Russia’s food security under the crisis of 2020–2021: Objective and subjective dimensions

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Abstract. The article presents the results of the assessment of Russia’s food security in 2020–2021 based on the available statistical data and sociological monitoring of the population’s ‘food well-being’ conducted since 2015 by the Center for Agro-Food Policy of the RANEPA. The authors believe that the pandemic risks for Russian agriculture were limited, and agricultural production ensured a high level of food self-sufficiency. Although the physical access to food remained at the same level, the economic access has deteriorated; however, Russian families managed to keep their usual diet by redirecting the money saved due to the pandemic restrictions to food consumption. Rising food prices have become the most important problem under the crisis, and to solve it, the Russian government has used a wide range of measures — from reducing duties on food imports and temporary bans on food exports to setting marginal retail prices for certain food products. The sociological assessment of the population’s ‘food well-being’ (the all-Russian telephone survey) showed that the families’ requirements to the access to food are rather modest due to the huge credit of patience and sustainable practices of adaptation to the objective social-economic restrictions. Given the achieved indicators of Russia’s food self-sufficiency according to the Food Security Doctrine, the state should shift its focus from food self-sufficiency (and increasing exports) to the economic access of the population to food.

Key words: food security, food well-being, self-sufficiency, economic and physical access to food, pandemic, statistical and sociological data

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Introduction

The covid-19 pandemic has changed the conditions for the functioning of food systems — both global and national — and still questions their sustainability. There was a risk of a decrease in donor contributions to the global funds supporting poor countries and in demand for agricultural products under the falling incomes of countries and households. However, based on the statistical data, many researchers found no significant disruptions in food chains but iden-
tified problems with the physical and economic access to food, and with the ability of countries to help others (see, e.g.: Béné at al, 2021).

“Russia’s food security is ensured” is the refrain of representatives of the relevant Russian departments (primarily Ministry of Agriculture) at official meetings and media events. Russian Ministry of Agriculture insists on such an optimistic assessment by referring to the following: food-producing enterprises work without interruptions; the country is self-sufficient in basic types of products (in 2022, the production index of the food and processing industry is about 101%); for 2022, all key measures of the state support for agricultural producers have been extended, including the program for farmers’ low-interest crediting, which was supplemented and strengthened; the state plans for the production of meat in 2022 did not change, and some growth is expected in a number of sectors (pork and beef production); the state takes anti-crisis measures to reduce the negative effect of the global post-pandemic situation — restores the destroyed logistics chains and develops alternative routes for the supply of raw materials, equipment, etc.

According to the official statement of the Ministry of Agriculture on March 3, 2022, Russia is self-sufficient in the main types of food such as grain and cereals, meat and fish, sugar, vegetable oil and so on; the production of dairy products, vegetables and fruits provides a significant part of the national consumption; for six years, Russia has been ranked the first in the world in grain exports; the country buys most of cheeses and dairy products from its official ally — the Republic of Belarus. The Ministry of Agriculture underlines that Russia’s need for food imports is insignificant: these are mainly products not produced in the country due to its climatic conditions, and importers work with a wide range of countries-suppliers, i.e., “the national food market is reliably protected, and food security risks are low”.

In order to check the declarations of state officials, some experts suggest a food security index; the state focuses on the physical access to food (for instance, the Russian President demands to keep low retail prices, which is difficult for the market economy in general not to mention the current social-economic and geopolitical situation), while experts consider the economic access to food an equally important indicator of food security, in particular, “the social role of retail chains in negotiating with the state and zeroing the trade mar-

1. See, e.g.: https://specagro.ru/news/202203/prodvolstvennaya-bezopasnost-rossii-obespechena-minselkhoz
2. See, e.g.: https://www.oagirk.ru/2022/03/03/prodvolstvennaya-bezopasnost-rossii-v-celom-obespechena
3. See, e.g.: https://www.gazeta.ru/social/2022/04/28/14794516.shtml?ysclid=l462klo4nu579635840
gin for certain socially important goods”. Other experts believe that the targeted food aid to the low-income groups (below the poverty line) is a more effective form of the state support, or insist on increasing the number of criteria in the food security index so that it would show regional differentiation.

In other words, issues of food security have returned to the national and global political agenda under the pandemic which dealt the first blows on food chains. In the international perspective, the Russian leadership focuses on keeping and strengthening the national export potential; in the internal perspective, food security is a part of national security and implies both economic and physical access to food. In January 2020, a new Food Security Doctrine\(^4\) was approved to replace the Food Security Doctrine of 2010\(^5\). The definition of food security was not changed in its core (physical and economic access to food that meets all quality requirements) but was expanded by a list of food products that would guarantee the country’s food independence. Despite the declared balance of external and internal elements of food security, the Russian state is obviously more successful in its export program. The population’s economic access to a sufficient number of high-quality food products remains a problem: food expenses grow faster than real incomes and prevail in the structure of consumption (for instance, the ‘borsch set’ price increased several times in the last five years, which affected the groups with the lowest incomes).

The article presents the results of the study of food security with such indicators as the physical access to food (production, exports and imports), the dynamics of food retail prices, the rush demand for food (time, products, and the ability of the food system to cope with it), government measures for protecting national food chains and physical access to food, statistical changes in food consumption, and households’ estimates of changes in their food practices. The article is based on two sets of data: (1) statistical data collected by the Russian Federal State Statistics Service (Rosstat), including the household surveys (studies of living conditions, diet, etc.); (2) sociological data collected in the all-Russian telephone survey, i.e., sociological monitoring\(^6\). The latter aims at assessing food security not

\(^4\) https://mex.gov.ru/upload/iblock/3e5/3e594f295a7f7ed02014f82ecf37f.pdf?yesclid=l515ae3f43f688976
\(^5\) http://government.ru/docs/all/71224
\(^6\) By 2020, the sociological monitoring program and questionnaire were designed and tested as a combination of the telephone survey (all-Russian sample) with ‘expert’ interviews — the longest conversations of interviewers with respondents were transcribed, because the duration can be an indicator of explanations in the answers to the questions that do not imply detailed comments in such a standardized formalized survey. The choice of the telephone survey was determined by its ability to work with non-cluster samples without increasing the costs of the field
in the perspective of state programs and national strategies, but in the perspective of the population’s economic access to food, everyday food (consumer) practices, and perception of personal and family food (consumer) risks.

