purchase products that are associated with important *reference groups* that are used as a benchmark for self-evaluation and to set personal goals (Wright, 2006:369). Certain food products (brands, types) are occasionally purchased to impress guests (Sjijtsema *et al*, 2002). *Cultural influences* unquestionably necessitate attention to food labels, as food customs involve inherent, strong beliefs, norms and values that direct appropriate food choices within a society (Mullins *et al*, 2005:126) – often in a prescriptive way that could evoke highly emotional repercussions. Manufacturers are therefore obliged to use appropriate symbols on their product labels to appropriately convey pertinent product attributes, for example signifying that a product is "halal" and hence eligible for consumption by Muslims (Bennion & Scheule, 2010:3). In a multi-cultural society such as South Africa, cultural issues are sensitive and have to be attended to respectfully (Lamb *et al*, 2010:99).

Family represents an individual's primary socialisation agent and largely influences a person's consumer-related knowledge and skills, including use of product information, until adulthood (Blackwell *et al*, 2006:521). The types of foods purchased and consumed in a family context, for example convenience foods or special foods for a family member with a particular health condition, influence an individual's food practices later in life (Lin & Yen, 2008) and largely determine a consumers' product-related consumer socialisation.

Socio-cultural influences on food purchases are context specific and an integral part of a con-

sumer's socialisation process – to the extent that it involves both rational and emotional thinking – and may dominate all other factors that may be relevant during decision-making.

Individual factors and consumers' labelling requirements

Individual/personal characteristics influence consumers' use of labelling and label-related requirements in an intricate way and determine how external influences are dealt with.

Needs A consumer's needs could be rational (such as a label that contains relevant information that would enable an informed food product decision in terms of a product's content or quality), or emotional in nature (such as label information as a means of empowerment, for example confirming the uniqueness and scarcity of a product through which one could gain the admiration of others) (Du Plessis & Rousseau, 2003:229).

Motive A consumer's motive for using labelling, i.e. the persistence with which a particular label format or label information is required and used, is mostly driven by highly personal needs (own health issues or religious concerns) that could be instigated by external forces (such as prominence of environmental issues in media or status factors).

Personality A consumer's personality determines his/her product preferences (Blythe, 2008:19), including the preferred label and packaging formats, and also influences the complexity of the product evaluation process. Innovative consumers are generally less risk averse and more willing to experiment with product alternatives and new products (Schiffman & Kanuk, 2010:459-460; Blythe, 2008:287). Their curiosity and sense for adventure would therefore encourage them to try novel products, which may involve a thorough scrutiny of label information to ensure that products at least meet certain

minimum conditions. Laggards, on the other hand, are particularly traditional and hesitant to accept new products and they are therefore inclined to steer away from labels that they are not familiar with (Schiffman & Kanuk, 2010:460). When consumers are brand and store loyal, they would probably not consult label information on a regular basis because they mostly purchase products with which they are familiar and satisfied. Different personality types may even express diverse and contradicting opinions about preferred colours and fonts on food labels as well as label formats. Manufacturers hence try to limit label characteristics to colours that are universally associated with acceptable product characteristics, for example the predominant use of blue and white on detergent containers (Schiffman & Kanuk, 2010:156). These characteristics would inevitably differ for different cultural groups, such as German consumers' preference for traffic light labelling versus Belgians' preference for Guideline Daily Amount labelling (Möser *et al*, 2010). Labelling on imported foods may therefore be vastly different to locally manufactured goods, although legislation still exerts certain minimum requirements for all food products that are sold in a particular country.

Perception Consumers' perception is the process in which sensory stimuli are selected, categorised and interpreted, and depends on a consumer's senses and previous experiences (Schiffman & Kanuk, 2010:175; Hoffman *et al*, 2005:184; Mullins *et al*, 2005:119), for example an awareness of cues and ability to discriminate visual cues such as colours and font sizes on labels. Certain product characteristics serve as heuristics during consumer decision making, which reduces the effort required to examine labelling information, such as assuming that imported chocolates are of a good quality or that certain brands of wine are excellent (Lamb *et al*, 2010:866).

