

## DIRECTIONS OF FUNCTIONAL FOOD MARKET DEVELOPMENT IN LIGHT OF NEW CONSUMER TRENDS

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### ABSTRACT

The main aim of the article is to present the directions of functional food market development in Poland and in the world against the background of changing patterns of consumer behaviour. The presentation of the concept and functions performed by this product category shall be the starting point. Consumer trends developed over the last decade are presented, with particular attention paid to changes in food consumer preferences and the role of marketing activities in this process. The last part of the study refers to the trends in the development of functional food in Poland compared to the world market.

**Key words:** functional food, consumer trends, marketing activities, prospects for the development of functional food

**JEL codes:** D1, D4, C23

### INTRODUCTION

Functional food is a widely discussed subject, present in the subject-related literature in a multifaceted way. The pro-health effects of functional food are well considered. This is reflected in the improvement of health, well-being and the reduction of the risk of disease [Oleđzka 2007, Sirtori et al. 2007]. In the last decade, a dynamic development of the functional food market has been observed both in the global and national dimension as an expression of consumer concern for health and appearance. The main aim of the article is to present the directions of functional food market development in Poland and in the world against the background of changing patterns of consumer behaviour.

### MATERIAL AND METHODS

The study has been prepared on the basis of secondary data. The source of secondary data was literature on the subject, statistical studies of Statistics Poland (Główny Urząd Statystyczny) and industry reports. The presented studies were the basis for diagnosing the role and importance of functional food and the directions of its development on the world market.

### CONCEPT AND FUNCTIONS OF FUNCTIONAL FOOD

The concept of functional food is defined in various ways. Research on functional foods concerns the definition of this concept, the definition of functional

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foods, the impact on health and the conditions for ensuring consumer safety and behaviour.

The first research into “functional” food products was launched in Japan in 1984 in search of a link between food and pro-health benefits of its consumption. As a result of the positive results of the research, the Japanese Minister of Health approved a new food category called FOSHU (Food for Specified Health Use) in 1991. The Food and Drug Administration in the United States refers to functional foods and food components that provide health benefits in addition to their primary nutritional function. In Canada, the concept of functional food is associated with conventional foods or foods similar to traditional regular diets that, in addition to their essential nutritional functions, have proven beneficial effects on health or reduce the risk of chronic disease. Australia and New Zealand use the term ‘novel food’ that includes functional foods that are similar to traditional foods and are intended to be consumed as part of a normal diet, but so modified that their functions go beyond simple nutritional requirements.

The definition developed in Europe as part of The European Commission’s Concerted Action on Functional Food Science in Europe (FuFoSE) Programme, coordinated by the International Life Science Institute (ILSI), is the most popular definition in use. It reads as follows: “a food may be considered functional if it has

been shown to have a beneficial effect on one or more functions of the body over and above the nutritional effect and its pro-health effect should be documented by scientific studies” [Korbutowicz 2018]. The research that is conducted must be representative of the whole population in order to ensure its reliability and objectivity.

Functional foods include products with the physiological activity declared by the producers as achieved by [Lindsay 1996]:

- adding biologically active substances, such as vitamins, minerals, fibre, animal or vegetable origin compounds, to foods;
- designing new chemical compositions of food products (e.g. types of margarine containing plant sterols, inhibiting the absorption of cholesterol in the human body);
- producing preparations containing biologically active substances derived from natural plant and animal raw materials (e.g. oil extracts from red grapefruit seeds);
- use of probiotics (living microorganisms improving the composition of the intestinal microflora and increasing the natural immunity of the human body);
- reducing the energy value of food products (light products);
- replacement of fat and sugar with substances of lower-energy value.

**Table 1.** Type and example of functional foods

Functional foods type	Definition	Example
Fortified products	A food with extra nutrients added.	fruit juices fortified with vitamin C, milk fortified with vitamin D, calcium-fortified orange juice, mineral fortified breakfast cereals
Enriched products	A food with added nutrients in order to replace vitamins or minerals that have been lost during the manufacturing process.	refining wheat to make white flour removes several B-complex vitamins and iron that are contained in the part of the grain that is removed
Altered products	A food from which a deleterious component has been removed, reduced or replaced with another substance with beneficial effects.	fibers as fat releasers in meat or ice cream products
Enhanced commodities	A food in which one of the components has been naturally enhanced through special growing conditions, new feed composition, genetic manipulation, or otherwise.	eggs with increased omega-3 content achieved by altered chicken feed

Source: Siro et al. [2008], Shamal and Mohan [2015].