The all-Russian survey was conducted on March 18–21, 2022 (\(N = 1810\)) on the random stratified (five conditional time zones — Center, Ural, Siberia, East, and capitals) sample of mobile phone numbers from the Russian Federal Communications Agency (Rossvyaz) website. The traditional social-demographic sample structure for mass surveys (18–34, 35–54, 55–64, 65+) was not used due to the lack of generational differences in previous ‘waves’. The differences between the sample and the Rosstat data by sex, age, type of settlement are insignificant: in the sample, the share of middle-aged men and women is by 3% larger, of older men and women (55+) and younger women (18–34) — by 2% smaller, of urban residents — by 3% larger; these differences do not affect the sample representativeness. The greatest difference is a 20% larger share of respondents with higher education in the sample, which is unlikely to significantly affect food practices (the share of respondents without higher education is decreasing with each wave).

**Statistical dimension of Russia’s food security**

The aggregated indicators of the fact that in 2020–2021, the Russian agriculture managed cope with the negative economic phenomena
of the pandemic include cultivated area and agricultural production. The sown areas were not reduced neither in 2020 nor in 2021, but the structure of production changed.

By the beginning of the pandemic in Russia in 2020, agricultural producers had already stocked up inputs for crop production. There were fears of disruptions in the supplies for animal husbandry but they were not justified: there were supplies of the high-tech inputs — seeds, breeding eggs, veterinary preparations, and plant protecting agents — from Europe, the USA and Canada, i.e., from the countries with the short-term production stoppages. Thus, the production of agricultural inputs did not stop, but in 2022, the situation changed, and by the end of February 2022, not all necessary agricultural inputs were imported to Russia.

In 2020, Russia harvested the largest crop of grain in its post-Soviet history; in 2021, production volumes decreased but insignificantly (Fig. 1).

![Fig. 1. Index of physical volume of gross agricultural products (% compared to the previous year)](image)

The main contribution to the decline in agricultural production was made by cereals (−9%), potato (−6.7%) and vegetables (−2.8%). At the same time, in 2021, there was an increase in the production of sunflower (+17.6%) and sugar beet (+21.6), and almost no changes in animal husbandry (from 0 to −3% in different branches). Grain production is the main agricultural activity in terms of scale, and its decline was determined by the poor overwintering of winter crops and not by the disruptions in the supply of inputs or labor migrants during the pandemic. The Russian government has taken various measures to protect food chains, including preventing bankruptcy of large companies — a list of strategic organizations in agriculture was made: in a difficult situation threatening their functioning, the state would take additional measures to support them. This list consists primarily of the well-known agroholdings with many large regional subsidiaries. However, this decision — to support strategic agricultural organizations — still requires additional explanations, because there is no convincing evidence that the state support of one agroholding with dozens of subsidiaries provides greater food security (by keeping the food chain during the
The pandemic started in Russia later than in Europe and the United States, so the Russian population was aware of the empty supermarket shelves in these countries thanks to the television reports. The population considered these reports as a warning and rushed to the shops: food sales were growing from January to March and exceeded the monthly purchases of March 2019 by 5% (on average in the first quarter of 2020 — by 3.6%) (Fig. 2). However, in April, the population drastically reduced purchases, and the sales fell by 9.3%.

There were factors preventing the shortage of food: availability in stocks, demand for cheap products from the low-income groups, limited savings (Fig. 3). The sales of salt, pasta and cereals in March 2020 increased by 77–78% compared to the February level, while the stocks decreased by 53%. As can be seen from the list of products, the cheapest ones were snapped up very fast. However, the ability of businesses to supply enough food and the general lack of savings for purchases put an end to the buying craze quite quickly. Therefore, in January–April 2020, exactly as many food products were purchased as a year earlier.

Food inflation reached 11% in 2021 (Fig. 4), which determined social tension and became one of the main issues in the state and social agenda. This was quite a paradox, because the issue became the most urgent when food inflation was lower than in some previous years.

Fig. 2. Index of physical volume of food retail sales (% compared to the previous year)
In February 2020, devaluation created risks of the excess food exports and rising internal food prices, but such fears were not justified. The government introduced duties and quotas for grain exports, and in 2021, a duty for the export of sunflower oil. At the end of 2021, food exports increased by $36.2 billion (+21.4% compared to 2020). The largest contribution to this growth was made by fat-and-oil products — 37% (+48% compared to 2020), cereals — 20% (+12%), fish and seafood — 9%. However, in physical volume, food exports decreased by 5.6% compared to 2020,7 which means that there was no food outflow from the national market, and food exports did not lead to rising prices. Another explanation for rising prices of agricultur-

7. Calculations based on the Federal Customs Service data: https://customs.gov.ru/statistic
al products was the transfer of external prices to internal ones in the open economy, which is difficult to confirm since prices were changing differently for different food groups and mainly for products that were not exported or imported (Fig. 5). The explanation by the transfer of external prices to internal ones applies only to the export-oriented food (grain as the basis for bread, cereals, pasta, vegetable oil) or imported one (primarily fruits and nuts).

![Food Price Increase](chart.png)

**Fig. 5. Consumer prices (December 2021 to December 2020)**

The more plausible hypothesis is that rising prices for potatoes and vegetables were determined by the production transfer from the smallest economies (family consumption) to the commodity economies (agricultural enterprises). The production profitability of potatoes and vegetables is much lower compared to cereal crops and oilseeds (Ternovsky, Shagaida, 2021; Shagaida, Uzun, Ternovsky, 2022), which points to the further increase in prices of potatoes and vegetables (their price is still lower than in many countries; Russia is not self-sufficient in their production).

