

PREMISES FOR PURCHASE OF ECOLOGICAL FOOD ACCORDING TO RESPONDENTS

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A b s t r a c t

The study encompassed households situated in different parts of the country, in particular those of them, in which ecological food is consumed. The subject of the study was, first of all, consumption of certified ecological food. The analysis considered some factors such as the source of information on ecological products, frequency of ecological food purchases, reactions to change in price that influence consumer behaviors in ecological food market. Among the factors that cause the situation where consumers do not reach for products of that type the respondents listed most often the limited number of outlets where they could be purchased and the high price.

PRZESŁANKI ZAKUPU ŻYWNOSCI EKOLOGICZNEJ W OPINII RESPONDENTÓW

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A b s t r a c t

Badaniami objęto gospodarstwa domowe znajdujące się w różnych częściach kraju, a zwłaszcza te, w których konsumuje się żywność ekologiczną. Przedmiotem badań było przede wszystkim spożycie certyfikowanej żywności ekologicznej. W analizie uwzględniono niektóre czynniki (źródła informacji o produktach ekologicznych, częstość zakupu żywności ekologicznej, reakcję na zmianę ceny) mające wpływ na zachowania konsumentów na rynku żywności ekologicznej. Wśród czynników, które powodują, że konsumenci nie sięgają po tego rodzaju produkty, respondenci najczęściej wymieniali ograniczoną liczbę miejsc ich nabycia oraz zbyt wysoką cenę.

Introduction

Knowledge of the principles of consumer behaviors in the market is becoming the key issue in the market economy. Extensive development of studies on consumer behaviors became necessary because of the fast rate of floating new products to the market, shortening of product life cycle, increased interest in consumer protection and increased public awareness concerning the necessity of environment protection.

The choice of food is determined by characteristics of the product such as looks, taste, flavor or texture as well as the characteristics of the consumer, his individual preferences, psychological stimuli and external factors such as economic, social and cultural conditions.

KOS and SZWACKA-SALMONOWICZ (1997) present another group of factors determining the demand for food encompassing mainly economic conditions, biological conditions (climate, ecology, nutrition standards), demographic factors (age, gender, size of household, etc.), social factors (tradition, customs, fashion, etc.) and social-professional factors (education, occupation, professional activity of women, etc.).

When buying a specific food product, Polish consumers take into account its price. Its quality, however, is also important for them. To the increasing extent the choice of food products is determined by factors such as freshness, nutritional value, dietetic properties, health influence, ecological requirements, high quality and convenience of use as well as content of chemical substances added.

A large part of the society shows interest in "healthy" food. In this case, according to URBAN (1999) preferences concerning a decreased fat content and increased protein content are formulated. Such food should originate from ecological production, contain more vitamins and have a higher nutritional value.

As a consequence of dynamically developing needs and expectations of customers acquiring knowledge on the ecological food consumer and factors determining his behaviors in the market has become necessary.

The studies represented an attempt at verification of the assumption that lack of ecological food promotion, low number of shops offering such products and their high price influence limited interest of consumers in products of that type. The characteristic that is valued the most in ecological food is its health aspect. The value to health is one of the main reasons motivating consumption of such products.

Methodology of study

The study covered households situated in different parts of the country, particularly those of them, which consume ecological food. Consumption of certified ecological food was the main subject of the study. During the studies and analyses it was compared to conventional food. The list of goods offered by Polish ecological farms during the periods covered by the study was the base for choosing the products range of that food covered by the study.

The empirical study concerning ecological food consumption was conducted in three selected geographic areas of Poland differing in the environment quality: 1) southern Poland: Kraków, Katowice and surroundings, 2) central Poland – Warsaw and surroundings, and 3) north Poland – Tricity, Olsztyn, Łomża and surroundings. Those geographic areas were selected for the study, as they are the main areas of ecological food consumption in Poland as indicated in the studies by GRYKIEŃ (1997) and ZYSNARSKA (1997).

The studies were conducted in supermarkets, food stores and commercial centers offering in their range of products certified ecological food. Because of low interest of the above outlets in such foods the study was also carried out in specialty shops specializing in ecological food.

The source materials were collected through direct standardized interviews using a detailed interview questionnaire. The interviews were conducted mainly with people purchasing food for the family. Every 10th person leaving the shop after making a purchase was interviewed. In total 352 interviews were conducted in 2005.

Three modules were separated in the questionnaire design. The first one allowed identification of people who declared that they had not encountered the term “ecological food” or understood the term wrongly as it was considered that as a consequence they were not aware of existence of such food. The second module allowed identification of people able to identify ecological food but did not consume it or stopped consuming it. This allowed identifying cases when such food was not consumed.

