

Still in the Dark on Nutrition?

*How well are consumers already acquainted with health ingredients?
A consumer study on 200 German consumers using the ADM-sample.*

by Stefanie Bröring and Sabine Bornkessel

Innovations in food ingredients offer a plethora of opportunities to be tackled by different industry players. With the register of the 222 approved Article 13.1 claims, the European Food Safety Authority (EFSA) has for the first time established a baseline for the potential communication of the health benefits of food products.

This raises many questions: How well are consumers already acquainted with health ingredients? What is the influence of a health claim on the consumer's knowledge about the relationship of health ingredients and the perceived value? How can one assess consumer's knowledge and value perception of health ingredients before developing and testing new ingredients in costly clinical trials? To find answers to these questions, the University of Applied Sciences Osnabrück has conducted a consumer study on

200 German consumers using the ADM-sample.

Converging Areas

The market for food ingredients changed rapidly in recent years. However, not only regulation – especially the Health Claims Regulation (EC 1924/2006) – but also industry structure is evolving only gradually. At the same time, health and well-being is the most influential food trend, opening up a well-spring of innovation opportunities for the food, the specialty chemicals and the pharmaceutical industries. One can detect multiple trends of convergence and a gradual overlap of especially the food and the pharmaceutical industry leading to a new inter-industry segment at the border between foods and drugs (see figure 1).

That this new inter-industry segment is no longer “just” an academic playing field to analyze competitive behavior, and

innovation strategies of functional foods has become even more evident by recent facts to be observed in the industry itself. Nestlé's September 2010 announcement of the creation of Nestlé Health Science S.A. and the Nestlé Institute of Health Science to confidently “...pioneer a new industry between food and pharma...” show that these opportunities will trigger more R&D and innovations in the future.

Nestlé has set a very ambitious goal, as the area between food and pharma doesn't just need competences from both industries. Additionally, product approval and communication of health benefits often seems to consume multiple resources. This is because the health benefits of these hybrid products between food and drugs need to be backed up by sound science. Accordingly, tendencies of industry convergence can be observed on the technological level

in the application of the same technologies. Likewise, they increasingly manifest themselves on the regulatory level in similar regulatory requirements, such as clinical trials as required by EFSA, as part of the assessment of health claims.

Consumer Acceptance

From the initially over 44,000 submitted dossiers to EFSA in order to obtain a health claim, and the consolidated package of 4,637 generic health claims submitted, only 5% have been approved.

What does that mean for innovation of food ingredients with health properties? In those cases where a health claim under EC 1924/2006 is approved – be it a generic one based on existing science (Art. 13), or a new one involving new science (Art. 13.5), or a more detailed risk reduction claim or a claim pertaining to children (Art. 14) – the legal way to communicate

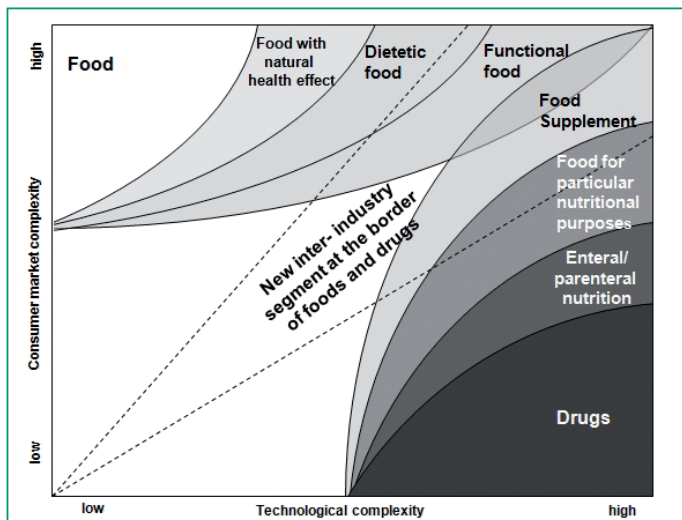


Figure 1: Functional Food – A Thin Line Between Foods And Drugs (Source: (Bröring, 2005))



Nestlé ActiCol Fermented Milk with Strawberry Flavor (Mexico) contains phytosterols to “help reduce cholesterol.”

Source: Innova Market Insights

health benefits has then been established. If that is not the case, there might be an option to use a nutritional claim based on the policies given in the annex of the Health Claims Regulation. However, in those cases where a food supplier only uses the word “contains...”, it then depends solely on the consumers individual degree of involvement, their ingredient related-knowledge and awareness, to perceive a benefit from the product or not.

So far, only a few innovations have turned out to be successful. Why is that? One key success factor for new products is consumer acceptance. New products on the market can only be successful if the consumer understands the product’s positioning and the health claim. Therefore, consumer acceptance plays a pivotal role and needs to be assessed carefully before a new product launch.

But how can one exactly

predetermine consumer acceptance of a new product that carries a certain health claim? The construct of consumer acceptance is influenced by a number of endogenous and exogenous factors. Endogenous factors concern the relevant consumer characteristics that have an impact on the acceptance and later on, willingness to pay for a functional health benefit. These consumer-specific factors are accompanied by external influences such as the purchasing situation and external recommendation of the product.

Ingredient Knowledge

Given the necessity of consumer acceptance for the adoption of new functional health ingredients by the market, the aim of our research is to explore consumers’ nutritional knowledge of functional ingredients as the knowledge is a precondition for the acceptance. Because only if the consumer is

aware of the physiological health benefit beyond the nutritional basis, this added value can be perceived. One methodology to explore this phenomenon is the means-end chain approach (see figure 2). The approach assumes consumers’ decision to be based on the anticipated consequences which are the most important choice criteria within a purchasing situation (Reynolds and Olson, 2001). This approach can be applied to the case of consumer knowledge and acceptance. In doing that, the product level is determined by different product characteristics (for instance the content of a functional ingredient). at the consumer level, there should be a benefit perception, but this is only possible if the consumer is aware of the perceived consequence of consumption (e.g., disease risk reduction). Hence, without relevant consumer knowledge, a positively perceived consequence of the consumption of a food supplement or functional food (ingredient) will be missing. The same holds true for a value perception of the individual consumer.