There are four main types of functional foods: fortified products, enriched products, altered products and enhanced commodities [Siro et al. 2008, Shamal and Mohan 2015] – Table 1.

Functional foods may be enriched with various pro-health bioactive substances: dietary fibre, oligosaccharides (prebiotics), polyols, choline and lecithin, proteins and peptides, polyunsaturated fatty acids, minerals, vitamins, phytochemicals with antioxidant properties (polyphenols, vitamin C, carotenoids, anthocyanins, glycosides, isoprenoids) and phytosterols and microorganisms with probiotic activity [Woźniak and Kamiński 2006].

There are four basic ways in which functional foods can improve the psychophysical well-being of consumers [Świdorski and Kolanowski 2006]:

- direct influence by inhibition of degenerative changes in the system or therapeutic effect in the course of some diseases;
- supply of larger quantities of nutrients in physiological states of increased demand, e.g. intensive growth, pregnancy, convalescence, sport, extreme tourism;
- composing a proper diet in specific diseases such as allergy, diabetes, food intolerance;
- improvement of mood and increase of psychophysical efficiency of the organism.

## CONSUMER TRENDS ON THE FUNCTIONAL FOOD MARKET

A trend is defined as a process of change that is seen from a psychological, economic or sociological perspective and may be short or long term and regional or global in its scope. In the long term, trends have a significant impact on consumer purchasing behaviour, which in turn leads to a change in consumption patterns. Trends are variable in time and characterized by co-existence and divergence.

The development of demand for functional food is primarily linked to eco-consumption (organic or sustainable consumption) and conscious consumption. Eco-consumption consists of deliberate efforts of individuals to minimise unfavourable effects resulting from consumption of consumer and investment goods and services through rationalisation and

exploitation of production factors (resources) and the reduction of post-production and post-consumer waste generation [Nowalska 2007]. Numerous examples of organic consumption can be mentioned, such as “healthy foods”, the purchase of reusable bags, transport and tourism that do not cause environmental degradation. There is a close link between eco-consumption and conscious consumption. Conscious consumption is based on responsible consumer decision-making based on knowledge of its social, environmental and political consequences. Conscious consumption not only concerns the purchase of products and services that are environmentally and human-friendly, but also involves the search for better solutions for reducing the use, sharing and reuse of products [Zalega 2013].

Significant stimuli of changes taking place in the area (size and structure) of consumption and consumer behaviours in the market are factors located in the broadly understood environment [Szwacka-Mokrzycka 2018]. The technological development, socio-demographic and economic changes in individual countries, regions and global space over the last 20 years are of leading importance here. This direction of change is indicated by many researchers, who grouped them into megatrends [Naisbitt 1982]. The directions of these changes are usually divided into three groups [Olejniczuk-Merta and Garbarski 2017]:

- the consumer market environment and the conditions it creates to meet consumer needs;
- the means of meeting needs, purchasing habits, purchasing behaviour and consumer behaviour;
- structure of purchasers’ needs, their attitudes and lifestyle.

The basis for conducting research into consumer behaviour and tracking the direction of its changes is the adoption of their global character [Datamonitor.com 2004]. The research carried out in this area has been divided into two groups. The first one is behavioural behaviours and trends in the market and households. The following elements are included:

- health care;
- comfort;
- sensuality;
- individualism;
- the need to meet other people.

The second group covers changes resulting from consumer life stages, income, age, and gender. A new approach to health care and the creation of a lifestyle based on it, perceived as wellness, is of particular importance in shaping the behaviours of contemporary consumers. There are various elements at play here that have a direct and indirect impact on the physical and mental health of the consumer. The following should be mentioned in particular [Kusińska and Olejniczuk-Merta 2009]:

- taking care to purchase so-called safe products;
- purchase of local products;
- use of so-called positive diets;
- consumption of products that provide a sense of satiety;
- purchasing light products, introducing a balanced diet;
- support of authorities in the field of health care and a healthy lifestyle;
- taking action to reduce stress;
- taking care of one’s external appearance;
- taking care of a healthy environment;
- independent treatment and prevention of diseases.