The rising prices in Russia were negatively assessed by the experts calculating the Global Food Security Index for 2020. Nevertheless, according to the aggregated data, Russia improved its position (24th place among 113 countries, which is 6 positions higher than in 2019)⁸. In 2020, Russia was placed in the red zone of ‘price warning’⁹ due to rising prices and increasing share of households’ food expens-

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⁸ Global Food Security Index. https://impact.economist.com/sustainability/project/food-security-index/Country/Details#Russia

⁹ See, e.g.: Bloomberg classified Russia as a ‘hot spot’ in terms of rising food prices. https://www.rbc.ru/economics/28/02/2021/623bb1a29a794716a52e4bf6
In 2021, Russia improved its position in terms of food security by taking the 23rd place.

In 2020–2022, in order to control retail prices, the Russian government has taken a wide range of measures — from reducing some import duties to limiting marginal retail prices for certain types of sunflower oil and sugar. There were quotas and duties on some export products, short-term export bans on certain types of food, changed rules for setting marginal prices and changed marginal prices for socially important goods, subsidies for some food producers (flour, sugar and sunflower oil), a duty-free quota for certain food imports and reduced import duties. In 2020–2021, to support family incomes and demand, the government paid some small sums to the families with children three times.

The effectiveness of these measures varies: it is difficult to assess the effect of subsidizing millers; after setting the marginal price for one type of sunflower oil, its prices were no longer connected to external prices; for sugar, marginal prices were introduced when they did not exceed the previous level (Fig. 6); the price dynamics changed due to being no longer dependent on external prices. Sunflower-oil and sugar producers received subsidies to compensate for ‘lost profit’. Limited compensations did not allow the government to extend the period for controlling the price of sunflower oil after October 1, 2021, and the price of sugar — after June 1, 2021\(^\text{10}\). Export restrictions for sunflower seeds implied risks of lower prices for agricultural producers, but the high demand for sunflower oil in foreign markets caused competition for raw materials in Russia, which led to the internal prices increase to the level of world prices due to logistics costs.

Fig. 6. Dynamics of retail prices for sunflower oil and sand sugar, rub/kg

\(^{10}\) The government will no longer control oil prices. [https://rg.ru/2021/06/07/pravitelstvo-ne-planiruet-bolshe-ogranichivat-ceny-na-maslo.html](https://rg.ru/2021/06/07/pravitelstvo-ne-planiruet-bolshe-ogranichivat-ceny-na-maslo.html)
Russia’s Doctrines of Food Security (2010 and 2020) declared the national self-sufficiency in various food groups as the priority of food security policy, and this idea was common for official discourse and public opinion. During the pandemic, Russia showed a high level of self-sufficiency in the form of the zero import-export balance and according to the Doctrines’ self-sufficiency criteria for main food groups (Table 1). Therefore, the long-term focus of the Doctrines on self-sufficiency is no longer relevant: even during the pandemic, the food self-sufficiency was ensured, and the pandemic did not reduce the physical access to food.

*Table 1. National production, %*

| Products                  | Fact | Doctrine |
|---------------------------|------|----------|
| Grain                     | 170  | 95       |
| Sugar                     | 101  | 90       |
| Vegetable oil             | 158  | 90       |
| Meat and meat products    | 100  | 85       |
| Milk and dairy produce    | 84   | 90       |
| Fish and seafood          | 163  | 85       |
| Potatoes                  | 95   | 95       |
| Vegetables and gourds     | 89   | 90       |
| Fruits and berries        | 43   | 60       |

The Doctrines also introduced the criterion for the economic access to food — food consumption according to the rational norms set by the state. Rational norms set the level of nutrition necessary for a healthy and productive life. If we compare actual and rational norms for each food group, we will see that the achieved rational norms were quite the same before and during the pandemic (Table 2).

*Table 2. Food consumption: fact/rational norm, %*

| Products                  | 2019 | 2020 | Products           | 2019 | 2020 |
|---------------------------|------|------|--------------------|------|------|
| Bread                     | 121  | 121  | Dairy products     | 72   | 74   |
| Potatoes                  | 99   | 96   | Meat               | 104  | 104  |
| Vegetables and gourds     | 77   | 76   | Fish               | 100  | 91   |
| Fruits and berries        | 62   | 61   | Eggs               | 110  | 109  |
| Sugar                     | 163  | 163  | Vegetable oil      | 117  | 116  |

At the same time, households’ food expenses increased to 37%: 35.7% in cities, 42.6% in rural areas. On the one hand, there were signs of the worsening economic access to food — an increase in
the share of family food expenses and rising consumer prices; on the other hand, in general the diet has not changed. This is a paradox of the pandemic — families spent more to buy the same set of food as before the pandemic, which was possible due to the restrictions on travels, activities and entertainment. In 2019, the average family food expenses provided 95.3% of the rational set, in 2020 — 96% (Table 3). However, by decile income groups, this indicator varies: at least 50% cannot afford food ensuring their consumption according to the rational set (in the first decile group — 66%, in the fifth — 95%).

Table 3. Families' ability to afford the rational food set with their food expenses (Shagaida-Uzun indicator of rational consumption)

| Indicators                      | 2013    | 2014    | 2015    | 2016    | 2017    | 2018    | 2019    | 2020    |
|--------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Actual food set, rubles per capita a year | 51,566  | 56,437  | 65,171  | 70,304  | 71,102  | 72,620  | 78,363  | 83,624  |
| Recommended set, rubles per capita a year | 54,779  | 60,439  | 70,834  | 73,329  | 75,273  | 76,661  | 82,212  | 87,101  |
| Actual set/Recommended set, %  | 94.1    | 93.4    | 92      | 95.9    | 94.5    | 94.7    | 95.3    | 96      |

In post-Soviet Russia, many families have a personal subsidiary plot for producing fruits and vegetables during vacations and holidays (such plots were allotted by the state free of charge). The average plot is from 0.06 to 0.5 ha. In Soviet times, the population produced about 26% of all agricultural products (1990); under the economic reforms after the collapse of the USSR, this share increased to 57% (1998), and then was steadily decreasing — to 25% (2020). In 2021, there were first signs of the growing families’ interest in expanding production, which the sociological data proves.