The widest interviews covered the respondents who stated that they were not only aware of what ecological food was but also were consumers of such food. They were the targets of the extensive third module of the questionnaire. The scope of questions in that, basic part of the questionnaire concerned extensive information on type and quantity of ecological food consumed, methods of its identification, places and frequencies of purchase, valued attributes (health, nutritive, organoleptic, commercial, environment protection) and price perception of such products. That last aspect is important, as ecological food is clearly more expensive comparing to conventional food.

The studies were conducted in November 2005. The analysis finally covered 332 households including 142 consuming ecological food.

Results of studies

Some factors determining consumer choices concerning ecological food

The covered consumers of ecological food were mainly young people representing the largest group of buyers. People under 30 represented 37% among the respondents while the average respondent age was 39,8 years. The level of education of the respondents should be also pointed at, as the most numerous group were people with tertiary education representing 47% of the respondents while the average income was PLN 1838 per capita per month.

Comparing that group of consumers covered with studies by GRZYBOWKA and PILARSKI (2002) shows that in their case the respondents represented a compatible profile, as the average age in that group was 42,7 years. And again, the people aged 20-39 representing 53% of the respondents were the most numerous segment among ecological food consumers. Around 51% of the respondents declared tertiary education. On the other hand the consumers of ecological food covered by the study in 2000 achieved income lower by over 100% that were at the level of PLN 987 per capita per month. The persons covered by both studies were not the same, although the places where studies were conducted were, however, considering the economic development of the country it can be concluded that the average consumer income increased, including the income of ecological food consumers.

As concerns the characteristics of respondents the interesting approach represented by ŻAKOWSKA-BIEMAS and GUTOWSKA (2003) is worth mentioning. They indicated that in case of consumer behaviors in ecological food market traditional consumer segregation criteria such as age, gender, level of education and professional activity could increasingly frequently be substituted by measures such as lifestyle and ecological awareness. The consumers who “take care of their health and health of the family” and “prefer the so-called healthy lifestyle”, as shown by those authors, will show clearer propensity to purchase foods satisfying the criteria of ecological production.

The above is also confirmed by the conducted studies indicating that the respondents extensively applied the principles of ecology in their lives. In 2005 the most frequent answer given by 51% of the respondents was that they applied the principles of ecology to a moderate extent while 18% of respondents declared application of those principles to a very high and high extent. Also more than 80% of respondents valued healthy lifestyle while 38% of them were active in sports.

In the already presented studies by PILARSKI and GRZYBOWSKA (2002) conducted in 2000 more than 80% of the respondents valued healthy lifestyle.

The ecological food consumers implemented active, sporty lifestyles (60%) while 50% of them declared that they definitely based their decisions on principles of ecology.

Ecological food consumers possess only the basic information on such food and frequently that information is limited. The majority of consumers, unfortunately, do not know who is authorized to award certificates of ecological food although they are able to define the ecological food correctly. The consumers do not identify the marking of that group of food products, which is also confirmed in studies by PILARSKI (2003), who shows serious consequences of that in market behaviors of those buyers as the can purchase and consume food that in fact has nothing to do with ecological food.

That issue was presented by RUNOWSKI, JASKA and METER (1998) already ten years ago. In the analysis of lack of interest in ecological food those authors pointed at insufficient information and promotion of ecological food as the major causes of the situation.

In view of those issues it is extremely important to determine, as an aspect of the characteristics of behaviors of consumers relative to products of ecological agriculture, whether the consumers are able to identify ecological food among other food products. In case of ecological food the information presented on the package fulfills a very important function, as it is the only element allowing informed differentiation of ecological products from other products in the market. The certificate mark (Ekoland, PTRE) on the basis of which 40% of the respondents identified such products (Tab. 1) was the most important marking facilitating identification of ecological food.

In 2006, a campaign promoting the new logo of food produced by methods of ecological agriculture was initiated. The logo is uniform for all products of that type, which undoubtedly is an important aspect influencing correct identification of ecological products. A significant group of respondents uses the information on the label and they are encouraged to purchase products designated by terms “bio” or “natural”. That answer was given by 37% of the

Table 1
Criteria of ecological products identification by respondents (in %)

Item	Percentage of the respondents (in %)
Information on the label (health food, natural product, bio)	37
Certificate mark (Ekoland, PTRE) on product package	40
Sold in a special outlet	17
Information from the seller	6
Other, what	0

Source: Own work based on studies.

respondents. Unfortunately, this indicates that food of ecological agriculture is still seen as equivalent of the so-called “healthy food” – the name created by marketing.