Attitudes Consumers' attitudes are long-lasting positive or negative evaluations or emo-

tions that determine consumers' like/dislike or preference for particular products and subsequently their behavioural intentions (Schiffman & Kanuk, 2010:246). Consumers' attitudes towards food products are *inter alia* influenced by their product knowledge (Schiffman & Kanuk, 2010:249) and consumers' attitudes could be changed through new and updated knowledge about products, which could be provided by means of food labels and encouragement to consult and trust label information. Consumers' product preferences actually signify their attitudes towards products (Blackwell *et al*, 2006:88), based on a greater interest, desirability and liking of one product over another (Hornby, 2005:1142) that might increase purchase intentions (Schiffman & Kanuk, 2010:481). Labels of food products can be used to shape consumers' beliefs and/or feelings about a product, for example claiming that a particular food product is "fat free" or "nutritious". Similarly, certain types of information such as "genetically modified" might evoke extreme negative attitudes (Batriinou *et al*, 2008). Food labelling legislation (Regulations relating to the labeling and advertising of foodstuffs, 2010) has become particularly strict and limits any claims that could induce unfounded positive attitudes to increase product sales.

Knowledge Consumers' product knowledge affects their ability to use and interpret labels. Consumers' demands are not necessarily based on substantiated product knowledge and are hence not always realistic, which makes it particularly difficult for retail and industry to address consumers' needs. Information on food labels can for example not be extended infinitely due to obvious label dimension limitations. For the same reason, label information cannot be presented in more than one language, even though South Africa has adopted eleven official languages. The traffic light system that was introduced in Europe demonstrates effort to provide important product information in a simple, comprehensible format so that even less educated

consumers could benefit from it. Through product exposure (such as products on display in a store) and continuous learning (such as messages conveyed in media), consumers assess new product information within their existing knowledge frameworks (Arnould *et al*, 2004:342). This may cause changes in attitudes and behaviour, i.e. product-related consumer socialisation (Blackwell *et al*, 2006:88). Product labels are therefore ideal tools to facilitate consumers' decisions and to educate consumers, provided that consumers know how to interpret these labels (Whitney & Rolfes, 2008:61), such as understanding that food contents are indicated in descending order. It is, unfortunately, difficult to teach or assist less educated consumers to make use of food label information. In this regard, initiatives such as front-of-pack labelling (including traffic light labelling) may help to explain nutritional information (Yngve *et al*, 2012) and to quickly identify healthier food alternatives (Kelly *et al*, 2009). Traffic light labels (as used in Europe and the UK) reduce the cognitive activity required to analyse and interpret food label information and can reduce the intricacy of food purchase decisions considerably (Hieke & Wilczynski, 2011).

Food labels and product information search

Contrary to most other products, a food product information search can almost entirely be done at the point of purchase, by scrutinising food label information to expand one's existing product knowledge. Product information is, however, of no value if a consumer is unable to interpret it or to use the information (such as quality indicators) to their advantage (Dimara & Skuras, 2005:92), as in the case of less literate and less educated consumers, for example. It is often these vulnerable consumer groups who are none the wiser about food and health issues and who then do not benefit from most of the product information on a food label (Macanda, 2005). Hopefully the number of consumers who actually attend to, and are able to use food labels will

increase in South Africa in the future due to a steady increase in the literacy rate of the country's population since 2002 (South Africa National Planning Commission, 2010:48).

Food labels as a point-of-sale stimulus involve five steps of information processing. After exposure to food labels, consumers' senses are stimulated (Mowen & Minor, 2001:38) to process information (Blackwell *et al*, 2006:71). Consumers' attention is most likely to be grasped when the information on food labels seems relevant to a specific purchasing need, such as health-inquisitive consumers who might be drawn to nutrition information on food labels (Kempen *et al*, 2011).

Comprehension occurs when the newly gathered information is analysed in terms of related information that was stored in a consumer's memory during prior experiences. Obviously, lack of experience would deter a consumer's ability to comprehend the information. Information is accepted if it is regarded as relevant and comprehensible, and newly acquired information can even change a consumer's beliefs and attitudes about a food product. Information retention occurs when new information about a product is stored in a consumer's memory and is accessible for future use (Blackwell *et al*, 2006:79).

