the other hand, there are problems of rising production costs and falling profits from gas sales. For example, Gazprom's loss for the first nine months of operations exceeded 309 bn rubles, while revenues grew by 8%, while production costs rose by 13%.¹ Due to the sanctions regime, gas supplies to European countries decreased. In 2023, about 45 bn cubic meters were supplied. For comparison: in 2018, supplies reached more than 200 bn cubic meters. This is compensated by supplies to China, but it is noted that, according to the agreements, China will buy gas at a price 28% lower than European consumers in the coming years.²

As for oil supplies, despite the imposed sanctions, production and supplies remain generally stable. Thus, according to official forecasts, oil exports in 2024 were expected to reach 240 mn tons, compared to 238 mn tons in 2023. 233.5 mn tons are planned for 2025. The sanctions and reduction of oil supplies to Europe are compensated for by increasing trade relations with India and China. Thus, as early as in 2023, exports to India increased 2.6 times to almost 82 mn tons, and in January-October 2024 oil supplies from Russia increased by another 8.1%. In the area of cooperation with China, in 2023 supplies rose to 107 mn tons, making Russia the largest supplier; moderate growth in supplies continued in 2024 as well.<sup>3</sup> At the same time, Europe is actively buying petroleum products from India and China, which are largely produced from the Russian crude oil.

## 3.4. Food security and agricultural sector in 20244

### 3.4.1. Integral food security index

Considering the main components of food security (availability and resilience of production; economic and physical access to food; food security), the situation in Russia on the eve of 2024 was not alarming.

Thus, back in 2023, the integral indicator of food security improved⁵ after a number of years of steady decline (*Fig. 7*). While the downward trend until 2023 has been shaped mainly by deteriorating economic availability and high volatility of food prices, in 2023 economic availability improved due to lower volatility of food prices

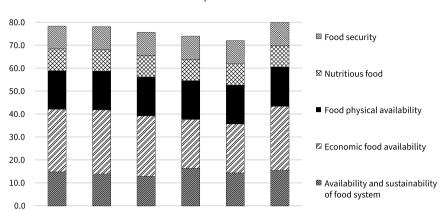
Gazprom's parent company's loss under RAS amounted to Rb 309 bn in 9 months. URL: https://www. interfax.ru/business/989213

<sup>2.</sup> Bloomberg has learned of a discount of up to 28% on Russian gas for China until 2027. URL: https://www.forbes.ru/biznes/511103-bloomberg-uznal-o-skidke-do-28-na-rossijskij-gaz-dla-kitaa-do-2027-goda

<sup>3.</sup> What 2024 was like for the Russian oil and gas industry. URL: https://www.vedomosti.ru/analytics/trends/articles/2024/12/23/1083310-kakim-bil-2024-god-dlya-rossiiskoi-neftegazovoi-otrasli

<sup>4.</sup> Authors: Shagaida N.I., Doctor of Economic Sciences, Head of the Center for Agricultural Policy IAES RANEPA; Ternovsky D. S., Doctor of Economic Sciences, Leading Researcher, Center for Agricultural Policy IAES RANEPA.

<sup>5.</sup> The results obtained as part of R&D RANEPA 2024. Developing approaches to calculate an integral indicator of food security status of the Russian Federation and RF regions.



and rising incomes of households. This reduced the share of people who could not afford even 90% of the food set specified in a so-called rational standard.<sup>1</sup>

Fig. 7. Dynamics of integral index of food security in Russia

Sources: Rosstat. RANEPA methodology.

2020

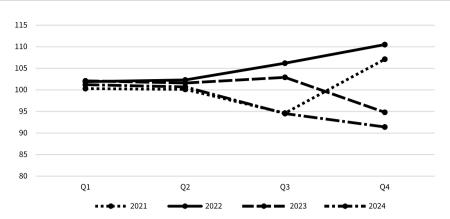
2018

#### 3.4.2. Agricultural production

The agricultural sector with performance ensuring basic food security and food availability, started the year 2024 with positive development rates (101% according to H1 compared to the same period of the previous year), which have exhausted in Q3 2024 (*Fig. 8*). The index of agricultural production amounted to 96.8% year-on-year. Taking into account that in 2023 the index was at 100.2%, it can be stated that production in 2024 declined relative to both 2023 and 2022.