There is a lot of research focused on different aspects, such as food concept awareness and consumer attitude and acceptance based on qualitative and quantitative methods [Verbeke 2005, Siro et al. 2008]. According to the results of these studies, consumers in the US and Europe had inconsistent points of view regarding the acceptance of functional foods. The latest research results show that there has been a declining trend in the consumption in the US in the first decade of this century, due to decreases in taste and satisfaction [Siro et al. 2008]. Consumers in Europe were more critical

in the choice of foods than Americans. European consumers viewed functional foods as “unnatural and impure”, especially Danish consumers [Siro et al. 2008]. They questioned the safety of functional foods because of the artificial process of their production. A lot of studies show that acceptance of functional food depends both on their health claims and on how they taste [Verbeke 2006, Lonnerker 2007, Lalor 2011, Žeželj et al. 2012].

According to different empirical studies, consumer acceptance of functional foods can be affected by socio-demographic factors, and cognitive and attitudinal factors [Verbeke 2005, Siro et al. 2008, Bornkessel et al. 2011, Jayasree 2011, Buyukkaraogoz et al. 2014, Shamal and Mohan 2015]. The most important determinants of consumer acceptance are consumer knowledge and beliefs [Verbeke 2005, Del Giudice and Pascucci 2010]. Five different concepts of consumer beliefs in functional foods are summarized in Table 2.

According to the Nielsen report, the majority of European consumers (56%) believe that proper nutrition helps to maintain good health. Functional products provide natural protein, strengthen immunity and supplement vitamin deficiencies in case of fatigue, stress and overwork. Polish consumer awareness of the nutritional value of food is higher than that of the average European. Over 54% of Polish consumers carefully read the labels of selected food products, where health claims indicating the health effects to be expected are included. Health claims made on a product or food ingredient are issued by the European Food Safety Authority (EFSA). They increase consumer confidence and acceptance of a functional product [Nielsen.com 2018].

**Table 2.** Different concepts of consumer beliefs in functional foods

Concept of consumer beliefs in functional foods	Source
Belief in impact on personal health	Hilliam 1996
Belief in health benefit	Child 1997, Verbeke 2005
Perceived role of food for health	Bech-Larsen and Grunert 2003, Verbeke 2005, Sandmann et al. 2015
Belief in the protection from disease	Wrick 1995, Jain et al. 2014
Belief in the relationship between eating and health	Niva 2000, Racz 2013

Source: Duy Tung Bui [2015].

The search for low sugar products or their natural substitutes is an example of the manifestation of the changes in food consumer preferences over the last decade. Recently, sugar substitutes in the form of polyols, intense sweeteners (i.e. sucralose, stevia), and substances intensifying the taste of added sugars (aromas, sweet soluble fibres) have been popularized. Finally, a sign of care for health is the increase in the demand for healthy snacks. The emergence of this consumer trend is strongly linked to physical activity. It is the basis for the development of a product category that includes: healthier versions of bars, ice cream and extruded products. The convenience and pro-health trends are manifested by an increase in demand for functional food and, within this offer, for dried fruit, that is, for healthy snacks (an alternative to sweets and salty snacks). Celebrity recommendations are important in stimulating demand for these product categories. Changes in the behaviour patterns of sweets consumers are caused by the development of consumer awareness. In order to meet the expectations of the contemporary consumer, the product offer must be adjusted to the system of his preferences. These trends are reflected in the following segments of functional food buyers on the Polish market [Makala 2018]:

- consumers convinced and aware of the health impact of food – 15%;
- undecided and hesitant customers with average knowledge and rarely buying this type of food – 20%;
- consumers with a high level of knowledge about food and nutrition but least likely to buy functional food – 11%;
- consumer-testers with little knowledge rarely buying such food – 16%;
- “beauty-oriented” customers, with little knowledge of nutrition and health, but often buying functional food – 11%.

### **THE IMPORTANCE OF PROMOTION IN STIMULATING DEMAND FOR FUNCTIONAL FOODS**

In the search for the most effective methods of reaching the addressees of promotion, companies often replace or use various promotion instruments combined.

