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FOOD SELF-SUPPLY AS A FORM OF SATISFYING CONSUMER NEEDS - AN EXAMPLE OF RURAL HOUSEHOLDS IN POLAND

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Abstract

Recent studies on consumer behavior have shown that there is an increase in consumer interest in natural food from their own farm or plot. In practice, the share of households, where the concern for the health of family members and the state of the natural environment is increasing. Polish consumers, which use food self-supply, used to choose this form of satisfying their consumption needs for economic reasons in the past, and now they choose it for health or environmental reasons. Analysing the role of the consumer behaviour is decisive for the development of new consumption trends, to which food self-supply largely fits. A quantitative and qualitative study was conducted based on a questionnaire to determine the behaviour of Polish consumers related to food self-supply, which allowed to determine how many households consume products from their own production among the surveyed population and what factors determine the choice of this form of consumption. The level of food self-supply in the surveyed rural households was high, and their members also declared that they would continue to use this form of satisfying consumption needs in the future. They justified their choice by assuming care for their and their family's health, traditions passed down from generation to generation, and financial considerations.

Key words**:** *food self-supply, consumption, rural households, Poland*

INTRODUCTION

Consumption issues are a current and growing research problem in economics. There is an increase in consumer interest in natural food from their own farm or plot (so-called return to nature), and in turn the share of consumers who care about the health of family members or the condition of the natural environment is increasing.

In Poland and other countries of Central and Eastern Europe, changes in consumption trends are a special subject for observation, because consumers have come a long way from food shortages through habits of buing products to excess, to the current trends of sustainable consumption or its greening [5].

A household has, at its base a special place in the economy, hence it is most often defined as a key unit in the sphere of consumption, the purpose of which is to meet the individual and common consumption needs of its constituents [11].

The most common ways of meeting the various needs of a household are [2]:

-Production of household goods (e.g. home building, production and preparation of food for consumption, sewing and maintenance of clothing, repair of household appliances, other various domestic services – tangible and intangible);

-Purchase on the market (purchases) of ready consumer goods and items that require processing and preparation for consumption;

-Acquiring consumer goods in a different way than their production or acquisition, and in particular through the social security and benefit system (medical services and social protection), inheritance, donations, use of public goods (education, use of municipal infrastructure), etc.

The part of food consumed that is obtained by the household without the market is called in the scientific literature food self-supply [4]. This is the oldest form of obtaining raw materials and products to meet the needs of the household [13].

Issues related to food self-supply are part of economic theories regarding consumption [12]. In the most synthetic approach,

consumption is defined as all human activities and behaviors aimed at satisfying needs using goods and services [3]. The beginnings of interest in economics in consumption fall at the turn of the 18th and 19th centuries. In the 1870s, many economists became interested in the problem of making consumer decisions by households. An example of one of the microeconomic theories of consumption that treats rural households in a special way is the theory of consumption by Gary Becker, which assumes that households are both consumers and producers of goods, because they produce a specific set of "products", i.e. food, cleaning, cooking, which contribute directly to meeting the needs [1].

There are many types and forms of consumption described in the literature. One of the classification criteria for consumption is the source of consumer goods. Taking them into account, market and natural consumption can be distinguished [14]. Food self-supply is an example of natural consumption, which is part of the food consumed, produced independently bypassing the market, i.e. most often from own allotments, from own production (farm) or independent processing (preparation) of food from products from own production or previously purchased.

In the literature on the subject there is little research related to food self-supply, and the existing ones mainly concern farmers' households, and not all households located in rural areas. Chmielewska conducted one of the first detailed studies on self-supply in agriculture [4]. The author showed differences in the level of food self-supply due to the socio-economic characteristics of households.

Interesting research on the role of food self-supply in the theory of sustainable development and sustainable consumption was presented by Głowicka-Wołoszyn and co-authors [6]. Noteworthy is the Strzelecka study, where the data source was the FADN database. Studies have shown that during the economic crisis, as a result of a decrease in income from business activity, there is an increase in self-supply of agricultural households [9].

Food self-supply from its own farm or garden is one of the main factors influencing the pattern of food consumption patterns, especially in rural areas.

MATERIALS AND METHODS

The aim of the study was to determine the level of natural consumption in total food consumption in households. For this purpose, a consumption structure meter was used to determine the share of food from self-supply in total consumption. The respondents declared the level of food self-supply in their households in percentage in the ranges given in the questionnaire. The study also aimed to show the factors determining such behavior as well as the benefits and costs resulting from the use of food self-supply.