The sub-sectors of agriculture developed abruptly in 2024. Thus, the production of livestock and poultry meat (3.2% for 10 months of 2024, 2.1% for the year), milk (0.9% for 10 months, 0.8% for the year) have increased. Stagnation in egg production has been almost got over by the end of the year compared to 2023 (-0.3% year-on-year, while in the first 10 months of 2024 it was -2.0%). The expected grain harvest in 2024 was lower than in the previous year: 125 mn tons (according to Rosstat 86.2% compared to 2023). However, this is compared to 2023, which was the second record year in Russia's history. The 2024 grain harvest remains in line with normal, compensating for all the country's domestic needs and ensuring exports.

Household members are food insecure if costs of food for eating at home, away, and natural food supply does not provide the food intake and 90% of the rational consumption rate. Shagaida N. I., Uzun V. Y., Ternovsky D. S., Shishkina E. A. Estimating economic availability of food in the Russian Federation in the context of food security. Voprosy Ekonomiki, 2024, No. 6. p. 73–95.



 $\textit{Fig. 8.} \ \textbf{Dynamics of agricultural production, \% against previous year}$ 

Source: Rosstat.

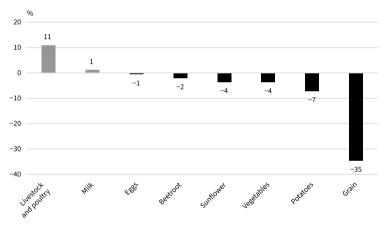


Fig. 9. Structure of absolute growth in the physical volume of production of main agricultural foods in Russia, 2024 vs. 2023

Source: Own estimates according to Rosstat.

The grain harvest was the key factor in the reduction of the physical volume of production of basic agricultural products, being responsible for almost half of the negative dynamics (*Fig. 9*). The Ministry of Agriculture of Russia considers high base of 2023 as the reason of reduction, which is associated with unfavorable spring weather conditions.<sup>1</sup>

Ministry of Agriculture: in 2024 grain harvest can fall to 132 mn t. Agroinvestor. URL: https://www.agroinvestor.ru/markets/news/42169-minselkhoz-v-2024-godu-urozhay-zerna-mozhet-sni-zitsya-do-132-mln-tonn/

In 2024, new national goals were adopted with 2 benchmarks for agriculture. The first benchmark is to increase by 2030 the volume of agro-industrial production by at least 25% compared to 2021. The realistic achievement of this indicator fits so far in the dynamics of development of the agro-industrial complex in 2015–2023, when the average annual growth rate of gross agricultural output amounted to 2.9% and production of foods to 3.8% with the targets 2.5% for 2021–2030 (*Fig. 10*).

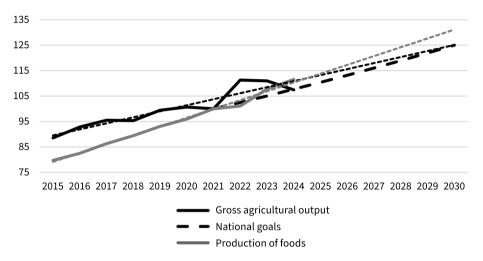


Fig. 10. Dynamics of agro-industrial production

*Sources:* Rosstat, Executive Order of the President of the Russian Federation of 07.05.2024 No. 309 "On national development goals of the Russian Federation for a period until 2030 and prospectively until 2036."

Involvement of Soviet-era abandoned land into agricultural turnover is often cited as a reserve for production growth. However, there are reasonable arguments against the need to stimulate this process. Using data from agricultural censuses (2006, 2016 and 2021)<sup>1</sup>, it is clear that the area used by agricultural producers is decreasing. However, according to the Rosstat, production has increased. Despite the abundance of abandoned fields, the potential for their involvement is limited. Obviously, there are objective prerequisites for intensive use of available land. There is still some reserve for increasing grain and oilseed production due to growth of crop yields.

Given the high dependence of crop production on weather conditions, it is important to maintain the availability of world-class technologies, including seeds that can mitigate the negative impact of climate change. Russian agriculture has demonstrated an incredible progress in production efficiency, relying on structu-