Low level of knowledge of ecological food marking method causes that the consumers are unable to make the right choice of their food and that what they declare as purchases of ecological food in fact represent purchases of food that has nothing to do with ecological methods of production and processing.

During taking purchase decisions, as indicated by ŻAKOWSKA-BIEMAS and GUTOWSKA (2003), consumers base their choices on information from personal sources (family, friends), commercial sources (advertising, sales personnel, package, presentation in the shop) public sources (media, consumer organizations) and own experience (testing, using the products).

In case of ecological food, magazines were the most important sources of information on ecological agriculture products for 28% of the consumers covered while for 27% the advertising materials at the point of sale. The respondents also considered the issues presented on television – 15% of the respondents while information from family and friends were used by 20% of the respondents.

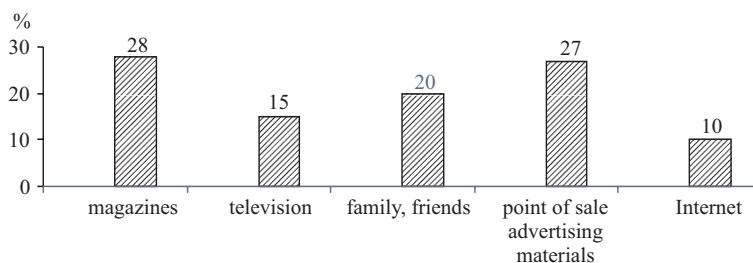


Fig. 1. Sources of information on ecological agriculture products according to respondents (%)
Source: Own work based on studies.

ŻAKOWSKA-BIEMANS and GUTKOWSKA (2003), in their studies on consumers living in Warsaw obtained results indicating that the main sources of information on ecological agriculture products were television programs (67.4% of respondents) and press and radio (49.7% of respondents).

BAJER and JANISZEWSKA (1997) who carried their studies roughly ten years ago indicated that ecological food required advertising and promotion. At that time the respondents indicated that radio and television advertising was the most effective. According to the respondents daily press was an equally effective means of communication while they pointed at advertising posters and specialist press as means of communication offering lower effectiveness.

Among other forms of advertising exhibitions, fairs, promotions and testing, attractive packaging and special shelves with ecological food in ordinary shops were also mentioned.

Market information on ecological agriculture products continues to be insufficient. A large proportion of consumers are unable to differentiate ecological from conventional food correctly. That in most cases results from insufficient knowledge about such products. To stimulate the consumer to purchase ecological food an extensive campaign promoting the characteristics of such food, the possibility of identifying it, places of purchase and also explaining the ideas of ecological agriculture is necessary.

The motivations for purchase or choosing consumption are a process of matching the specific characteristics of the product with expectations of individual buyers. Consumers select a specific offer, the range of the most attractive characteristics that are included in a given product and which offer them complete satisfaction. That is why attributes of a given product will represent a specific value to the individual consumer or a segment of consumers, whose behaviors are similar.

It is worth noticing that, according to BAADE (1987), support to ecological agriculture ranks second among motivations of German consumers of ecological products. Purchasing ecological food they prevent "extinction" of ecological farms and, as a consequence, of ecological farmers as a social group that fulfills an important role from the perspective of environment protection, preservation of natural rural landscape, etc. The belief is spreading that not only the producer but also the consumer is responsible for environment protection because their mutual relation has increasingly become the feedback relation. While such beliefs are well established in societies of highly developed countries, in Polish reality they are only at the neonatal stage.

WIER and CALVERLEY (2002) present that consumer give benefits for themselves and the family, benefits for the environment and taste as the main motivations encouraging consumption of ecological food. For the majority of consumers the specificity of products that gives them direct benefits is the motivation for purchase of ecological food. The motivations vary between different segments of consumers. Consumers most frequently purchasing ecological food are motivated by concern for the natural environment. Those consumers, however, represent just a small percentage of the buyers. The group of consumers who consider care for their own health when buying ecological food make the purchases of that type of food less frequently but they represent a larger percentage of buyers. In the segment of consumers interested in health the demand for this type of food increases.

In their striving towards the higher quality of living assign the fundamental importance to health as the value that is particularly threatened. That is

why the criteria of health play a very important role in taking purchase decisions. Among products possessing the qualities that are sought related to influence on health ecological food possesses a special position. Interest in ecological food is caused not only by contamination of conventional food but it is also the expression of developing new preferences related to the higher quality of living, to decreasing role of the quantity consumed and the increasing role of quality of consumption.

