

# Prerequisites of State Regulation of Prices for Agricultural Products (through the Example of Poultry Farms in Siberia)

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**Abstract**— There is an acute problem of providing the population of Siberia and the Far East with animal protein. One of the solutions to this problem may be the development of industrial poultry farming. The situation in the poultry industry in 2018 was predetermined by the factors prevailing in previous years, the effect of which was felt incrementally, namely low selling prices for products, cost increases, which ultimately influenced the growth rate of poultry production. A similar situation exists in the market of Siberia. It should be noted not so significant decline in prices for chicken eggs in the summer and a significant increase in September-October 2018. That influenced the economic performance of local producers, and significantly attracted to the market of the Irkutsk region manufacturers from other regions, thus reducing the market size. All these factors influenced the volume of egg production in agricultural enterprises. Consequently, the mechanism of state regulation of prices for agricultural products should help to establish the level of price parity acceptable and sufficient for the realization of the economic interests of the subjects of the agrarian market, ensuring the purchasing power of consumers of agricultural products and equality of parties in the exchange.

**Keywords**—Chicken egg; agricultural products; price; price parity index

## I. INTRODUCTION

In the last decade, the state-political importance of Siberia and the Far East has been in the shadow of the pro-Western foreign policy and foreign economic orientation. Unfortunately, the ideas about the socio-economic situation about the trends and consequences of the development of the region, on which the programs and development forecasts are based, do not reflect the real state of affairs [1].

In the modern world, the food problem is among the most complex problems of the world economy and politics. In the coming years, the overwhelming majority of the world's population will not be provided with a caloric intake rate, and the achievement of animal protein intake rate remains a challenge for all of humanity. According to FAO, at the beginning of the 21<sup>st</sup> century, the following model of food consumption is expected: for developed countries, an average of 800 kg of grain per person per year (100–150 kg in the form of bread, cereals, etc., and 650–700 kg in terms of meat, egg, milk, etc.); for the poorest - 200 kg per person per year (in the form of bread) [2].

Academician I. V. Kurtsev notes that, on average, in the diet of Siberians compared to 1990, meat decreased by 31%. The food basket has increased the amount of bread, potatoes and vegetables, but this does not compensate for the reduction in consumption of animal products. And this means that there is an acute problem of providing the population of Siberia and the Far East with animal protein. One of the solutions to this problem may be the development of industrial poultry farming.

Consider the development of the regional economy in terms of the development of the poultry industry [3]. The situation in the poultry industry in 2018 was predetermined by the factors prevailing in previous years, the effect of which was felt incrementally, namely low selling prices for products, cost increases, which ultimately influenced the growth rate of poultry production.

The price increase for an egg in September is seasonal, after a recession in the summer period and does not have a stable pattern in accordance with Figure 1.

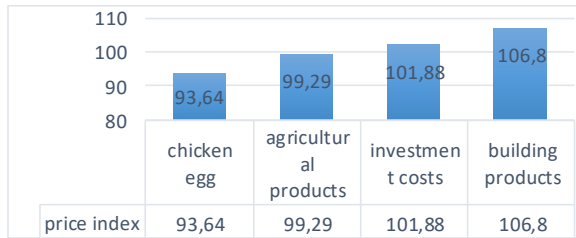


Fig 1 Dynamics of average producer prices for chicken eggs in the Russian Federation. (according to the Rospitseyozuz )

The price formed in December increased by 10% by the beginning of the year. At the same time, the average price per year is 38.50 rubles / dec. is 92% of the average annual producer price of 2016 (41.70 rubles / dec.), when the selling prices reached their maximum values. This state of affairs creates a very serious financial and economic situation for producers, which is aggravated by the continuing price growth trends for almost all consumed resources (grain, premixes, fuel and lubricants were the most critical in terms of price increases) and requires additional attention to its development for timely adoption necessary decisions. Despite the current situation, the poultry industry continues its development, attracts investments for the implementation of current and future tasks. First of all, with the attraction of preferential investment loans, priority environmental issues are solved (construction of sewage treatment plants, plants (workshops) for the processing of litter), construction of feed mills is under construction, processing of eggs (with the release of dry and liquid egg products) is being further developed, technologies are being introduced, ensuring compliance with product requirements for exporting it.