<sup>1.</sup> Agricultural censuses. Rosstat. URL: https://rosstat.gov.ru/selskohozyajstvennye\_perepisi

ral reforms in agriculture, government support for the industry and access to hightech inputs that were largely imported. Since 2014, the RF government has been taking actions to reduce import dependence on agricultural inputs. Along with funding for scientific research, establishing world-class facilities (innovation facilities in the agro-industrial complex)<sup>1</sup>, inclusion of sub-programs in the Federal scientific/technical program of agriculture development for 2017–2030 (FSTP), designing a National project "Technological support to food security"<sup>2</sup>, which will be launched in 2025, various restrictive instruments were adopted. Such tools include import duties on high-tech plant protection products, as well as quotas on seed imports. Rosselkhoznadzor actively uses non-tariff instruments, restricting supplies of large European producers and completely localizing production of imported varieties and hybrids. The goal of this policy is to achieve self-sufficiency in staple crops up to 75%, as a threshold of self-sufficiency mentioned in the 2020 Food Security Doctrine. In 2024, there was a discussion on the size of utilization fee on agricultural machinery, which is, actually, a prohibitive duty on imported tractors, combines (with a small exception of some models)<sup>3</sup>, which was introduced since January 1, 2025. Evidently, a balanced approach towards the import substitution policy involving support for national research and promotion of its results for use in agriculture, while maintaining the previously available access to imported high-tech inputs, can reduce risks of disruptions in production. The argument for rejecting self-restrictions in the use of imported innovative resources may also be supported by the fact that Russia still holds only 59th place in the Global Innovation Index<sup>4</sup> among 133 countries (33rd place among 36 European countries).

Despite government efforts to modernize agriculture in order to increase productivity, investment in agriculture has been declining in recent years. Obviously, this increases risks of failing to achieve the production growth target (*Fig. 11*).

Labor shortage, which poses risks to the industry's functioning, remained an issue in 2024. Authors' estimates proved that currently there are limited opportunities to fill the shortage of personnel in agriculture by using internal reserves. This deficit can be addressed by increasing labor productivity through application

<sup>1.</sup> URL: https://xn--m1acy.xn--p1ai/centers

In 2025, the national project "Technological Support of Food Security" will be launched. URL: https://xn--80aapampemcchfmo7a3c9ehj.xn--p1ai/news/v-2025-m-startuet-natsproekt-tekhnologicheskoe-obespechenie-prodbezopasnosti/

<sup>3.</sup> How the utilization fee on agricultural machinery evolved into a substitute for protective duties. URL: https://agrovesti.net/news/indst/kak-utilsbor-na-agrotekhniku-prevratilsya-v-analog-zagraditelnykh-poshlin.html

<sup>4.</sup> Global Innovation Index. URL: https://www.wipo.int/web-publications/global-innovation-index-2024/en/https://www.wipo.int/gii-ranking/en/russian-federation

Agriculture is still losing the "wage race" that started in many areas of the economy. URL: https://rg.ru/2024/10/13/kto-nakormit-stranu-cherez-piat-let.html

<sup>6.</sup> *Shagaida N.I.* Is it possible to quickly eliminate labor shortage in Russian agriculture? // Russian peasant studies, 2024. No. 2, p.139–152.

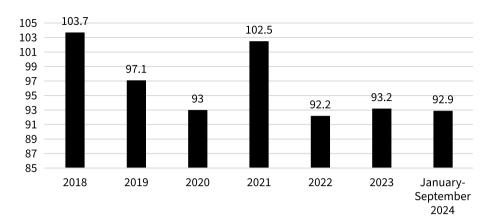


Fig. 11. Index of physical volume of investments in fixed capital of agriculture, % to the previous year

Source: Rosstat.

of modern/new technologies, but its implementation requires considerable time. In the short term, the deficit of personnel can be filled by attracting trained migrants. The latter requires establishing a system of recruitment in the country of residence, training, social guarantees and protection from unlawful actions within the country. Russia is rapidly losing its historical appeal for foreign workers from the post-Soviet space. It is beginning to lose the competition with countries of Western Europe, South Korea and Israel, who are actively building a bridge for redistribution of Russian-speaking migrants from Russia to their countries via governmental agreements.

One of the risks of agricultural production, considering sustainability of its functioning and stability of import supplies in modern time, is the concentration of production in a limited number of business units. It should be stated that the level of production concentration in Russia is very high. According to estimates for 2018–2023, 1.29–1.57% of agricultural organizations account for 50% of the revenue across a range of agricultural enterprises (22,000), not counting their consolidation into agricultural holdings.

Currently, the government can stimulate the establishment or development of agricultural organizations proportional to the potential of labor resources of the territory where they are located. It would be advisable to limit the amount of government subsidies under all support programs to one organization, to consider applications for government support taking into account local balance of labor resources. This would not only contribute to more uniform development of a wide range of organizations, but also limit their size, thereby reducing dependence on migrant workers.