**Sociological dimension of Russia’s food security**

Russians prefer to but food in large department stores (72%, which is close to the 2020 level; perhaps, its decline in 2021 was the consequence of the pandemic restrictions); 48% prefer small stores (48%), 23% — food markets, 11% — private sellers (friends and someone consumers know); the last two indicators have slightly decreased since 2020 (Fig. 7). In 2021, given the decreasing number of stores in rural areas, we added van shops to the list — as in the previous wave, 5% chose it.
The trends identified in 2021 are still observed in 2022. The expansion of large retail chains leads to the decreasing number of small stores that cannot compete with their assortment, price policy and promotions. In 2021, 13% of the answers in the ‘other’ were Internet shops, in 2022, we added them to the list of answers (8%): the forced online shopping during the pandemic has turned into a consumer pattern.

Vegetarianism and veganism are not widespread in Russia — 97% eat meat; of the remaining 3%, 27% adhere to the ideology of vegetarianism/veganism, and 44% cannot afford meat products. The level of fish consumption is slightly lower — 92% families eat fish; of the remaining 8%, 3% adhere to the veganism, and 38% cannot afford fish products; the majority of those who chose the ‘other’ say that their families do not like fish (77%). It would seem that 38% and 44% of the relatively small number of those who do not eat meat or fish is an insignificant indicator, but the fact that the lack of money is the reason threatens food security.

In 2022, we changed the form of some questions: the option ‘do not eat’ was removed from the list of answers. First, the respondents answered the control question “Does your family eat meat/fish?”; if the answer was positive, the next question was about the frequency of meat/fish consumption. This form is more convenient for respondents and interviewers, and reduces the time of the survey (the interviewer does not read all answers to those who are not in the group of meat/fish consumers).

Russians prefer meat products (Fig. 8), and the distribution of answers is similar to 2020–2021 with a small increase in daily meat consumption: every second family eats meat every day (46% in 2020, 48%
in 2021, 51% in 2022), several times a week — less often (respectively, 37% and 40% in the following years), less than once a week — much less often (9% in previous years, 7% in 2022).

Fig. 8. The frequency of consumption of meat and fish, %

44% eat fish several times a week (29% in 2020, 42% in 2021), and 51% (63% in 2020, 52% in 2021) less than once a week. The increase in fish consumption in 2021 (compared to 2020) was probably due to the pandemic combined with the sanctions, which increased the volume of Russian fish products in stores, including the deep-frozen ones. Given the removal of pandemic restrictions but the increased sanction pressure, we can expect this trend to continue provided that the sufficient purchasing capacity (which is doubtful under rising prices). Until now, sanctions and inflation have not drastically affected food and consumer practices. Therefore, we should not be too optimistic about the consumption of meat and fish — the survey reveals the shares of respondents eating meat and fish with a certain frequency but not the quantity and quality of such products. For instance, people can buy only the cheapest chicken: “there is no way to live without meat” but “beef is too expensive”.

The specific feature of the Russian public opinion is ‘normalization’: people tend to give socially approved answers even to slightly sensitive questions. Thus, the ‘normal’ family should have a good diet consisting of ‘healthy’ products, primarily meat and ‘vitamins’ (fruits) which are bought even in a difficult financial situation. Only 6% (7% in 2021) say that they do not buy fruits in winter, every tenth (12% in 2022 and 2021) claims to buy them every day, every second (57% in 2022, 56% in 2021) — several times a week, every third (respectively, 29% and 30%) — less than once a week. Like with meat and fish products, the main reason for not buying fresh fruits in winter is the lack of money (68% of this group in 2022, 64% in 2021).
In 2021, the option ‘do not buy’ was removed from the list of answers to the question about buying fruits in winter, and the options ‘every week’, ‘several times a month’ and ‘less than once a month’ were replaced with ‘every day’, ‘several times a week’ and ‘less than once a week’. Such changes in wording somewhat affected the distribution of answers, but clarified the situation (Table 4). Since 2017, the share of those who cannot afford fruits in winter has doubled (from 3% to 6%), which indicates the growing social-economic polarization. There is a very small share of those who find it difficult to answer the question (2%), which indicates that it is clear and relevant. Only a small share of Russians can buy fruits every day in winter (12%), while every second respondent can afford them several times a week (57%). Some changes in the data can be explained by the pandemic and different months of the survey — in the spring of 2021 and in the summer of 2020 (i.e., people may forget their winter food practices). However, the similar distribution of answers in 2021 and 2022 proves that Russian families have developed sustainable practices in fruit consumption provided that their purchasing capacities do not change.

Table 4. Does your family buy fruits in winter?

| Answers                  | 2022 | 2021 | 2020 | 2017 | Answers                  |
|--------------------------|------|------|------|------|--------------------------|
| No                       | 6%   | 7%   | 7%   | 3%   | No                       |
| Every day                | 12%  | 12%  | 64%  | 55%  | Every week               |
| Several times a week     | 57%  | 56%  | 21%  | 29%  | Several times a month    |
| Less than once a week    | 29%  | 30%  | 6%   | 12%  | Less than once a month   |
| Hard to say              | 2%   | 3%   | 2%   | 2%   | Hard to say              |

In the previous waves, we identified the persistent food nationalism of Russians with a block of questions, but since 2021, we have been focusing on the very fact of food nationalism and its scale. If two products are of the same price, the majority will prefer the Russian product (76%, 75% in 2021) to the foreign one (respectively, 5% and 7%). In 2021, we explained the distribution of answers by the fact that it is increasingly difficult for the consumer to identify a product as Russian or foreign, and today the situation is aggravated by the anti-Western media rhetoric. The high level of food nationalism is ensured by older generations: of two products of the same price, the Russian one will be chosen by 85% (87% in 2021) of older respondents, 79% (77%) of 35-54-year-olds, but 58% (57%) of the youth. Women are more likely (86% vs 73% of men) to choose a Russian product, but not because men prefer foreign products (5% vs 2%) — men more often find it difficult to answer the question (21% vs 12%).