The significance of food labels during pre-purchase evaluation

Contrary to most other products, concrete product attributes are clearly expressed on food labels of packaged foods to enable an objective, rational product evaluation in the store. Food product decisions could be made impulsively, based on brand familiarity (Singla, 2010), or after a more thorough comparison of available alternatives (Mullins *et al*, 2005:116). It is comforting to know that food labels are regulated and trustworthy. The in-store pre-purchase evaluation of food products that are purchased

regularly can be done less attentively and fairly quickly, without evaluating several alternatives (Silayoi & Speece, 2004). In time, the purchase of many food products and groceries become habitual, low-involvement purchase decisions for most households, for example purchasing tea and sugar (Adamowicz & Swait, 2011). The evaluation process could, however, be fairly intricate if a consumer needs to check label information and if the information is difficult to comprehend (Miles *et al*, 2006), for example the units used to indicate nutritional and grading information, which differ across food types. If label information was used to select a product, the specific information determines a consumer's expectations and the product's performance would in all probability be judged in accordance with the product label information (such as nutritional information) (Silayoi & Speece, 2004) and would determine the consumer's post-purchase satisfaction with the product and intention to repurchase it (or not) (Schiffman & Kanuk, 2010:498).

When selecting a suitable product from a number of alternatives, a consumer's evoked set of food products would consist of products with the most preferred characteristics, such as ease of preparation, nutritional content or country of origin (Mullins *et al*, 2005:114). Product attributes and benefits are generally compared in terms of their relative importance (such as a preference for organic foods, country of origin and expiry date), through the application of a particular decision rule. A non-compensatory rule would for example mean that the food must be organically produced and not even another attractive attribute such as a low price would compensate for it (Schiffman & Kanuk, 2010:491; De Magistris & Gracia, 2008; Mullins *et al*, 2005:114). Food product evaluation is generally done fairly speedily, compared to the time required to evaluate other product categories. Attributes of new products in a familiar product category are mostly also compared to products that consumers have purchased before

(Klein, 2005:67), and this can be done without forewarning at point-of-purchase.

The relevance of food labels during post-purchase evaluation

Clarification of terminology When discussing consumers' satisfaction with food labels and food labelling, one needs to distinguish between satisfaction with characteristics of the label itself (i.e. physical attributes including dimensions and legibility in terms of font size and writing styles) and satisfaction with label information that conveys product attributes (i.e. expiry date, ingredient list, nutritional information, health and nutrition-related claims, country of origin/geographical region, allergen information, logos, identification and address of the manufacturer, quality guarantee, instructions for use, number of servings). A consumer might check on product information after a product had been used, to confirm certain aspects such as the quality, ingredients or country of manufacture, for purposes of re-purchase intentions.

Expectations created by food labels Consumers who actually attend to label information might evaluate products more astutely and even have more stringent expectations with regard to selected attributes. In addition, consumers' desires and product expectations change over time, due to product-related experience or subsequent increased product knowledge. Consumers' satisfaction with a product might therefore fade over time, even if a product in essence still meets expectations. Expectations are an important determinant of consumer satisfaction, which is best described by the expectation/disconfirmation theory (Ha, 2006). Consumer satisfaction is an emotion that culminates after an instant, transaction-specific measure of whether a consumer's perception of a selected product's performance meets, fails, or exceeds expectations (in other words, whether it confirms expectations, whether a negative disconfirmation of expectations is experienced, or whether a

positive disconfirmation of expectations is experienced). The outcome of an evaluation process culminates in positive, negative or neutral emotions, i.e. satisfaction, dissatisfaction or some dispassionate conclusion with limited emotion in terms of a repurchase (Mowen & Minor, 2001:199). Low information satisfaction is more likely to stimulate negative word-of-mouth communications than low attribute satisfaction, because the consumer may feel cheated if the product does not deliver what the information suggested it would do (Spreng *et al*, 1996). Satisfaction with food label information is encouraging and might result in repeat purchases and positive word-of-mouth communication.

Label characteristics that may instigate consumer dissatisfaction

One would firstly expect the physical attributes of a label to be satisfactory, in other words that the product label has to be visible, legible and comprehensible. The size of some product labels, however, makes it difficult to include too much information. Consumers with vision impairment might therefore experience difficulty to read label information. Concerns about colour differentiation and font size are hence increasingly raised (Doyle *et al*, 2005) by certain market segments, such as the elderly or health conscious consumers (Dimara & Skuras, 2005; Silayoi & Speece, 2004). Confusion and scepticism about the credibility and scientific truthfulness of health-related claims on food labels thus still exist, despite food regulations (Worsley & Lea, 2008; Silayoi & Speece, 2004). Some consumers also find food labels difficult to follow and too time-consuming to read (Peters-Teixeira & Badrie, 2005; Silayoi & Speece, 2004). The underlying principles of how product information is presented, is also not necessarily clear to consumers (for example, that ingredients are listed in a descending order in terms of quantities) (McEachern & Warnaby, 2008; Doyle *et al*, 2005). From an informational point of view, consumers may become highly frustrated if information that they expect to find on products is absent (such as expiry dates,

