

Research Article

**Prospects for Food Consumption and Its Economic
availability in Rural Population**

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ABSTRACT

The economic affordability of food is an important factor in the country's food security. In this study, the main problems in the availability and consumption of food at the level of rural households were identified. A comparative analysis of expenditures, incomes and consumption of basic foodstuffs in rural and urban residents has been carried out, and positive and negative trends identified. In particular, a diet with a high carbohydrate content and low animal protein was determined. Moreover, based on the range of income in the rural households, a significant differentiation in the consumption at the level of decile groups was revealed, and suggested solutions to the problems presented.

Keywords: Economic availability; Food consumption, Rural population, Agriculture.

INTRODUCTION

Agriculture is the foundation of food supply in Russia, and the goals of food industry have changed in this country over time. For example, in the first half of the 20th century, the problem in the fight against hunger was identified. Interruptions in the supply of bread in 1917 led to mass riots and finally the revolution.

In the early 1920s with the introduction of a new economic policy in Russia, the possibility of restoring agriculture appeared, which was practically destroyed by the First World War and the Civil War.

In the late 1920s, collectivization, which was supposed to increase agricultural production for the country's urban population, and meet needs of industry for raw materials, turned into a new famine.

In 1946, the food supply situation was critical after the war.

Crop failure in 1963–1964 again aggravated this problem, which was solved by importing supplies of grain from the USA, Canada and other states. Only at the beginning of the XXI century, Russia achieved a positive trade balance in the grain.

It can be argued that the problem of hunger has been resolved since about the end of the 1960s. The development and implementation of programs for the development of agriculture have improved the nutritional structure of the population.

The Food Program of the USSR (1982) was tasked with fully meeting the needs of not only bread, but also other types of food in accordance with scientifically based standards.

In the late 1980s, there was a tendency for growing the consumption, which was close to rational norms [17].

However, with the transition to market relations and a radical change in the existing economic system in the 1990s, the problem of food security became acute again. The main reason was not so much a shortage of food as a sharp decline in real incomes of the population, especially in rural areas.

A large-scale import of cheap products from abroad began, while Russian agricultural enterprises could not compete in the market and were forced to cease their activities. As a result, the rural population, which was previously engaged in agricultural production, abandoned their work without basic income. The process of degradation of the village and agricultural lands was launched.

In the period from 2000 to 2005, a recovery period began, which predetermined the significance of large industrial agrarian formations. Meanwhile, there was not incentives and funds to invest on the low level of technical development in the industry [8, 9, 10].

With the introduction of the law on the development of agriculture in 2006, and then the priority national agricultural development project, it was possible to partially prevent massive land degradation and the outflow of the rural population to the city.

However, the rural population decreased by 2.4 million people (6%) and reached to 37.7 million people from 1995 to 2017. There is a population migration from the village to the city every year. The degradation of rural areas continues in conditions unattractive for the population.

The importance of the problem at the state level and its solution mechanisms are reflected in the Federal Target Program “Sustainable Development of Rural Territories for 2014–2017 and for the period until 2020”.

Incomes in rural residents remain extremely low, and ensuring the economic affordability of food is therefore of particular relevance to Russia. At the present stage, this aspect is not sufficiently studied.

Theoretical and methodological issues of food security are available in the works of Russian scientists: V.V. Miloserdov, A.I. Altukhov, A.N. Semin and others [1, 12, 15].

There are separate studies assessing the economic availability of food for the population of the Russian Federation as a whole and the regions for N.I. Shagaida, V.Ya. Uzuna [7].

In foreign publications, this problem at the level of world food security and food consumption ratios is presented by Amir M. Sharif et al., Donna Mitchell et al., Eduardo Botti Abbade, Eugenio Diaz-Bonilla, Roberto Capone, et al. [2, 5, 6, 7, 14].

The importance of economic access to food is also important from the standpoint of food security [11, 19].

MATERIALS AND METHODS.

To study the consumption and affordability of food for the rural population, monographic, abstract-logical, and statistical-economic methods were used. The used data were from the Federal State Statistics Service of the Russian Federation

RESULTS

Economic affordability was determined by the existing possibility of buying food, which primarily depends on purchasing power of the population.

The summary indicator is the average per capita amount of disposable resources, which includes cash and in-kind income (in monetary value) [18].