The 2022 data confirms the findings of 2020 and 2021 — two factors seem to determine the inconsistency in assessments of food practic-
es and opportunities. First, Russians evaluate their past and current food-consumer practices, compare their life situation with their social circle and conclude that everything is ‘satisfactory’. Second, before the pandemic, the range of food products was expanding; under the social-economic restrictions of the pandemic, food became a source of a sense of ‘normality’. In 2022, both factors remain, and the influence of the second one will increase despite the end of the pandemic, given the decreasing purchasing capacities due to the ruble fall, rising prices and sanctions pressure.

In general, since 2017, the assessments of food practices and opportunities have not changed significantly (some fluctuations do not exceed the statistical error) (Fig. 9): most assessments are of the ‘normal’ type — the majority claims to eat well or satisfactorily (84% in 2017, 80% in 2020, 82% in 2021, 81% in 2022; the sums of those who eat excellently or well — 55%, 61%, 56% and 58%, respectively). With age, assessments of the family diet change for the worse: 17% of young people, 13% of 35-54-year-olds, 8% of the oldest claim that their diet is excellent, 52%, 45% and 43%, respectively, name it good, 26%, 35% and 40% — satisfactory.

![Fig. 9. Assessments of the diet quality, %](image)

In 2022, there is a number of indicators similar to 2021 and 2020 (their fluctuations do not exceed the statistical error). In 2020, there was a smaller share (23% vs 29% in 2017) of those having relatives and friends who eat poorly; in 2021 this share was 25%, in 2022 — 22%, and this is a too high indicator (only 70% do not have malnourished families in their social circle). The situation is similar with the assessments of the number of such malnourished people: from 2017 to 2020, there was a positive trend — the share of re-
respondents who noted an increase in the number of malnourished families decreased from 51% to 43%, but in 2021, it returned to its previous level — 51%, 47% in 2022. In other words, every second respondent believes that the number of malnourished families among his friends and relatives has increased, which is an extremely negative indicator given the Russians’ tendency to social ‘normalization’. Every second respondent, who admitted an increase in the number of the malnourished families, describes his close social circle from which he hardly differs in terms of financial and consumer opportunities. The social desirability factor makes Russians assess their own situation more positively: 72% claim that the quality of their diet has not changed (60% in 2021), 8% say that it has improved (15%), and every fifth (19%; 23% in 2021) — that deteriorated. After changing the interval for assessing such changes — from three years to one year, we got the similar distribution of answers despite significant changes in other indicators, which confirms the pressure of social desirability. And Russians keep mutual food-aid practices: 42% do not help relatives with food purchases, 57% help (60% in 2021): 41% help sometimes, 16% help constantly (in 2021, 41% and 18%, respectively).

In a shorter term, respondents assessed not only the sufficiency of food but also the requirements for it. In 2021, we used half a year interval, in 2022 — a month, since a shorter interval ensures more reliable data. However, the differences in answers were not significant, which seems to confirm the pressure of social desirability in direct questions (Fig. 10-11): in 2021, 85% claimed that their families did not suffer from malnutrition (45% had enough food they wanted, 40% had enough food but not always the one they wanted); in 2022, 88% were not malnourished (48% and 40%, respectively). The main reason why respondents do not always have the food they want is the lack of money (85%; 82% in 2021).

![Fig. 10. Estimates of food self-sufficiency in 2022](image)

- Enough food that we want
- Enough food but not always the one we want
- Sometimes not enough food
- Often not enough food
- Hard to say
Fig. 11. Estimates of food self-sufficiency in 2021

According to the 2022 data, most indicators show some stabilization. The distribution of self-restrictive practices has changed since 2017 (one half limited food expenses, and the other half did not); by 2020, the share of self-limiting families decreased to 39%, in 2021 — 43%, in 2022 — 41% (Fig. 12). In 2022, we changed the interval to a more convenient for estimation — ‘last month’ instead of ‘last 12 months’. On the one hand, these are very different intervals in duration; on the other hand, the resulting fluctuations do not exceed the statistical error (i.e., respondents answer the question in general, not focusing on a given period).

Fig. 12. “Has your family started limiting food expenses in the last month (2022)/in the last 12 months (2017, 2020, 2021)?”, %
Although since 2017, rising prices (58%) have remained the main reason for limiting food expenses rather than decreasing incomes (23%), in 2020, 50% (42% — incomes) named rising prices, in 2021 — 64 % (28%), in 2022 — 74% (20%), i.e. there is a constant decline in purchasing capacities due to the rising food prices.

The list of products in which Russian families limit themselves has changed little since 2017 (Fig. 13), but there are some negative trends. As before, respondents cut down expensive meat purchases (67% in 2017, 65% in 2020, 57% in 2021, 55% in 2022), and this indicator approached fish products (respectively, 49%, 51%, 55% and 47%), i.e. Russians reduce their fish and meat consumption. Since 2017, from a quarter to a third of respondents have cut down dairy purchases (in 2021–2022, 31%), 39%–40% — fruits. The shares of those who cut down purchases of fruits and dairy products change little, while the share of those who reduce purchases of vegetables started to grow: in 2017, one in four households, in 2020 — one in five, and now — one in three (34% in 2021, 37% in 2022). In 2021, this change could be explained by the fact that we removed ‘potatoes and bread’ from the list of answers, but the growth of this indicator in 2022 is alarming (it is unlikely that Russians reduce their diet by excluding potatoes). In the previous waves, in the ‘other’ desserts/sweets dominated (every fourth answer in this group in 2021, every third — in 2020), then came smoked meats, sausages, cheese and delicatessen. In 2022, sugar became the leader (29%) due to the recent sugar boom, then come cereals (25%), desserts/sweets, smoked meats, sausages and cheese.

Fig. 12. “What food products does your family buy less?”
For assessing food purchases, the indirect question — about the close social circle — did not work, perhaps, due to the difficulty in assessing purchasing practices of other people (compared to more ‘visible’ food ones). 41% admitted that their families started to limit themselves in food expenses in the last month, and 44% noticed an increase in the number of such families among their friends and relatives. Probably, the difficulty in assessing the purchasing practices of other households makes respondents answer this question by referring to their own situation.