II. MATERIALS AND METHODS

A similar situation exists in the market of Siberia. The dynamics of average producer prices for chicken egg of Siberia in the Irkutsk region is represented by Figure 2. It should be noted not so significant decline in prices for chicken eggs in the summer and a significant increase in September-October 2018. That, of course, influenced the economic performance of local producers, and significantly attracted to the market of the Irkutsk region manufacturers from other regions, thus reducing the market size. All these factors influenced the volume of egg production in agricultural enterprises. At the end of 2018, 916.4 million chicken eggs were produced, which is 7.6 million less than in 2017 or 0.8%.

Inflation rates, currency parity, price disparity, purchasing power of the population. All these factors are inextricably linked in terms of the main feature of the price. Inflationary processes have a significant impact not only on the economy of enterprises, but also on the ability of the population to purchase goods, including food [3]. Food prices rose in 2017 only by 1.1%. The inflation slowdown in 2016-2017 was uneven across the main components. The increase in consumer prices for components December to December and on average for January - December to the previous year is presented in percentage in table 1.

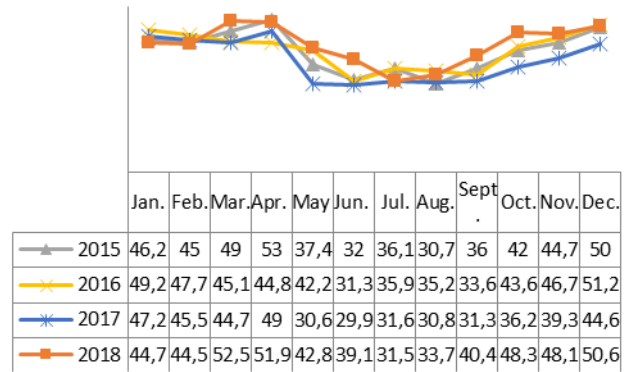


Fig 2 Dynamics of average producer prices for chicken eggs in the Irkutsk region.

TABLE I CONSUMER PRICE INCREASE BY COMPONENTS, DECEMBER TO DECEMBER OF THE PREVIOUS YEAR AND ON AVERAGE JANUARY-DECEMBER TO THE PREVIOUS YEAR, %

Indicators	2016 year		2017 year	
	Dec./ Dec.	Jan.-Dec. / Jan.- Dec.	Dec. / Dec.	Jan.-Dec.r / Jan.- Dec.
Consumer price index	5.4	7.1	2.5	3.7
Foodstuffs	4.6	6	1.1	3
Non-grocery goods	6.5	8.2	2.8	four

The most significant was the slowdown in food prices growth - almost 2 times in 2017 by 2016 in terms of the growth rate of prices “December to December”. At the same time, the growth in gasoline prices in 2017 accelerated by 3.5 points compared with the previous year and turned out to be significantly higher than the general level. The record low price increase for 2017 is associated with a sharp slowdown in food prices (+ 1.1% against + 4.6% for 2016) and non-food products (+ 2.8% against + 6.5% for 2016). Food inflation in 2017 turned out to be lower than the general level of inflation, as in 2016: in terms of “December to December” and an average for the year. Prices for many food categories, including eggs and dairy products, have fallen.

In order to assess the impact of nutrition on the health of the population, the Department of Russian Agency for Health and Consumer Rights for the Irkutsk Region, according to the state statistics bodies, analyzed the structure of food consumption by the population.