In this aspect, the comparative analysis of household disposable resources and the share of food consumption expenditures between the rural and urban population (Table 1) are of particular importance.

The ratio of disposable resources in rural and urban households suggests that there has been an increase in rural incomes relative to the urban population in the past five years. However, the existing difference in incomes should still be viewed as a negative factor.

The main reason for the existing gap in the disposable resources between rural and urban families is the low income level in the latter case, where wages remain the main component.

Table 1 - Ratio of disposable resources and expenditures of rural and urban households

Indicator	Year									
	2000	2005	2010	2011	2012	2013	2014	2015	2016	2017
Ratio of disposable resources in rural and urban households, %	65,38	55,21	62,27	64,22	65,28	60,02	62,34	65,34	63,51	67,30
Ratio of food expenses in rural and urban households, %	59,83	60,83	71,45	73,70	74,10	74,01	75,06	78,07	77,28	76,71
The share of food expenses in consumer spending, %:										
-urban population	48,83	32,03	28,34	28,13	27,02	26,40	27,26	30,66	30,93	30,02
-rural population	52,42	39,49	35,98	36,05	33,51	34,10	34,61	38,19	38,66	36,61

Source: compiled by the author using sources [3, 4]

The cost of food for rural residents is 23-30% less than that for urban residents.

Meanwhile, the share of expenditures on food in the rural population was 37%, which is 7% more than that in the urban population.

It is believed that if the share of food expenditure does not exceed 20%, then food is economically available for the population. This is also evidenced by the world practice of developed countries. If less than one third of the income is spent on food, the level of availability is considered average. More than 30%, but less than 50% is high; and over 50% is critical [16,17].

For Russia, the situation for the rural population with economic access was critical until 2000. From 2005 to the present, the situation has improved, but the problem remains unresolved.

An analysis of the ratio of food expenses to the cost of a conditional (minimum) set of food products indicates that a villager spends a minimum of funds (Table 2).

Table 2 - Dynamics of ratio of the cost of food and cost of the conditional (minimum) set of food

Indicator	Year									
	2000	2005	2010	2011	2012	2013	2014	2015	2016	2017
The cost of the conditional (minimum) set of food products, thousand rubles	0,85	1,33	2,37	2,64	2,54	2,81	3,11	3,67	3,70	3,85
The ratio of the cost of food and the cost of conditional (minimum) set of food:										
-urban population	0,75	1,18	1,37	1,35	1,50	1,45	1,43	1,37	1,49	1,45
- rural population	0,45	0,72	0,98	1,00	1,11	1,07	1,08	1,07	1,15	1,11

Source: calculated by the author using sources [3, 4]

In 2016, as part of the implementation of the Food Security Doctrine, new rational norms of food consumption were established, which were lower than ones were previously adopted. Practically for all types of food, except potatoes, there is a positive trend in the consumption (Table 3). Comparing the actual data with the standards, deviations were obtained as both positive and negative.

For example, the consumption of vegetable oil and other fats, fish and fish products meets accepted standards in the territory of the Russian Federation.

Table 3 - Dynamics of consumption of basic foodstuffs by the rural population (kg)

Product	Norm	Year								
		2010	2011	2012	2013	2014	2015	2016	2017	
Potatoes	90	76,3	71,8	75,4	72,5	69,9	67,8	70,2	71,3	
Vegetable oil and other fats	12	12,1	11,9	11,6	11,6	11,8	12	12,3	12,6	
Milk	325	244,6	245,4	248,8	248,5	249	250	260,7	269,2	
Meat and meat	73	71,5	75,4	76,1	77,7	78,6	77,9	81,9	85,6	

products									
Vegetables and gourds	140	97,4	97	99,6	97,9	97,8	99,1	104,2	105,4
Fish and fish products	22	21	21,3	21,8	22,4	22,4	21,1	21,6	22,9
Sugar and pastry	24	35,8	35	35,1	34,4	34,6	34	36	36,1
Fruits and berries	100	59,9	59,2	61,8	65,1	64,9	61,3	65,1	67,8
Bread products	96	122	117,5	116,4	113	112,4	111,4	116,9	118,6
Eggs, pieces	260	207,5	208,8	211,5	206,7	209,1	210,1	221,1	234,2

Source: compiled by the author using sources [3, 4, 13]

There is a shortage of consumption of potatoes, milk and dairy products, vegetables and melons, fruits, berries and eggs.