Joint Health Involvement

In a previous study on joint health ingredients (Bröring, 2010) we found that first of all, it is very important to know how consumers categorize their joint health, because personal attitudes influence the accept-

ance of certain products and their ingredients. Within this study, most of the interviewed German adults aged 40 years or older are at least concerned about their joint health. Considering the age distribution, it has to be mentioned that the older the consumer gets, the more joint health becomes a problem. The interviewees show a rather limited awareness of joint health ingredients. However, the study reveals that the more joint health becomes a problem, the higher the consumer awareness of health ingredients is, while users of non-prescribed drugs know best about health ingredients. This may be due to the highest degree of involvement and attention among actively searching consumers who are probing a supplement. Interestingly, as soon as the consumer is under medical treatment, the awareness declines, possibly due to the patient having the doctor look after everything, leading to less own information searching.

A further study on consumers’ knowledge of ten different functional ingredients was conducted in Germany in September 2011, interviewing 200 German consumers aged 18 and older (Bornkessel and Bröring, 2012). Within this study, only 18% of the interviewed consumers estimate their knowledge about glucosamine to be very good or respectively good. But still less (only 4%) are able to link glucosamine with bone and joint health. That means that 96% of consumers in our sample are unable to perceive a value from the ingredient glucosamine. Other associations with glucosamine are “kind of sugar” or even the idea that glucosamine is a toxic substance. As the link between ingredient and indication seems to be missing, the importance of healthcare professionals, who are able to communicate a potential health effect, increases. The few consumers whose knowledge of glucosamine is very good are mostly of older ages (75% are

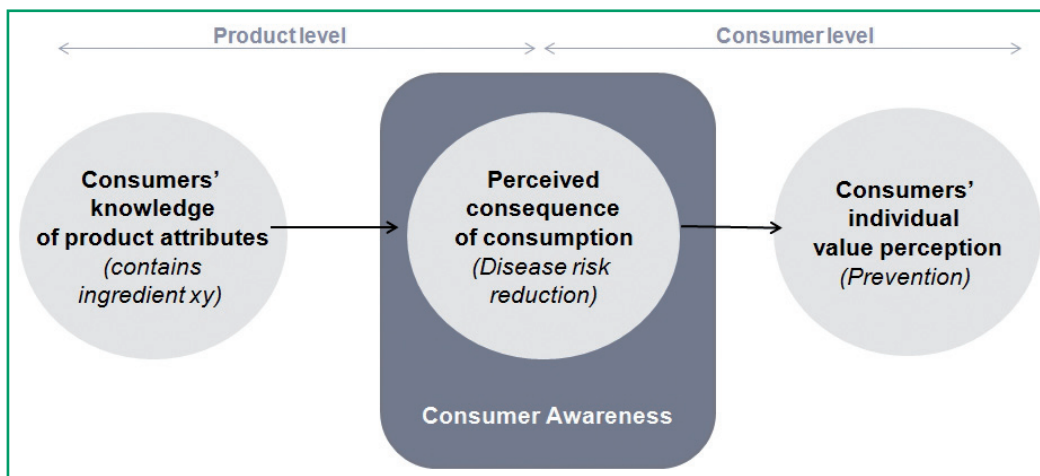


Figure 2: Means-End Chain Approach in Case of Consumer Acceptance of Functional Ingredients (Based on Reynolds and Olson, 2001)

60 years and older). This might be due to the increasing relevance of bone and joint health problems among the elderly. Interestingly, consumers with a high knowledge of glucosamine consume more dietary supplements (38%) proportional to the whole sample. In the case of dietary supplements containing glucosamine, this might lead to a strategy focusing on the elderly because for this target group dietary supplements to complement the basic nutrition seem to play an important role.

Key Learnings

Product characteristics vary tremendously between different product categories. In this study, the focus is put on one special product for maintaining joint health. An important finding is that nothing seems more important to German consumers than a product recommendation given by health professionals. It is also important for German consumers that all contained natural health ingredients are

declared on the package. Most interestingly is the relevance of the effectiveness of a functional ingredient that was tested with the statements. Hence, for a positioning of the product (for example for the PARNUT category = foods for particular nutritional purposes), a consumer assessment may help to verify the target group and potential communication strategies. ♦

Prof. Dr. Stefanie Bröring works at the University of Applied Sciences Osnabrück, Germany. For more information: s.broring@hs-osnabrueck.de, www.chainnovation.de

References

Bornkessel, S.; Bröring, S. (2012). Consumer Knowledge of Health Ingredients – an assessment of 10 different ingredients, Working Paper No.1, Hochschule Osnabrück.
 Bröring, S. 2005. The front end of innovation in converging industries. The case of nutraceuticals and functional foods. Dt. Univ.-Verl.
 Bröring, S. 2010. Consumer Awareness of Health Ingredients - Walking the Fine Line of Innovation Between Foods and Drugs. CHEManager Europe, 5.
 Reynolds, T. J. & Olson, J. C. (eds.) 2001. Understanding consumer decision making. The means-end approach to marketing and advertising strategy, Mahwah, NJ [u.a.]: Erlbaum.



Hilo Active Green Tea Flavored Low Fat and High Calcium Milk Powder (Indonesia) contains a combination of glucosamine and chondroitin.