It must be emphasised that the implemented promotion policy on the functional food market should use a complementary selection of promotion instruments. Particular importance is given to advertising and public relations activities. The use of information strategies, strengthened by recommendations of well-known experts in this field, is essential in advertising activities. In this case, these will be the recommendations of dietitians, doctors, celebrities, etc. The promotion of functional food can be prioritized through the use of authorities in health care and healthy lifestyles, as well as in disease prevention. Famous people who are of interest to certain social groups, such as actors, athletes and journalists, can play an important role in the authentication of advertising messages, especially those of an educational nature.

In the 2010s, advertising messages created with a focus on “naturalness and without preservatives” have had a leading role. This is due to growing consumer awareness of the impact of nutrition on human health. Hence the search for products with a reduced sugar, fat or salt content. This is the basis for the development of health-oriented trends, an increase in the consumption of functional food, and light products. The effectiveness of the advertising message is enhanced by the inclusion of accurate information on the packaging, together with the health claim of the product, which enhances its credibility and consumer confidence. Educational goals are also achieved through public relations activities, which disperse reliable information and create the image of functional products. Various forms of such activities can be used, such as press articles, seminars and conferences organised by the scientific community, and publicity programmes with well-known figures. Nowadays, marketing communication is based primarily on digital information transfer, wider use of the Internet and modern technologies. Social media and the aforementioned recommendations of well-known persons, experts or bloggers are becoming increasingly important in communicating with customers. This is a result of changes in consumer behaviour patterns and closer relations with consumers. The main objective of social media activities is not the sales effect, but first and foremost building the brand image by ensuring the credibility of the message.



Polish consumers choose food mainly based on taste, quality, naturalness and brand. Changes in purchasing preferences of food consumers on the Polish market are a certain reflection of the tendencies outlined on the European market. They testify to the growing awareness of customers who, through their market behaviours, influence the behaviour of manufacturers regarding transparency in the communication of product warehouses.

### FUNCTIONAL FOOD MARKET IN POLAND AND WORLDWIDE

The functional food market is the fastest growing sector of the global food market. Global sales of functional food increased by USD 32 billion between 2015 and 2018. The relatively largest increase in sales occurred in the countries of North America: the USA and Canada. The world leader in the sale of functional food is Asia and the Pacific Island. The value of the functional food market in Europe in 2016 amounted to EUR 117 billion. The Polish functional food market in 2016 amounted to EUR 3.7 billion according to KPMG experts [portalspozywczy.pl 2017]. It was three times its growth compared to 2012. In light of the forecasts prepared until 2024, it can be assumed that global sales will grow at a higher rate than assumed. The forecast for the years 2019–2024 indicates an increase in sales by USD 50 billion higher than in the years 2015–2018. In turn, the European states will achieve sales of functional food in 2024, reaching USD 52 billion (Table 3).

**Table 3.** Functional food sales globally in 2015–2018 and forecast for 2019–2024

Specification	2015–2018*	2019–2024*
	billion USD	
Total world sales	128–160	171–253
Middle East and Africa	7–8	8–12
Central and South America	9–13	13–17
Europe	26–32	36–52
North America	34–44	45–68
Asia and Pacific Islands	51–64	70–104

\*Estimated sales volumes for 2017–2018 and 2019–2024.

Source: Korbutowicz [2018].

The world market for functional food is dominated by dairy products, cereal products, functional drinks and confectionery. In Europe, dairy products (60% of share) and cereal products (30% of share) prevail, while functional beverages prevail in the USA and Japan (60% of share). The share of cereal products in the USA and Japan is 20%; confectionery products in Japan – 15%; dairy products in the USA – 30%.

In the functional food market in Japan, dairy products (14.5% per year), sports nutrition and snacks, bars and takeaways are the leading products. The seeds of hemp and teff (Abyssinian love grass) are becoming more and more popular. Hemp seeds strengthen immunity and delay the effects of ageing. Teff, in turn, regulates blood sugar levels and helps to lose weight. The functional food market in China and India is growing rapidly. In China, sales of dairy drinks (20.4% per year), sweets (10.9% per year) and energy drinks (29% per year) are on the rise. In India, sales of functional food are growing at a rate of 17.1% annually and are expected to reach USD 4 billion in 2020. The main consumers of functional food in India are city dwellers consuming sweets, breakfast cereals, sports nutrition and enriched milk and yoghurt.