Excess consumption is observed for meat, meat products (since 2011), sugar and confectionery and bread products.

The ratio of food consumption in rural and urban households shows some differentiation (Table 4).

In comparison with urban households, rural households consume less milk and dairy products, meat and meat products, fruits and berries.

Despite the marked improvement in the nutritional status of rural residents in Russia, serious problems remain with the economic availability of food for the population due to low real incomes.

Table 4 - Ratio of food consumption in rural and urban households

Year	Potatoes	Vegetable oil and other fats	Milk	Meat and meat products	Vegetables and gourds	Fish and fish products	Sugar and pastry	Fruits and berries	Bread products	Eggs
2010	1,22	1,11	0,91	0,87	1,01	0,99	1,14	0,81	1,30	0,92
2011	1,19	1,11	0,91	0,91	0,99	1,00	1,14	0,79	1,28	0,95
2012	1,26	1,10	0,91	0,90	1,00	1,00	1,14	0,79	1,27	0,95
2013	1,29	1,13	0,89	0,89	1,02	1,00	1,12	0,81	1,26	0,94
2014	1,28	1,18	0,92	0,91	1,00	1,00	1,15	0,81	1,26	0,96
2015	1,26	1,19	0,92	0,89	0,99	1,00	1,15	0,82	1,25	0,95
2016	1,24	1,17	0,94	0,90	0,99	1,00	1,18	0,86	1,27	0,96
2017	1,27	1,21	1,00	0,95	1,02	1,07	1,19	0,89	1,30	1,01

Source: calculated by the author using sources [3, 4]

Population groups are different in a number of ways, including the nature of food, quality, and others. The income level of the population certainly affects the consumption. Thus, on the basis of the differentiation of rural households in terms of income level, 10 groups are distinguished (docile groups).

The average consumption data presented earlier in Table. 3, did not show a serious problem due to the differentiation of incomes in rural residents.

The largest gap in food consumption is observed between the first (lowest income) and tenth (highest income) groups.

The first group consumes less potatoes by 25%, vegetable oils and other fats by 36%, milk by 55%, meat and meat products by 56%, vegetables by 51%, fish and fish products by 59%, sugar and confectionery products by 40%, fruits and berries by 63%, bread products by 29%, and eggs by 46%. Thus, the diet of the poorest households in rural areas is critically inappropriate.

Comparing the data from the first decile group of rural households with urban ones, it should be noted that meat and meat products consumption is lower by 20%, milk and dairy products by 15%, fish and fish products by 9%, fruits and berries by 17%, and eggs by 11 % (Fig. 1).