The subject of the study were rural households, i.e. farms where the permanent residence is a village, which can be distinguished: typically agricultural farms, agricultural and labor farms, rural farms not associated with agriculture at all [14].

Surveys were conducted in 2017 on a deliberately selected group of 302 rural households located in ten selected municipalities of the Mazowieckie voivodship, in Poland. The Masovian Voivodeship was chosen deliberately as an area of empirical research. This choice was dictated by the fact that, although it is the richest region in Poland assessed according to the level of GDP per capita, it is also the most spatially diversified in terms of socio-economic development. In turn, household self-supply according to the Central Statistical Office data in the Mazowieckie voivodship is at an average level across the country.

The research was carried out using the diagnostic survey method, survey technique, the questionnaire was the tool.

Descriptive and comparative methods of information processing were used in the work. In the process of processing research material in the form of quantitative data, a Microsoft Excel spreadsheet was used [8].

RESULTS AND DISCUSSIONS

The questionnaires on food self-supply have been applied to a number of 302 respondents.

Women predominated among the respondents (59%).

The researched farms are mainly two- and three-generation families, where four-person households predominated. The structure of households by persons on a household was as follows: 1-person – 2.7%, 2-person – 7.8%, 3-person – 14.5%, 4-person-29.1%, 5-person - 25.7%, 6- and more persons – 20.3%.

Around 32% of the households surveyed had children up to the age of 14. Households without children up to 14 years old constituted 68% of the respondents, with one child 18%, with two – 10%, with three and more – 4%.

One of the most differentiating social categories is the education of the respondents. The vast majority (52%) of the respondents were people with secondary education, of which 13.8% of respondents had vocational secondary education, 38.3% of general secondary education, and 4.7% post-secondary education. About 4.4% of respondents had basic vocational education, slightly less – 2.2% had higher primary education, while the remaining 18.5% had higher education.

The primary factor determining the share of each member of society in the division of the social consumption fund is the income per 1 person. Thus, income is the basis for the intensity of feelings and the degree of satisfaction of needs, therefore it is the basic determinant of the development of the consumption structure [7]. Taking into account the entire surveyed population, the income of the surveyed households was as follows: below PLN 500 – 9.3%, PLN 501-1,000 – 28.8%, PLN 1,001-1,500 – 22.5%, PLN 1,501-2,000 – 15.6 %, above PLN 2,001 – 17.5%. About 6% of respondents did not answer the income question.

Respondents were also asked about the size of their farms, the average area of the surveyed farms was 22.8 ha, which significantly exceeds the national average. In every fourth farm, both plant and animal production was carried out, in 54% only plant production was carried out, and in 27% - only animal production.

Asking the respondents what was the percentage share of food consumption from their own household in the total food consumption in the household 35% declared that it was from 26-50% of food. Only in every tenth household declared consumption of food from self-supply was below 10% (Fig. 1).

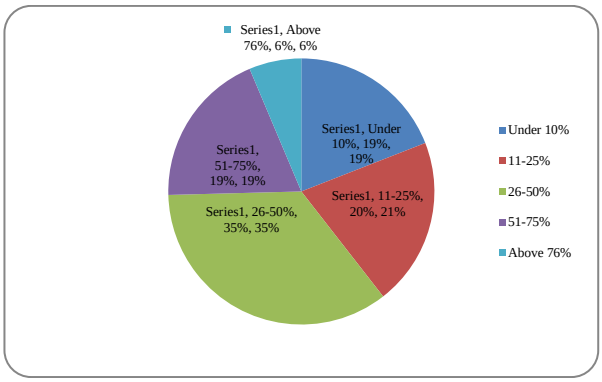

Fig. 1. Percentage share of food consumption from own farm in total food consumption in the household
Source: Own calculation.

Respondents who declared the use of self-supply were also asked about the frequency of consumption of such products. 35% of respondents said that they consumed food from self-supply at least 4 times a week. Every fourth respondent did it every day. Two to three times a month, 12% of respondents used self-supply, and less than once a month – 8%.

Respondents most often prepared as part of food self-supply fruit jams (92%) and vegetable preserves (90%). About 90% of the respondents reached for fresh vegetables and fruits from their own plot. 77% of respondents declared that they eat eggs from their own farming. The products that least often manage to produce themselves according to the respondents are cream and butter (Table 1).