information about food allergens and country of origin); or when the weight and content on imported foods are indicated in imperial instead of metric units (De Magistris & Gracia, 2008; Peters-Teixeira & Badrie, 2005); or if they are not familiar with the symbols or terminology that is used (Mannel *et al*, 2006; Miles *et al*, 2006). Discerning consumers who read labels extensively and those with particular food, nutrition and health-related interests often expect information that goes beyond the norm and might get annoyed if the information is not indicated, such as a product's association with a geographic region, its traceability and methods of production (McEachern & Warnaby, 2008; Teisl *et al*, 2008; Dimara & Skuras, 2005). Too much information, on the other hand, could result in an information overload (Kimura *et al*, 2008; Silayoi & Speece, 2004), which creates a fairly strong controversy in terms of what needs to be included to satisfy all consumer segments (Feunekes *et al*, 2008). In essence, food choices are significantly prejudiced if consumers are unable to understand label information (Jacobs *et al*, 2010), because consumers then typically ignore the information or might even reject the product in favour of another of which the label information seems more clear and useful (Silayoi & Speece, 2004). Dissatisfaction with a food label could result in reduced preference for a product and probably also less overall product dissatisfaction.

CONCLUSIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

This literature review indicates how food labels and food label information influence consumers' purchase decisions throughout the consumer decision process and it shows that these influences have become particularly intricate in recent years. It confirms that more should be done to assist consumers to make informed, responsible food purchase decisions. Food purchases not only take up a large part of a household's

budget, but it is also crucial in terms of people's general physical, emotional, cultural and social well-being. It is therefore probably inaccurate to describe food purchases as less complex purchases. Any future research on food labels and labelling should acknowledge global influences, i.e. the phenomenon that many of the food products that are offered in South African shops, are imported. It would therefore understandably be particularly difficult to implement suggestions that could only be applied to locally produced packaged food products. Consumers' expectations of food labels are furthermore not necessarily realistic and differ from one consumer to the next, depending on their experience, product knowledge, cultural and social affiliation, involvement, interest and physical ability. Consumers' expectations may also differ in terms of the physical attributes of labels and the content-related attributes (McEachern & Warnaby, 2008; Teisl *et al*, 2008; Silayoi & Speece, 2004). It might therefore be almost impossible to design a food label that is approved by the diverse South African population (Lamb *et al*, 2010:50), which ranges from very wealthy to very poor, educated to uneducated, and literate to illiterate, and which includes all cultural and language groups.

It is therefore suggested that food label research should acknowledge consumers' preferences, their needs and the problems they experience with existing food labels. It is proposed that the focus with food label research should then divert to consumer education (Macanda, 2005), and should therefore explore ways to educate consumers of all walks of life to use food labels more purposefully during the various stages of the consumer decision-making process, in order to empower consumers to use food label information to their best advantage. Amidst evidence that only 49% of South African metropolitan consumers choose food products with detailed health information (Bosman *et al*, in press), the South African Department of Health has for example used food labels as part of a strategy to prevent obesity and to aid consumers in making

healthier food choices (Booyesen, 2007:55).

As a result of education programmes, consumers might express more realistic expectations about food labels. These might encourage consumers to use food labels more attentively, which in turn might result in increased satisfaction with the performance of products in general.

The following research questions may be worth investigating in order to structure educational programmes more purposefully:

- *What is the relationship between specific consumer-related variables (i.e. demographic characteristics, individual as well as socio-cultural characteristics) and consumers' (dis) satisfaction with food labels?* The outcome would be useful to structure the content of educational programmes for various market segments more specifically.
- *What is the relationship between consumers' (dis)satisfaction with food labels and their rejection of or preference for a product?* The outcome would be useful to demonstrate the importance of consumers' understanding of food label information.
- *What is the relationship between consumers' satisfaction with food labels and product loyalty?* The outcome would be useful to demonstrate the importance of food labels to increase post purchase satisfaction.
- *What are South African consumers' expectations regarding food labels?* The outcome would be useful to demonstrate specific problems with consumers' use of existing labels that could be addressed in consumer education programmes.

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