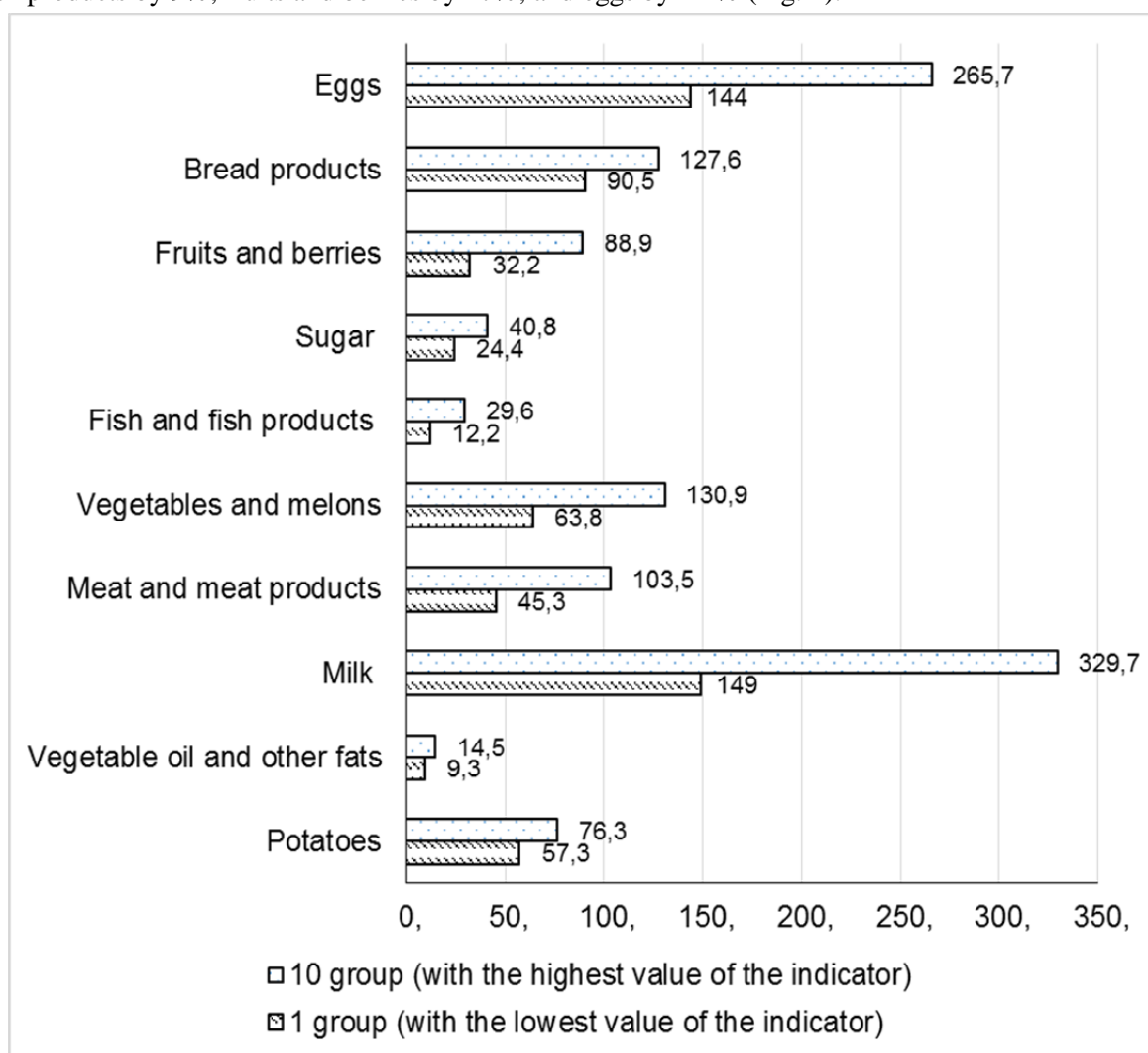


Figure 1. Consumption of products of 1 and 10 decile groups, kg

Source: compiled by the author using sources [3, 4]

At the same time, consumption is higher for potatoes, vegetables, sugar and bread products. Thus, the more expensive protein food is replaced by the consumption of cheaper one—namely carbohydrate.

As a result, the average daily caloric intake in rural households was 2757 Kcal, which is 11% more than in urban ones. However, an objective assessment requires additional analysis of indicators by age, gender, intensity of physical activity, etc. Unfortunately, official data on them is freely available.

CONCLUSION

According to the FAO methodology, the concepts of "malnutrition" and "unhealthy diet"

are required, implying a shortage of calories in the consumption, and the lack of consumption of important nutritional components, such as proteins, respectively. It is the second component that is of paramount importance for the rural population of Russia.

To ensure rational nutrition of the rural population, an increase in material support and provision of rural households is required.

In particular, rural residents are characterized by high income differentiation and widespread poverty, the level of which continues to grow. In the monitoring, it is necessary to introduce indicators characterizing the material situation of rural households. In particular, the rural

population shared with cash income below the subsistence minimum, which should not exceed 10% by international estimates.

Taking into account the orientation towards the convergence of the quality of life in rural areas, it is necessary to increase standard values of the indicators predicted for 2030, "ratio of wages in agriculture to the average value for the country's economy" and "ratio of average per capita disposable resources in rural and urban households" to 90% and 100% respectively.

Particular attention should be paid to the development of measures in the Strategy for Sustainable Development of Rural Areas in the category of poor rural households that need a targeted food aid system. Until now, such a program of state support has not been developed in Russia.

Meanwhile, positive experience has been gained in developed countries with regard to the development of mechanisms for the provision of domestic food aid to certain categories of citizens. The creation of such financing mechanisms at the state budget level would increase the consumption of foods with high amount of animal protein and solve the problem of unbalanced nutrition of the rural population, and, consequently, the food security of the country.

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