The next question in the questionnaire concerned the indication of which of the factors had the greatest impact on household production of food by itself (a maximum of 3 answers could be given).

Every fourth respondent replied that he produces food on his own due to his and his family's health and because of family traditions and habits.

Table 1. Types of products made under self-supply

Types of products made under self-supply	% of respondents who declare consumption of products
Fruit preserves (e.g. jams)	92%
Vegetable preserves (e.g. pickled cucumbers)	90%
Fresh vegetables	90%
Baking cakes	88%
Fresh fruit	88%
Eggs	77%
Potatoes	75%
Poultry	67%
Fruit / vegetable juices	66%
Herbs	66%
Sausage, sausage, offal	64%
Pork meat	56%
Dried fruits and vegetables	56%
Fresh Milk	51%
Cottage cheese cheeses	45%
Baking Bread	45%
Sour cream	35%
Butter	30%

Source: Own calculation.

Another most frequently mentioned reason is low production cost (19% of respondents), hobby (9%) and use of free time (9%). Less than 5% of respondents said that they still produce for sale, so they could transfer the surplus to the household. Few indicated concern for the state of the natural environment, creativity or the need to personalize the product offer (Fig. 2).

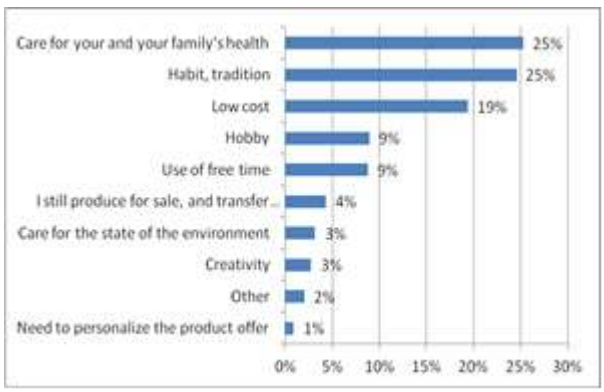

Fig. 2. Factors determining the use of self-supply in the respondents' opinion
Source: Own calculation.

In addition to factors influencing the decision to use self-supply, consumers are also affected by the properties of food products from their own production. Respondents mentioned the features that in their opinion had the greatest impact on household production of food on their own (a maximum of 3 answers could be given). The most popular are: freshness (that's what 29% responded to), taste (25%), smell (24%) and nutritional value (12%). The durability and lack of preservatives or chemicals in such foods were indicated by 5% and 4% of respondents, respectively.

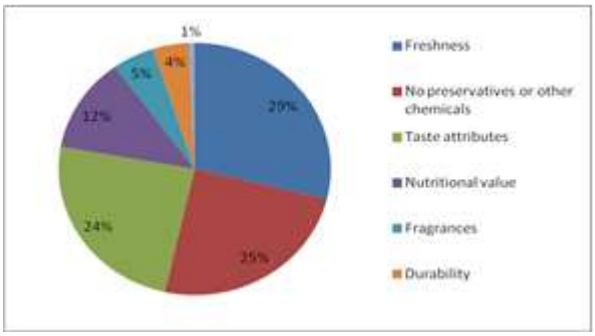

Fig. 3. Product features, in the respondents' opinion, which have the greatest impact on food production on their own
Source: Own calculation.

According to respondents, the biggest disadvantages of food self-supply include the seasonality of food produced (31%), labor consumption (26%) and production time consumed (21%). 15% of respondents indicated the answer regarding the difficulty in producing some products, while the small variety of products was a disadvantage for only 6%.

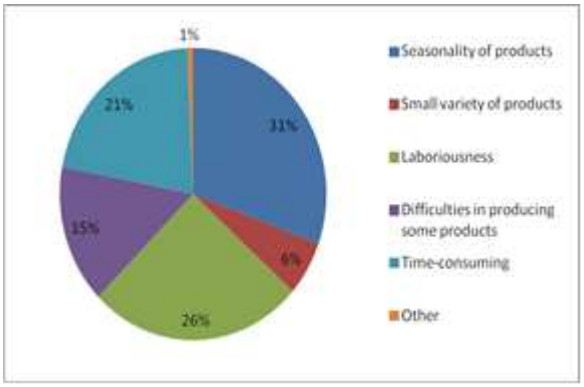

Fig. 4. Disadvantages of food self-supply in the respondents' opinion
Source: Own calculation.