PILARSKI (2003) indicates that ecological food consumers appreciate the taste of such food. It is definitely better than that of conventional food. It contains less chemical contaminations and preservatives, stabilizers or colors but more vitamins and other nutrients.

The study included assessment of ecological food characteristics where the respondents indicated the most valuable attributes of that type of products (Fig. 2).

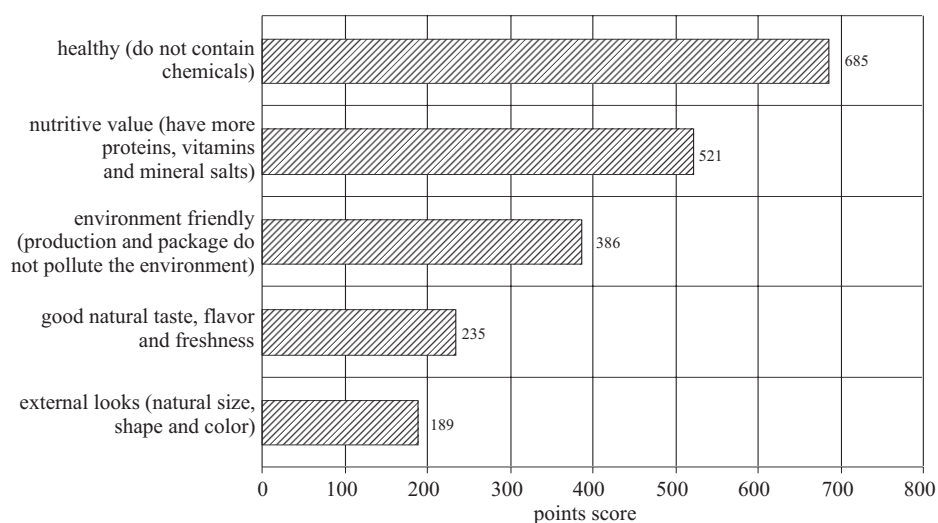


Fig. 2. Assessment of ecological food attributes (max 710 points)

Source: Own work based on studies.

The basic attributes assigned to ecological food by the respondents were health, that scored the highest and nutrition qualities.

An interesting observation was that among the attributes of ecological food the respondents awarded fewer points to taste values (good natural taste and flavor, freshness) even though that aspect plays an important role in buying behaviors in food market. It should be noticed that the respondent valued friendliness to the natural environment higher than the looks or good taste. The consumers definitely appreciate the characteristics indicating health

safety of those products and expect personal benefits for which they are able to pay a higher price.

Determining how often consumers purchase specified products is important for identification of market behaviors. As a consequence of a wider range of products of vegetable origin 63% of respondents purchased such products a few times per week and 34% a few times a month (Tab. 2).

Table 2

Frequency of ecological food purchase declared by respondents (%)

Purchase frequency	Percentage of respondents (%)	
	vegetable products	animal products
A few times a week	63	20
A few times a month	34	14
Incidentally (less than a few times a month)	3	23
I do not buy, do not eat	0	43

Source: Own work based on studies.

The lower frequency of animal products purchasing as compared to vegetable products could indicate shortages of such products in the products range and that it cannot fully match the range of products of animal origin in the market of conventional food.

Price level is one of the key elements for development of demand for ecological food. Those prices are higher than prices of conventional food products. The degree of acceptance for the ecological food price levels as compared to its values was assessed and 54% of respondents indicated that prices for products from ecological farms were too high for their values. The prices were accepted by 31% of the respondents while the others had no opinion concerning that issue.

Price still is a rather important factor limiting the interest in products of ecological agriculture. A large number of consumers say that the level of prices, as compared to the values of ecological food is too high. In the society where the share of expenditures on food in total expenditures is quite high the price of products has a key influence on purchasing decisions. As a consequence the higher quality of ecological foods as compared with conventional foods should be exposed and customers should be made aware that own and family health as well as care for the environment are so precious that it is worth to pay a higher price for food possessing those values.

Economic acceptance of ecological food is a rather complex issue. From that point of view the consumer assesses that food mainly in the categories of price and supply, i.e. accepts the food at relatively low price and the diversified supply offer. In case of ecological food, when the prices are relatively high, their

level should be assessed not only in comparison to prices of conventional food but also relative to the defined volume and structure of consumption as it is not without influence on the level of interest in it. That is why one of the important tasks in the study was to identify how the consumers see the level of ecological food prices as compared to its values and how they would react to the possible increase of those prices.

The analysis identified the threshold of sensitivity of the respondents to the increase of ecological products; prices. Over 40% of the respondents declared that they were ready to pay the price higher by 10% for ecological food. Only 5% of the respondents declared readiness to pay the price higher by 25% (Tab. 3).