The majority noticed the rising prices — 95% (74% believe that prices rose significantly, 21% — slightly). In this question, we also changed the interval to ‘last month’ (instead of ‘since the beginning of the year’). On the one hand, this change ensures the question simplicity for respondents and more reliable data for researchers. On the other hand, the option ‘last month’ allows for more accurate comparisons. For objective reasons, the monitoring timing changes (March 2022, April 2021, June 2020), and respondents were to evaluate different periods — in terms of duration, range and affordability of seasonal products. Despite the different interval, the answers have not changed since 2020 (the majority noticed rising food prices), and the shares of those convinced of rising prices in general and of the significant increase in particular are growing (85% and 37% in 2020, 91% and 68% in 2021, 95% and 74% in 2022), i.e. Russians are increasingly pessimistic about purchasing capacities.

The response strategies of households to rising food prices do not change much (Table 5): the majority tries to find places (shops, markets) with cheaper prices (71%) or does not change places but chooses cheaper products (69%); another strategy is less expenses (43%), partly combined with the produce of personal subsidiary plots (the latter has reduced from 40% in 2017 to 32% in 2022); the least requested strategy is to ask relatives with personal subsidiary plots for food aid (23% and 15%, respectively).

Table 5. Households’ response strategies to rising food prices

| Strategy | 2022 | 2021 | 2020 | 2017 |
|----------|------|------|------|------|
| We buy less food | Yes | 43% | 42% | 38% | 49% |
| No | 56% | 56% | 61% | 50% |
| Hard to say | 1% | 2% | 1% | 1% |
| We try to find a place (shops, markets) with cheaper prices | Yes | 71% | 70% | 69% | 78% |
| No | 27% | 27% | 29% | 21% |
| Hard to say | 2% | 2% | 1% | 2% |
| We buy cheaper products in our usual shops | Yes | 69% | 68% | 67% | 68% |
| No | 28% | 30% | 30% | 30% |
| Hard to say | 2% | 3% | 3% | 2% |
Since 2017, the shares of those who prefer the self-reliance practices have declined — 32% start or increase production of vegetables and fruits (40% in 2017); 15% rely on similar efforts of relatives (23%) (Fig. 14).

Since 2017, the self-reliance practices have reached their limit: in 2017, 65% grew vegetables and fruits, in 2020 — 60%, in 2021 — 52%, i.e. not even all owners of personal subsidiary plots/gardens (59%). In 2022, the share of respondents growing vegetables and fruits has increased (88%), which is unlikely to be determined by the eco-enthusiasm — rather in the current social-economic situation (rising prices, poor economic access to fruits and vegetables), the limit of self-sufficiency was revised. This is confirmed by the fact that there was no increase in potato production — the share of potato growers has decreased since 2017 (66% of families with personal subsidiary plots; 78% in 2017), which can be explained by the relatively lower price and longer shelf life compared to

| Strategy                                                                 | 2022 | 2021 | 2020 | 2017 |
|--------------------------------------------------------------------------|------|------|------|------|
| We get more food from relatives with personal subsidiary plots           | Yes  | 15%  | 20%  | 17%  | 23%  |
| No                                                                      | 84%  | 78%  | 82%  | 76%  |
| Hard to say                                                              | 1%   | 2%   | 1%   | 1%   |
| We started to grow (more) fruits and vegetables                          | Yes  | 32%  | 36%  | 37%  | 40%  |
| No                                                                      | 65%  | 63%  | 62%  | 59%  |
| Hard to say                                                              | 3%   | 1%   | 1%   | 1%   |

Fig. 14. Household’ response strategies to rising food prices
other vegetables and fruits. In 2022, the share of those who do not grow potato and/or vegetables and fruits due to their unprofitability has decreased (23% vs 29% in 2021), but other indicators have not changed: every fifth respondent does not consider such a self-reliance activity necessary, 14% (13% in 2021) do not want to be engaged in it. Every second respondent (48% and 45%, respectively) in this group chose the ‘other’ — objective reasons (too small plot, poor land quality), physical inability (poor health, age, illness) or lack of time.

A small group keeps poultry and/or livestock (13%; 16% in 2021), mostly chicken and duck (91%; 88%) — this indicator has increased significantly since 2017 (55%). The share of those keeping pigs increased from 12% in 2017 to 28% in 2020 and 25% in 2021, but now has decreased to 18%; sheep — from 7% to 13% in 2020, 15% in 2021, and now 9%; cows — from 13% to 18% in 2020, 26% in 2021, and now 18%; 8% in this group keep rabbits (8%) or ‘other’ (goats, geese or turkeys). In 2021, we suggested the expansion of self-sufficiency practices, and its dairy-meat component became more marketable (farmers had more sales opportunities due to the urban residents moving to the village during the pandemic and the increasing number of urban consumers), but today the situation changes due to the rising costs of poultry and livestock production.

As in 2021, those who produce food on personal subsidiary plots provide their family consumption (over 90%) and have reached their limit. However, the situation has worsened so much that the share of those planning to expand such activities increased: in 2021, 87% refused to do this, in 2022 — 81%; in 2021, every tenth respondent accepted this possibility, and now 16% are ready to grow more potatoes, vegetables and fruits (71% in this group), much less often to keep more poultry (39%) or cattle (22%).

In the previous waves, the majority did not notice the disappearance of usual food (84% in 2021, 85% in 2020, 82% in 2017), but in 2022, this indicator changed to 50%. Accordingly, before a small share noticed a reduction in the usual food range (7%, 8% and 7%, respectively), now it is 44%. As before, every second respondent who noticed a reduction in the range does not experience any inconvenience (49%; 46% in 2021). But there are changes in the estimates of the set of missing products: before, one in five in this group mentioned vegetables, fish and fruits, one in three — dairy products, one in four — groceries; in 2022, groceries (52%) and ‘other’ became leaders (61%) compared to dairy products and fruits (7%), vegetables (6%), fish (5%) and meat (3%). It seems that the self-limiting practices determined a set of affordable meat and dairy products, fruits and vegetables, while groceries were more diverse before the latest price increase and sanctions (Fig. 15: ‘groceries (cereals, pasta)’ were included in the list 2020). In 2022, the ‘other’ has increased significantly due to the sugar rush which led to rising prices and its temporary shortage. Respondents often specify that “there are cereals and fish — everything is on sale but too expensive — we cannot buy it... at an exorbitant price”.