Seasonality of products is a characteristic feature of fruit and vegetable consumption in Poland. Fresh fruit is available only practically at the time of harvest, i.e. from June to September.

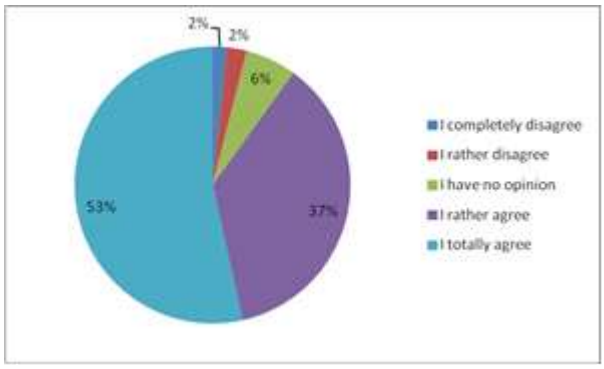

Fig. 5. Respondents' opinions on the statement: "Products under food self-supply are of better quality than those bought in the store"
Source: Own calculation.

Respondents were also asked to what extent they agree with the statement that products under food self-supply are of better quality than those bought in the store. Over half of the respondents (53%) completely agree with this statement (Fig. 5).

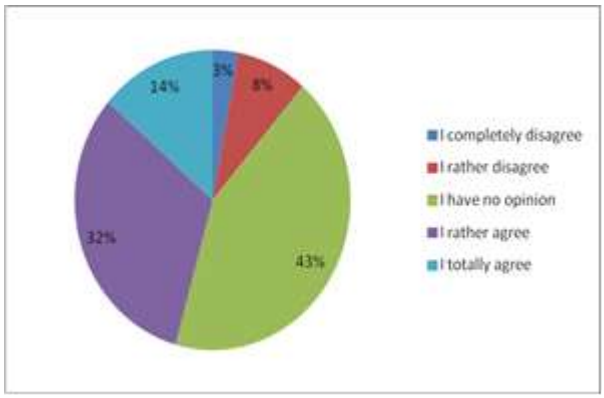

Fig. 6. Respondents' opinions on the statement: "Food self-supply is currently fashionable"
Source: Own calculation.

Currently, there is a lot of media coverage about fashion for natural food from its own production. Respondents were asked what they think about it. 43% of respondents have no opinion whether food self-supply is currently fashionable. 14% of respondents completely agree with this statement, and 3% completely disagree (Fig. 6).

Table 2. Opinions of respondents on the following statements

	I completely disagree	I rather disagree	I have no opinion	I rather agree	I totally agree	Total
A healthy diet is important to me	1%	3%	17%	44%	36%	100%
I prefer natural food	1%	2%	12%	36%	49%	100%
Producing food for your own use is a waste of time	49%	37%	10%	2%	2%	100%

Source: Own calculation.

The research shows that it is not the fashion for food self-supply that determines the choice of this form of satisfying consumer needs, but the choice of a healthy diet based on natural and organic food for yourself and your family. Half of the respondents prefer natural foods, and a healthy diet is important for every third respondent (Table 2).

Food self-supply is also considered as a hobby, creative leisure activities in nature. Respondents were asked to what extent they agreed with the statement that food self-supply is a waste of time. Half of the respondents completely disagree with this statement.

Modern consumers belong to the group of conscious consumers. Consumer decisions are based on knowledge of their social, ecological and political consequences. The conscious use of the benefits of the environment is the most important element of sustainable consumption [10].

CONCLUSIONS

The role of self-supply in rural households in Poland is still very important. This is due to the traditions and consumption patterns that have been shaped over many years. Natural consumption of food is one of the main determinants influencing the formation of food consumption patterns, especially in farmers' households. We can assume that this phenomenon will continue for not only economic but also pro-health and environmental reasons. Respondents declared their willingness to use self-supply in the

future. Respondents valued food from self-supply most for freshness, taste and smell. The disadvantages of food self-supply most frequently mentioned by the respondents are: seasonality of food produced, labor consumption and time consumption of production. Surveys of opinions on food self-supply among consumers representing rural households show that both the phenomenon itself and opinions about products from own production are very positive. According to the respondents' opinions, products from food self-supply are of better quality than those bought in the store. Their production resulted not from fashion for this form of satisfying food needs, but from food preferences, because they prefer to eat natural food, and a healthy diet was very important for them.

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