#### 3.4.3. Exports of food and agricultural products

Growth in exports of agro-industrial products should be at least 1.5 times higher than in 2021; this is the second benchmark for agriculture in the national development goals of the Russian Federation for the period until 2030, adopted in 2024. In real prices, exports of agro-industrial products in 2023 have already reached \$43.5 bn, which is 18.2% higher than in 2021. Food exports for the first 10 months of 2024 amounted to \$35.2 bn, down 2.4% y-o-y, largely due to a decline in world prices for exported goods (–14.2% for cereals according to the FAO Food Price Index). Food imports, meanwhile, rose by 4.9% to \$30.6 bn, maintaining a positive trade balance.

There is a great potential to increase the share of food and processing industry exports (12% in 2023). Growth in exports of meat and dairy products (4% in 2023) faces sanitary and veterinary restrictions, which requires scrupulous work to harmonize requirements of exporters and importers. Moreover, not all types of Russian livestock products are competitive in terms of price both on the world and domestic markets, which is evident from retrospective OECD NPC indicator (consumer protection rating factor¹) (*Table 13*). Traditionally highly competitive products on the foreign market are crops², excluding sugar, as well as eggs. Occasionally, sugar and milk fall among the competition.

Consumer protection rating factor (consumer's NPC)

10	idi	e	13	3

	2020	2021	2022	2023
Total index	1.05	1.00	1.01	0.99
Wheat	0.94	0.93	0.71	0.85
Barley	0.91	0.81	0.67	0.68
Corn	0.99	0.80	0.83	0.61
Oats	0.78	0.69	0.76	0.52
Raw sugar	1.38	1.03	1.24	1.00
Potatoes	1.00	1.00	1.01	1.00
Sunflower seeds	0.86	0.90	0.94	0.89
Row milk	1.07	1.00	1.16	1.00
Beef and veal	1.23	1.03	1.14	1.22
Pork	1.40	1.48	1.59	1.15
Poultry meat	1.11	1.02	1.05	1.10
Eggs	1.00	1.00	1.00	1.00
Other goods	1.00	0.98	0.96	0.96

Source: OECD3.

Consumer protection rating factor (CPRF): the ratio between the average price paid by consumers (at the farm gate) and the price at the border. URL: https://www.oecd.org/content/dam/oecd/en/topics/ policy-issues/agricultural-policy-monitoring/producer-support-estimates-manual.pdf)

<sup>2.</sup> Vegetables under cover are not considered.

 $<sup>3. \</sup>quad URL: \ https://data-explorer.oecd.org/vis?lc=en\&df[ds]=dsDisseminateFinalDMZ\&df[id] \\$ 

To improve competitiveness of livestock products, the government will have to maintain/expand export subsidies in various forms<sup>1</sup>, updating the discussion on beneficiaries of the Russian budget: the Russian consumer (for those types of products made for domestic market; vulnerable groups of people in terms of food) or the foreign consumer by subsidizing production/agricultural producers of export goods.

#### 3.4.4. Demand and food prices

Agriculture and food chains have generally shown enviable resilience both amid the pandemic and nowadays, when the households' effective demand for food has increased despite rising prices. This is evident from the dynamics of the index of physical volume of retail food sales (*Fig. 12*). In 2024, food purchases in the retail trade remained at more than 100% of the respective month of pre-pandemic 2019. However, since June 2024, the index of physical volume of sales began to fall.

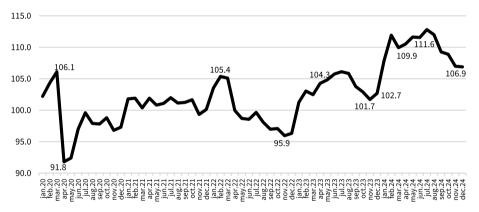


Fig. 12. Index of physical volume of retail trade turnover in foods including beverages and tobacco (in comparable prices), % to the corresponding period of 2019.

Source: Own estimates according to Rosstat.

Growth of food purchases since January 2021 was observed amid growing incomes. However, a comparison of dynamics of two indices: nominal size of monetary income and consumer prices illustrates a significant gap (for the first time since 2006) in dynamics of incomes and prices (*Fig. 13*). By the end of 2024, growth in food prices accelerated, while growth rate of incomes declined.

<sup>1.</sup> Which is not in line with WTO Rules.

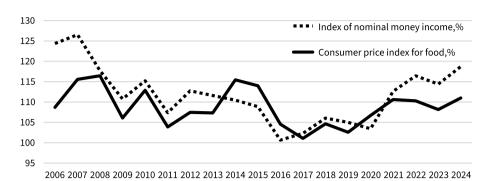


Fig. 13. Indices of nominal money income and consumer price for foods,

% December vs. December

Source: UISIS.