As far as the European market is concerned, about 70% of functional food goes to four countries: the Great Britain, Germany, France and the Netherlands. European consumers believe that proper nutrition and diet helps to maintain good health and that is why they consume healthy foods or so-called superfoods – products with pro-health properties: broccoli, kale, sauerkraut, apples, chokeberry or chocolate. On the other hand, Polish consumers are mainly looking for products for active people, food for allergy sufferers and dietary supplements. Consumers most often buy yoghurts, juices, nectars and multivitamin fruit drinks, breakfast cereals, muesli, fruit teas and types of margarines, milk enriched with omega-3 acids, calcium, magnesium, dietary fibre, vitamins and phytosterols, and seek lactose-free milk or milk with reduced fat and sugar content. The research shows that the type of functional food consumed is closely related to the age of consumers. Consumers aged 31–40 years consume products for athletes, diabetics and persons suffering from cardiovascular diseases very often. On the other hand, younger consumers are mainly looking

for products with reduced energy value [Górecka and Jędrusek-Golińska 2019].

The dynamic development of demand for functional products in Poland is manifested by a wide range of products of this category in stores. Manufacturers expand and diversify their offers in such a way as to meet the expectations of increasingly demanding and conscious consumers. An important argument inducing consumers to buy functional food is that manufacturers provide reliable information on the packaging. Appropriate promotion of functional foods is one of the most effective ways of promoting consumer health. The content of the message addressed to consumers should be informative, rational and emotional in nature, indicate the nutritional value, health and taste qualities, substances supporting health, and the ease with which meals can be prepared. We should promote slogans concerning the variety of everyday diet, the attractiveness of products and dishes with additives of pro-health substances, the popularity of healthy lifestyle and slim silhouette [Górecka 2007].

## CONCLUSIONS

Today functional foods take a significant position in food production in the world market. The sector of dairy products, non-alcoholic beverages and cereal products is characterized by particularly high sales dynamics. The rapid growth of production and consumption of functional food on the world food markets is caused on the one hand by the development of new technologies and on the other hand by health-oriented trends. Consumer interest in healthy food products has increased over the last decade as a result of an appreciation of their impact on maintaining or improving public health.

The research conducted in the USA and Europe, including Poland, confirm that health benefit beliefs play an important role in determining consumer acceptance of functional foods [Babicz-Zielińska 2010, Ding et al. 2015, Kraus 2015, Shamal and Mohan 2015, Siegrist et al. 2015]. The decisions of functional food choice relies on detailed information about the ingredients and health benefit. The likelihood to buy functional foods increase with age and knowledge [Verbeke 2005, Wansink et al. 2005, Ares et al. 2008]. In addition, in Poland, unlike the US research, the tar-

get market are families with young children and pregnant women [Babicz-Zielińska 2010]. The results of different research show that food producers should pay more attention to communicating the components and health benefit to the consumers [Van der Zanden et al. 2015]. Functional foods cannot be treated as one homogenous group. Specific types of functional foods should be addressed to different target markets with an individual communication process. Nowadays the segment of sport active people is the most developmental in Poland.

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## KIERUNKI ROZWOJU RYNKU ŻYWNOŚCI FUNKCJONALNEJ W ŚWIETLE NOWYCH TRENDÓW KONSUMENCKICH

### STRESZCZENIE

Celem przewodnim artykułu jest przedstawienie kierunków rozwoju żywności funkcjonalnej w Polsce i na świecie na tle zmieniających się wzorców zachowań konsumentów. Punktem wyjścia rozważań jest przedstawienie pojęcia i funkcji spełnianych przez tę kategorię produktów. Następnie przedstawiono nowe trendy konsumenckie w ostatnim dziesięcioleciu, ze szczególnym zwróceniem uwagi na zmiany preferencji konsumentów żywności i rolę w tym procesie działań marketingowych. Ostatnia część opracowania odnosi się do kierunków rozwoju żywności funkcjonalnej w Polsce na tle rynku światowego.

**Słowa kluczowe:** żywność funkcjonalna, trendy konsumenckie, działania marketingowe, perspektywy rozwoju żywności funkcjonalnej