Scientific Works. Series C. Veterinary Medicine. Vol. LIX (3)
ISSN 2065-1295, ISSN Online 2067-3663, ISSN-L 2065-1295

FUNCTIONAL FOODS – A NEW OPPORUNITY FOR FOOD INDUSTRY

Mădălina BELOUS

Spiru Haret Veterinary University, 9-11 Energeticienilor Ave., 32091, Bucharest, Romania

Corresponding author e-mail: madalina.belous@gmail.com

Abstract

The aim of the research was to investigate the consumer awareness regarding Functional Foods, for a new approach regarding producers in Food Industry. Lately, the consumers are becoming more aware regarding a healthy nutrition, food quality, or food components that can bring a benefit for general health, either general wellbeing or either improving health for some particular diseases. On a particular note, it is generally recognized that calcium and probiotics (milk or dairy products) are interconnected with bone health or digestive health, or the fish rich in omega - 3 fatty acids will reduce risk of heart disease. The study was based on an exploratory research based on other literature and geographical data. The amount of scientific date presented in literature, offer substantial ideas regarding consumer awareness and certain foods and health, with new opportunities for food industry. The study could be a tool to investigate the potential opportunity of functional foods for manufactures in food industry. The study was an exploratory one based on international literature with no research based on Romanian market. Thus, local market is in accordance with European trends, markets and regulatory. The study is trying to create an overview regarding a potential production opportunity for food industry. This will require the collaboration of regulatory authorities, manufactures for food quality and food safety.

Keywords*: Functional foods, healthy nutrition, food quality, general health.*

INTRODUCTION

One of the most concluding definition regarding Functional foods belongs to Diplock et al (1999) and it states: "A food can be regarded as functional if it has beneficial effects on target functions in the body beyond nutritional effects in a way that is relevant to health and well-being and/or the reduction of disease". Today is a wide concern regarding a good health and a healthy nutrition based on nutrients that can support the body more than a simple nutrition. Health is one of the most frequent choices regarding foods in European countries (Lappalainen et al 1998). Functional foods can be natural (fruits rich in fiber and antioxidants, oily fish with high levels of omega 3-fatty acids), added to minimally processed foods (orange juice with soluble fiber, margarines containing plant stanols), achieved through breeding techniques or through customizing animal's diet (cows fed with high selenium diet to produce organo – selenium enriched milk) (Thompson and Moughan, 2008). Historical point of view Hippocrates in 400 BC is one of the pioneers. 'Let food be your medicine and medicine be your food.' The modern concept of functional foods belongs to Japanese in the 1980's linked with old Asian philosophy food and overall health. Thus, an epidemiological evidence diet and health exist since 1950's. New types of foods designed to promote health or to reduce the risk of diseases, known as functional foods, have been entering the market since the 1990's.

Based from manufactures point of view, the industry is offering a lot of opportunities, thus consumers expectation is paying an important role (Thompson and Moughan, 2008). Different generations have been identified as having different attitudes and behaviours which result in specific patterns of functional food consumption (Duff 2006). According to Berry (2006), consumers are becoming more aware of the effect that certain foods or food components may have on their risk of developing specific diseases (like examples: calcium promote bone health, dietary fiber may reduce risk of cancer, omega – 3 fattty acids will reduce risk of heart disease or probiotics will help digestive health).

The topic of research will be to investigate if exist an appropriate consumers culture linked with functional foods and to provide the interest for consuming these types of foods. The Rationale of the Research will cover gap in literature and will try to identify a new opportunity for food industry producers. The Method of the Research is based on an exploratory method based on literature review analysis.

MATERIAL AND METHODS

Methodology used is an exploratory one based on previous literature review analysis. According to Niva and Mäkaelä (2005), qualitative and quantitative consumer studies on functional foods tend to focus on different aspects of the phenomenon. Many qualitative studies have focused on the meanings and interpretations of functional foods among consumers and indicated that the acceptability of new foods is a complex issue with a multitude of aspects.In contrast to the qualitative approaches, quantitative studies often focus on attitudes towards specific products or product types with the aim of finding out what kinds of products, added ingredients, tastes, health claims or combinations of these would most appeal to consumers (Poulsen, 1999; IFIC, 2000; NIN, 2002; van Kleef et al., 2002; Bech-Larsen and Grunert, 2003; Urala et al., 2003).Therefore qualitative studies have largely focused on consumers' interpretations of functional foods, quantitative approaches have concentrated on factors that may explain differences in the acceptability of functional foods Niva and Mäkaelä (2005).

RESULTS AND DISCUSSIONS

Research findings are based on literature review analysis.In modern Western societies, health is one of the central values and even an end in its own right. Also government policies focus on health promotion and preventive measures against illnesses. For many, health has become a life-long project of keeping well and fit, including self-control and continuous work towards better health (Burrows et al., 1995; Petersen and Lupton, 1996). According to Burgarolas et al. (2006), looks like the consumers most likely to purchase functional foods are women and those who place a high level of importance on health and nutrition. In Europe, relatively few studies have investigated the role of socio-demographic factors in the acceptability of functional foods, even though a multitude of studies indicate that citizens' views about food and health as well as their eating patterns are related to age, gender, socio-economic status and phase of life. The 'ACNielsen Functional Foods and Organics Consumer Behaviors and Attitudes Survey'(2005) found that high-fibre products were the most common functional food purchased worldwide, followed by iodine-fortified salt, cholesterol- reducing margarines and fortified fruit juices (Table 1). There are a number of trends regarding purchasing of functional foods, most of them linked and appear to be relevant on a global scale are the desire for individualized nutrition, the need to control body weight, and the use of foods rather than pharmaceuticals to positively influence mood and mental health (Mellentin 2007; French 2006; Kern 2006). The rise of functional foods can be seen as part of the rapid developments in medicine and life sciences that study the interconnections between nutrition and health, or more specifically, between food components and risks of diseases. At the same time, technical advances in food engineering and manufacturing have opened up possibilities in developing products with novel technologies and enriching foods with new ingredients. (van Kleef et al., 2002; Verschuren, 2002.) According Niva and Mäkaelä (2005), the appropriation of functional foods in terms of acceptability is a multifaceted phenomenon. It is possible to discern several aspects: personal experiences of functional foods and opinions of their quality and safety, but also concerns about the consequences of functional foods for our eating practices as well as assessments of the need for control and scientific substantiation of products and their health claims. The importance of these factors varies amongst consumers.