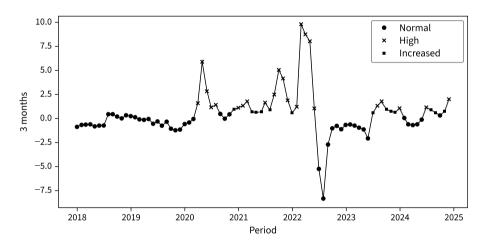


Fig. 14. Retail food market price anomaly indicator (based on FAO methodology of price volatility)

Source: own estimates according to Rosstat.

Fig. 14 shows dynamics of price volatility for foods calculated according to FAO methodology.¹ After a rather long period of high volatility (from mid-2020 to early summer of 2022) volatility was in the range of values allowing to describe it as normal (Normal), and from autumn 2023 until now it was in the zone of increased (price watching) and high (price alert) volatility.

<sup>1.</sup> URL: https://www.fao.org/fileadmin/user\_upload/foodprice/docs/resources/a-i7550e.pdf

In December 2024, food inflation amounted to 11.7% (by December 2023), including 13.8% for socially important goods (*Fig. 15*). However, taking into account the share of socially important goods in consumption, their contribution to food inflation amounted to 3.5 p.p.

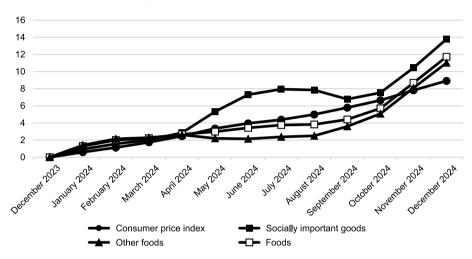


Fig. 15. Growth of retail prices for foods, %

Source: own estimates according to Rosstat.

Table 14
Change in food prices by commodity group,
December 2024 relative to December 2023

Commodity group	Price growth by individual commodity groups, %	Contribution to price growth given their share in consumption, p. p.	
Vegetables	32.2	2.5	
Butter and fats	28.6	1.0	
Milk and dairy products	15.3	1.9	
Fish and seafoods	14.9	0.9	
Fruit	13.5	0.9	
Bread and bakery	12.2	1.0	
Sugar and confectionery	10.2	0.6	
Non-alcoholic drinks	9.3	0.2	
Alcohol	8.3	1.0	
Meat and meat products	6.1	1.6	
Groceries	5.9	0.3	
Flour, cereals, pasta	3.8	0.2	
Eggs	-10.9	-0.2	

Source: own estimates according to Rosstat.

Table 15

# Change in prices for socially important goods in December 2024 relative to December 2023

Name	Price growth rate	Contribution to price growth, p. p.
Socially important goods		100,0
Potatoes, kg	102.8	22.1
Butter, kg	38.8	20.8
Apples, kg	20.6	10.1
Bread and bakery products made of wheat flour of various grades, kg	16.4	8.6
Beef (except for fine meat), kg	14.1	6.7
Drinkable whole pasteurized milk 2.5–3.2% fat, l	19.3	6.3
Rye bread and bread from a mixture of rye and wheat flour, kg	18.0	5.1
Fresh white cabbage, kg	44.7	4.3
Frozen ungutted fish, kg	21.8	4.0
Yellow onion, kg	50.2	3.6
Pork (except for fine meat), kg	6.0	3.4
Sunflower oil, l	12.9	3.2
Lamb (except for fine meat), kg	28.4	2.9
Polished rice, kg	7.3	1.6
Wheat flour, kg	8.0	1.5
Carrots, kg	14.8	1.0
White sugar, kg	3.1	0.8
Black loose-leaf tea, kg	4.5	0.7
Vermicelli, kg	5.2	0.5
Millet, kg	7.5	0.2
Buckwheat, kg	-5.9	-0.8
Chilled and frozen chicken, kg	-1.1	-0.8
Chicken eggs, 10 pieces	-11.9	-5.7

Source: Own estimates according to Rosstat

Current prices for foods are historically high. Compared to the average values for the previous 5 years, taking into account overall inflation, foods are more expensive by 4.0%, including socially important goods by 7.2%. Vegetables, dairy products, butter and fats evidenced the highest price increase, more than 10%. Taking into account the share in consumption, the same products were also the most important for consumers' wallets (*Table 14*).