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Fig. 15. Missing food products (in the relevant group)

The key part of the sociological monitoring is the economic access to food. Its main indicator is the share of the total monthly family income spent on food (Fig. 16), which has changed little since 2017: one half spent a third to a half of income on food; over 40% — a half to two thirds (43% in 2022, 45% in 2021–2020, 48% in 2017); the most polar income groups — 13% (14% in 2021, 13% in 2020, 12% in 2017) — spent less than a third of income on food, about one in ten (11% in 2022–2021, 12% in 2020, 10% in 2017) — more than two thirds.

Fig. 16. Shares of food expenses in the total monthly family income, %

In 2021, the oldest had the largest share of food expenses in the total monthly family income — more than a half (65% vs 48% in 2020).
the younger group, 54% in the middle group). In 2022, the ratio has changed — 57% in two older groups spend a half or more of income on food, while in the younger group — 46%. “Now the food is all there, but sometimes there is not enough money... We do not spend money on anything except food”. Moreover, the oldest spend a significant share of income on medicines: “I need to buy medicines which have risen in price by the devil knows how much”.

In the middle-age group, fluctuations in the share of food expenses do not exceed the statistical error, while in the older group, the decrease in the share of respondents with the highest food expenses can be explained by the fact that pension indexations and social payments partly compensate for rising prices. In the older group, there is a higher share of those who did not notice changes in food expenses compared to the last year (22% vs 14% and 12% in younger groups), a lower share of those with increasing food expenses (72% vs 83%), and a higher share of those with increasing incomes in the last 12 months (24% vs 19% and 13%).

The low food-purchasing capacities were proved by the answers to the question whether family food expenses had changed over the year (Fig. 17).

![Fig. 17. Changes in family food expenses, %](image)

An ever-increasing share claims that from year to year, their food expenses grow — 65% in 2017, 79% in 2022. Since there are no significant changes in the share of food expenses in the total monthly family income, we can suggest that Russians spend social payments and benefit indexations, pensions and salaries on their usual food basket. However, respondents tend to stereotypically ‘normally’ assess their financial situation: 63% consider it good (‘very good’ — 4%; 58% and 5% in 2021, 63% and 5% in 2020, 60% and 4% in 2017), 30% — poor (‘very bad’ — 4%; 34% and 5% in 2021, 30% and 5%
in 2020, 32% and 4% in 2017). The ‘normalization’ of assessments is confirmed by the clarifying comments: “Rather good, but sometimes you just want more... You have to suffer in order to buy something in addition to food, something necessary. If you buy this something, you start limiting yourself in everything else, because it is impossible to just get up, go and buy what you want. Even though I am working”.

The tendency to ‘normalization’ can be seen in the assessment of changes in the total family monthly income over the last 12 months, and the distribution of answers has not changed since 2020: 56% (57% in 2021, 52% in 2020) claim that their family income has not changed, 24% (27% and 34%) — that it has decreased, 18% (14% and 13%) — that it has increased. Given the objective indicators of inflation and rising prices, the share of those who admit a decreasing family income is a negative indicator of the worsening social-economic situation of a significant share of households. Most respondents (60%; 64% in 2021, 67% in 2020, 71% in 2017) have a low average monthly family income — from 11 to 50 thousand rubles, and 32% (38%, 41% and 47%, respectively) — from 11 to 30 thousand (Table 6).

Table 6. Average monthly family income, %

| Income            | 2022 | 2021 | 2020 | 2017 |
|-------------------|------|------|------|------|
| Less than 10,000  | 4    | 7    | 7    | 9    |
| 11-30,000        | 32   | 38   | 41   | 47   |
| 31-50,000        | 28   | 26   | 26   | 24   |
| 51-100,000       | 20   | 15   | 14   | 11   |
| More than 100,000| 10   | 8    | 6    | 3    |
| Refusal to answer/Hard to say | 6 | 7 | 7 | 5 |

Changes in the ratio of income groups since 2017 are insignificant and, for most indicators, do not exceed the statistical error. However, there is an upward trend in the average family income (Fig. 18) — the share of households with an income of more than 50 thousand rubles increases, but, given the food-expenses share, such an income growth does not compensate for rising food prices.

The oldest have the lowest average monthly family income: 53% (63% in 2021) — less than 30 thousand rubles, while 70% (62%) of 18-34-year-olds and 66% (53%) of 35-54-year-olds — much higher. In the youngest group, 40% have an average monthly family income of more than 51 thousand rubles, in the middle group — 37%, and in the older group — only 16%. In general, there is an increase in the average total monthly family income of all age groups in absolute terms, but it lags behind an increase in food prices.
Fig. 18. Average total monthly family income, %

As in the previous waves, in 2022, there are no significant differences by social-demographic characteristic. For instance, some gender differentiation was predictable: women know better food prices; they more often mention the lack of money as the reason for not buying fresh fruits in winter (77% vs 45% of men); more often admit family food restrictions (47% vs 39%); more often prefer the strategy of buying cheaper products in usual stores (73% vs 65%); more carefully monitor the range of food products and notice its reduction more often (49% vs 38%); are more demanding on the family diet — less often consider it excellent (10% vs 15%) and more often — satisfactory (38% vs 32%); more realistically assess family food expenses and more often admit that food limitations are determined by rising prices (95% vs 91%) rather than by decreasing incomes (22% vs 29%). As one male respondent stressed, “I have a good wife. I open my fridge and can choose whatever I want”.