Table 3
Declared level of higher price of ecological products the respondents were ready to accept (%)

Level	Percentage of respondents (%)
0	3
5	40
10	40
15	6
20	6
Over 20	5

Source: Own work based on studies.

Consumers are ready to pay a higher price for ecological food than for conventional food so the price is not the major barrier limiting the demand for that type of food. The accepted threshold for the respondents was the price higher by up to 10% than the price for conventional food.

ŻAKOWSKA-BIEMAS and GUTOWSKA (2003) indicate that in Poland the level of prices for ecological agriculture is highly diversified. According to those authors ecological farmers declare that they set prices for their products at the level of wholesale prices for conventional products or 10% higher. During the recent years the situation concerning pricing of ecological products has not changed. The level of prices for ecological agriculture products depends on the conventional products price level and is subject to regulation by trade margins.

RUNOWSKI in 1996 showed that the majority of consumers were ready to pay a price only slightly higher for ecological products than for conventional products. He projected that the situation could change in the future when the belief in the diversified values of ecological food increases. He pointed at

advertising in the media as the supporting tool. Ten years later the situation has not changed dramatically as concerns both the perception of price for ecological products and promotional activities related to those products.

Limitations existing in the ecological food market are a serious barrier to its development. ŻAKOWSKA-BIEMAS and GUTOWSKA (2003) indicate two groups of factors among hindrances to purchase of ecological food. One is related to the product and includes the looks, taste, availability, range of products and the price level. The other concerns communication and encompasses information, confidence and customs.

The conducted studies show that high price of ecological products is not the only hindrance to development of ecological food market, although an important one. Limited number of outlets where such products could be purchased is equally important. A narrow range of products was indicated as a barrier by 23% of the respondents (Tab. 4). The major weaknesses of ecological food given by the respondents included high price, small number of shops offering this type of food and the narrow range of products offered. Increasing interest in purchasing ecological food would surely be stimulated by a lower price and wider information on shops offering food produced by ecological agriculture. The range of products of that type available in the market should also be expanded.

Table 4

Barriers to purchase of ecological products

Item	Percentage of respondents (%)
Price too high	35
Limited number of sales outlets	32
Narrow range of products	23
My low income	3
Unwillingness of the family to consume such products	6
They are hard to identify	0

Source: Own work based on studies.

Similar results of studies are also presented by ZANOLI and NASPETTI (2002) who indicated that lower price and better distribution could help increasing the demand for ecological food. The potential ecological food consumer, as they reported, expects as much a good taste of the product as easy and fast preparation. Good results could be achieved through information placed on packages concerning the food as consumers expect better information to make knowledge-based choices. Certificates and appropriate labels represent the starting point facilitating differentiation of ecological from conventional food.

Summary and Conclusion

Interest in ecological agriculture products among numerous and diversified groups of clients results from changes in lifestyles of both western European and Polish societies. The share of ecological products in the Polish market is small representing just 0.06% of the area under crops. Still some certified products are sold as conventional while owners of shops are searching for continual supplies of diversified products such as fresh vegetables and fruit, dairy products and bread.

Specific characteristics of products that offer the consumers direct benefits motivate the majority of consumers to purchase ecological food.

The studies conducted allow formulation of the following conclusions:

1. Ecological food requires a much wider promotion. The most important source of information on ecological agriculture products was, according to the respondents, the magazines. The respondents also pointed at television as an effective medium for proliferation of information concerning ecological products. Internet was also indicated quite frequently as a new source of information on ecological food. Among other forms of advertising courses, exhibitions, fairs, promotions and testing, attractive packages and special shelves with ecological food were also mentioned frequently.

2. Determining whether the consumer is able to identify ecological food among other food products represents an immensely important aspect of consumer behavior characteristics related to products of ecological agriculture. In case of ecological food a very important role is played by the information on the package because it is the only element allowing conscious differentiation of ecological products from other products available in the market.

3. The technological and nutritive values were ranked the highest in the perception of the respondents of ecological food. Organoleptic characteristics were ranked lower while the attributes related to trade attractiveness were ranked the lowest. According to the respondents the value of ecological food is concentrated in its values to health. The respondent consumers appreciated highly the characteristics concerning health safety of those products and they expected personal benefits for which they were able to pay a higher price.

4. Limitations present in ecological food market represent a serious barrier to its development. The factors that cause that consumers do not reach for products of ecological agriculture and processing most frequently indicated by the respondents were the limited number of sales outlets and excessively high price.

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