Nominal potatoes prices for 2024 increased by 102,8%, 44,7% for cabbage, 50,2% for yellow onion. Meanwhile, the real prices for these foodstuffs, considering overall inflation, are still below the prices in comparable periods of the pre-

vious acute price crisis for vegetable in summer-autumn 2021. As a result, potatoes became the commodity that contributed most to the price index for socially important goods, 22.1 p.p. of the total change, taking into account the consumption structure. Butter was the second such product with a 38.8% rise in retail price; its contribution to the price index amounted to 20.8 p.p. The rise in the price of potatoes and butter together accounted for almost half of growth for socially important goods (*Table 15*).

Price growth is at the focus of public discussion. The Government of the Russian Federation and the President of Russia constantly declare the thesis of efforts to contain prices. They discuss limiting trade mark-ups on socially important products (within the range of 5–15%1), introducing social subsidies (the so-called ration stamps) for vulnerable segments of the population.<sup>2</sup>

Agriculture has been "squeezed" between ever-increasing production costs and the consumer, who is concerned about rising prices regardless of whether he belongs to a vulnerable group or the share of food expenditures in his income/expenditures. This results in prices for agricultural products for the agricultural producer growing slower than his costs, increasing price disparity.

The example of wheat (the most common agricultural product) shows that its prices have increased by 15.3% over 5 years, while resources have become much more expensive. Thus, fertilizers increased in price by almost 40% and wages more than doubled. The total inflation rate for this period amounted to 49.8%, more than 3 times higher than the price of wheat (*Fig. 16*).

Attempts to limit trade mark-ups for retailers are unlikely to solve price growth. Thus, calculations based on retail chains' data on purchasing and selling prices of vegetables, potatoes<sup>3</sup> show that a 15% markup will make a set of socially important products more expensive compared to present, when chains take a differentiated approach to markups. Setting a marginal markup of 5%, which the Russian government is currently discussing for beets, carrots, cabbage, potatoes, onions, drinking milk, cottage cheese, kefir, butter, sugar and bakery products of non-durable shelf life<sup>4</sup> will cheapen the set of foods, but will cause the exclusion of the assortment of products from this list; this has been repeatedly observed in similar cases.

Retailers are interested in the availability of socially important foods with minimal mark-ups. These can be foods under chain brand, certain types of the so-called "social food", discounts on foods with a short period of permissible sale or enlarged packages. This practice looks reasonable. Support of social initiatives of retail chains at the state level looks attractive for all participants.

<sup>1.</sup> URL: https://tomsk.spravedlivo.ru/25136610

<sup>2.</sup> URL: https://www.rbc.ru/life/news/676006d49a7947abbbf0762d

Weekly report on price monitoring of socially important foods in ARC member retail chains. report@ acort.ru

<sup>4.</sup> URL: https://www.rbc.ru/business/04/02/2022/61fc62219a794725647465f7

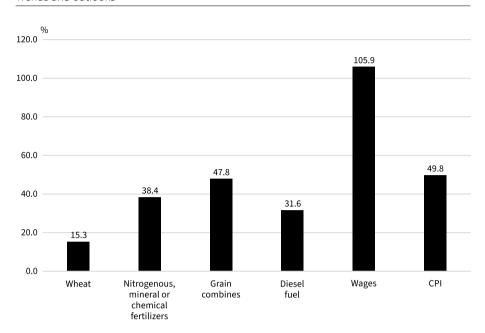


Fig. 16. Wheat price growth and resources required for wheat production in Russia (2024 vs. 2019)

Source: Own estimates according to Rosstat.

Finally, in 2024, the reduction of production rates in agriculture did not affect consumers, as it mainly affected export goods. Food chains have demonstrated their resilience to stress situations. This situation could change if new challenges are not addressed timely, including limiting constraints on access to resources as well as price regulation due to unpredictable producers' reactions. In times of turbulence, it is useful to change the way the information is presented. In terms of price growth, switch from information on growth for the period in nominal prices of each product to information on growth adjusted for inflation or contribution of a product to the overall food hikes. If prices growth is highlighted, then it is necessary to show retailers' efforts to support prices for socially important goods, allocating positions for vulnerable groups of the population. In rhetoric about food support, switch from focusing on labels that cause negative emotions (ration stamps, coupons) to focusing on the core: government efforts to support vulnerable segments of the population. In reporting on price hikes in different countries, do not focus on stating that they are worse, but look at the causes of the situation (spread of bird flu and need to take measures to prevent its spread, for example), as similar causes can arise in any country. Consumer education should help to soften the perception of a negative situation if prices rise.