Table 1. Frequency of the purchase for particular functional food categories in different regions. Adapted from (ACNielsen Functional Foods and Organics Consumer Behaviors and Attitudes survey, November 2005)

Functional product purchased regularly	Asia/Pacific	Europe	North America	Global average
	%	%	%	%
Whole grain, high-fibre products	37	38	55	40
Iodine-enhanced cooking salt	32	30	24	32
Cholesterol-reducing oils and margarines	28	27	41	31
Fruit juices with added supplements/vitamins	32	26	32	30
Yoghurts with acidophilus cultures/probiotics	30	20	22	25
Milk with added supplements/vitamins	25	12	23	19
Bread with added supplements/vitamins	24	10	25	18
Fermented drinks containing 'good' bacteria	21	14	4	17
Soy milk	27	6	10	14

CONCLUSIONS

It is clearly that a number of opportunities exists for consumers and manufacturers within the functional food sector, but there are a number of issues that must be resolved if the industry is to continue to grow. Some important challenges are regarding consumer awareness, understanding and acceptance. Manufacturers not currently operating within the functional foods market identified price, lack of consumer awareness and lack of scientific evidence as the key issues they were concerned about when contemplating entering this sector (Thompson and Moughan, 2008). Collaboration between scientists and health professionals, regulatory authorities, manufacturers and retailers will be appropriate for developing this opportunity for food industry.

REFERENCES

ACNeilson (2005) *Consumer Insight*Winter: 28–29. American Obesity Association (2005) *Global Obesity.* Retrieved 25 April 2007 from http://www.obesity.org/education/global.shtml.

Bech-Larsen, T. & Grunert, K.G. (2003) The perceived healthiness of functional foods. A conjoint study of Danish, Finnish and American consumers' perception of functional foods. *Appetite*, 9–14.

Berry D (2006) Functional ingredients forecast. *Dairy Foods* May: 22–30.

Brugarolas M, Martinez-Carrasco L, Martinez- Poveda A, Llorca L and Gamero N (2006) Consumer opinions of functional foods. *Alimentacion Equipos y Tecnologia* 25: 71–74.

Burrows, R., Nettleton, S. & Bunton, R. (1995) Sociology and health promotion. Health, risk and consumption under late modernism. In *The Sociology of Health Promotion* (ed. by R. Bunton, S. Nettleton & R. Burrows), pp. 1–9. Routledge, London.

Diplock AT, Aggett PJ, Ashwell M, Bornet F, Fern EB and Roberfroid MB (1999) Scientific concepts of functional foods in Europe: Consensus document. *British Journal of Nutrition* 81: S1–S27.

Duff M (2006) Functional foods promise sustainable strategy. *Food Retailing Today*, May 8: F2.

French S (2006) Functional foods: the next phase. *Food and Beverage International* 5: 19–20.

IFIC (2000) *Functional Foods: Attitudinal Research.* International Food Information Council (IFIC) Foundation, Washington DC. [WWW document].

Kern M (2006) 2025: Global trends to improve human health, from basic food via functional food, pharma-food to pharma-farming and pharmaceuticals. Part 1: Basic food, functional food. *AgroFood Industry Hi-Tech* 17: 39–42.

van Kleef, E., van Trijp, H.C.M., Luning, P. & Jongen, W.M.F. (2002) Consumer-oriented functional food development: how well do functional disciplines reflect the 'voice of the consumer'? *Trends in Food Science and Technology*, 93–101.

Lappalainen R, Kearney J and Gibney M (1998) A pan European survey of consumer attitudes to food, nutrition and health: An overview. *Food Quality and Preference* 9: 109–117

Mellentin J (2006) Dairy wins the functional battle. *Dairy Industries International* November: 16–17.

NIN (2002) *Consumer Awareness of and Attitudes Toward Functional Foods.* June 2002. National Institute of Nutrition, Ottawa.

Niva, M. and Mäkaelä, J. (2005). Finns and functional foods: socio-demographics, health efforts, notions of technology and the acceptability of health-promoting foods. International Journal of Consumer Studies. National Consumer Research Centre, Helsinki, Finland

Petersen, A. & Lupton, D. (1996) *The New Public Health. Health and Sel in the Age of Risk*. SAGE Publications, London.

Poulsen, J.B. (1999) *Danish Consumers' Attitudes Towards Functional Foods*. MAPP Working Paper 62. MAPP – Centre for Market Surveillance,

Research and Strategy for the Food Sector, Aarhus.

Thompson, AK and Moughan, PJ (2008). Inovation in the foods industry: Functional foods. *Innovation: management, policy & practice ,* Volumul 10, Issu1, July 2008.

Urala, N. & Lähteenmäki, L. (2003) Reasons behind consumers' functional food choices. *Nutrition and Food Science*, 148–158.URL http://ific.org/relatives/17260.pdf.

Verschuren, P.M. (2002) Summary report. Functional foods: scientific and global perspectives. *British Journal of Nutrition*, S125–S130