There are predictable differences by type of settlement, although in absolute terms incomes of the Russian population grow in urban and rural areas (Table 7): 55% in the countryside (67% in 2021, 61% in 2020) have a total monthly family income of less than 30 thousand rubles, while 31% — in the city (39% and 44%, respectively), i.e. groups with a total monthly family income of more than 31 thousand rubles make up 64% (55%; 48%) in the city and 39% (28%; 34%) in the village. If we take 50 thousand rubles of total monthly family income, then in the city, every third family has a higher income (34%), in the village — 17%. Thus, there is an ongoing concentration of poverty in rural settlements. Moreover, lower incomes of rural households determine a larger share of food expenses which make up less than a half for 38% of urban residents and 22% of rural residents, more than a half — for 52% and 62%, respectively.
Table 7. Income groups in the city and the village, 2020 / 2021 / 2022, %

| Average monthly family income | Urban areas | Countryside |
|-------------------------------|-------------|-------------|
| Less than 10,000              | 6/5/3       | 8/13/8      |
| 11–30,000                     | 38/34/28    | 53/54/47    |
| 31–50,000                     | 27/28/30    | 22/18/22    |
| 51–100,000                    | 15/17/22    | 8/7/12      |
| More than 100,000             | 6/10/12     | 4/3/5       |
| Refusal to answer/Hard to say | 7/7/6       | 6/6/6       |

Despite lower incomes and a larger share of food expenses, most indicators of food consumption and social-economic well-being are similar for rural and urban respondents. On the one hand, this confirms the conservation of rural poverty (as ‘normal’) and sustainability of rural survival strategies (personal subsidiary plots). For instance, although rural residents more often admit having malnourished relatives and friends (27% vs 20%), almost every second rural respondent (49% vs 39%) claims that the number of such families in his social circle has not changed. On the other hand, there is a kind of ‘standardization’ of food-consumer practices — not differing by settlement but depending on objective factors. For instance, urban respondents are more likely to buy food in large department stores (76% vs 58%), while rural respondents — in small stores (60% vs 45%) and from private sellers (16% vs 10%). At the same time, rural respondents do not rely on personal subsidiary plots to a much greater extent than urban respondents: it seems that in the production of potato, vegetables and fruits, rural respondents have reached the limit of their capabilities, so they are less likely to increase their production (60% vs 77%).

**Conclusion**

The 2022 survey confirmed a number of the previously identified trends. Russians buy food mainly in large department stores and are confident food nationalists. Meat products are considered a necessary indicator of the ‘normal’ family diet, but family income determines their quality and quantity. The absence of meat and fish or fruits in winter in the family diet is always determined by low incomes. Russians react to rising prices mainly by reducing the fish and meat parts of their diet, then reduce expenses on dairy products and fruits, and in 2022 — on vegetables, sugar and cereals. It seems that the population’s self-limiting practices have led to a set of affordable meat and dairy products, fruits and vegetables, while groceries were more diverse until the latest price increase and sanctions.
Russians describe their food practices and opportunities inconsistently, which can be explained by two factors. On the one hand, Russians tend to ‘normalize’ their practices when comparing them with other people and concluding that their diet is ‘satisfactory’. On the other hand, low incomes and high shares of communal and food expenses limit all other opportunities, and food becomes an important source of a sense of ‘normality’. Both factors seem to remain and even increase their impact due to the decreasing purchasing capacities under rising prices and sanctions. This is confirmed by the rather high estimates of the quality and sufficiency of one’s diet (in direct questions) while admitting the increasing number of malnourished families among one’s friends and relatives (in indirect questions).

Low incomes (their growth in absolute terms does not compensate for rising prices) and high food expenses, i.e. the economic access to food, is the main threat to Russia’s food security. The physical access to food is sufficient: Russians are worried not by the range of food products (with the latest exception of sugar and groceries) but by rising prices under the exhausted resources of food self-sufficiency and self-limitations. Thus, Russians are constantly looking for cheaper products and stores, do not give up usual products but buy them in smaller quantities; in 2022, Russians were forced to reconsider their attitude to personal subsidiary plots and more often intend to expand food production for self-sufficiency.

Based on the statistical and sociological data, we can conclude that today the main challenge for Russia’s food security is the economic access to food. Russian agriculture performs its key function, and its production, with a few exceptions, is sufficient for sustainable food supplies; in some branches, the country is no longer a net importer. However, there are no improvements in the economic access to food, and not enough data to assess the physical access to food. Russia’s population is still quite positive about the situation despite the lack of improvements in its economic access to food, but the reserves of social positivity are limited.

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Продовольственная безопасность России в кризисный период 2020–2021 годов: объективное и субъективное измерение

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Аннотация. В статье представлены результаты оценки продовольственной безопасности России в 2020–2021 годы на основе доступных статистических данных и социологического мониторинга «продовольственного самочувствия» населения, реализуемого с 2015 года Центром агропродовольственной политики ИПЭИ РАНХиГС. Авторы полагают, что для российского сельского хозяйства риски пандемии были ограничены, и производство сельхозпродукции обеспечило высокий уровень продовольственного самообеспечения. Хотя физический доступ к продовольству сохранялся на прежнем уровне, экономический доступ ухудшился, но российские семьи смогли обеспечить привычный для себя рацион питания, перенаправив экономические за период пандемийных ограничений средства на питание. Рост цен на продовольствие стал важнейшей проблемой кризисного периода, и для ее решения российское правительство задействовало богатый арсенал мер — от снижения пошлин на импортное продовольствие и временных запретов на экспорт отечественной продукции до установления предельных розничных цен на отдельные продукты питания. Социологическая оценка «продовольственного самочувствия» населения (общероссийский телефонный опрос) показала, что запросы семей с точки зрения доступа к продовольствию довольно скромны на фоне значительно го кредита терпения и устойчивых практик приспособления к объективным социально-экономическим ограничениям. Принимая во внимание достижение страной большинства показателей продовольственного самообеспечения согласно Доктрине продовольственной безопасности, целесообразно сместить фокус государственной политики с самообеспечения (и наращивания экспорта) на экономический доступ населения к продовольствию.

Ключевые слова: продовольственная безопасность, продовольственное самочувствие, самообеспеченность, экономический и физический доступ к продовольствию, пандемия, статистические и социологические данные