In the Irkutsk Region, the Department of Russian Agency for Health and Consumer Rights established a deficit (in relation to the recommended food consumption standards) for two food groups (meat, milk, eggs, vegetables and melons, potatoes, bread, sugar, vegetable oil). It was also noted that the Irkutsk region is located in the group of constituent entities of the Russian Federation with a very low level of consumption of basic foodstuffs, in addition to vegetable oil, potatoes, sugar, as compared with the average Russian indicators.

For example, the consumption of meat and meat products in 2017 was in the Irkutsk region 67 kg per capita per year (with a standard value of 73 kg / year), and was less than the recommended standard by 6 kg (8.2%). In the dynamics over

the past 3 years, there has been a decrease in the consumption of meat products by the population by 1.5%.

The consumption of milk and dairy products in the Irkutsk region in 2017 was 194 kg per capita per year, which is lower than the recommended standard by 131 kg (1.7 times). In terms of the consumption of milk and dairy products among 85 subjects of the Russian Federation, the Irkutsk Region occupied the 63rd position. Over the past 3 years, there has been a decrease in the consumption of dairy products by 3.96%.

Consumption of eggs in the Irkutsk region in 2017 amounted to 233 pieces per capita per year, which is lower than the recommended value by 27 pcs (by 10.4%). According to the consumption of eggs among the 85 subjects of the Russian Federation, the Irkutsk region ranked 59th. 2017 price rise, the index over the same period in 2016 were analyzed based on the data of the Russian Federation, the state statistics bodies presented in Figure 3. For comparison, agricultural producers of chicken eggs and the general price index for food products, as well as price indices for industrial products were analyzed for the Irkutsk region. As a result, the disparity of prices was observed in the amount of 13 points between the prices of eggs and gasoline, as well as construction products. It should be noted that disproportions in the pricing of agricultural products and products of other branches of the agro-industrial complex have occurred throughout the history of the 20th century, from collectivization to the agrarian reforms of the 90s.

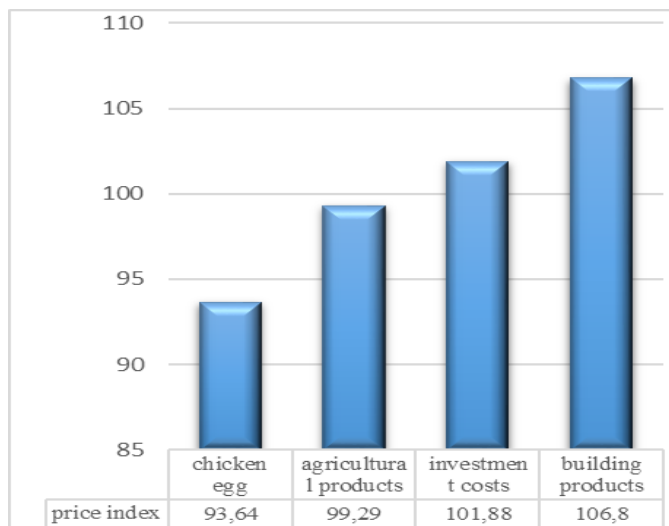


Fig 3 Price index for 2017 to the same period of 2016.

The disparity of prices is a process of imbalance (imbalance, disproportionality) of the ratio of price levels for agricultural products and industry. A characteristic indicator that assesses the dynamics of prices for agricultural products and industrial production is the price parity index ( $I_{pc}$ ). It is calculated by dividing the price index for agricultural products by the average price index for industrial production resources:

$$I_{pc} = \frac{I_{sh}}{I_{prom}} \times 100\% \quad (1)$$

$I_{prom}$

where  $i_{sh}$  - price index for agricultural products;

$I_{prom}$  - price index for industrial production resources for agriculture.

Thus, price parity between the price index of industrial production and the price index for agricultural products was 94.4%, and between the price index for chicken eggs and industrial products 89%.

### III RESULTS

The interests of producers in the field of pricing are not limited to the sale of their own products. For them, the prices of the means of production they acquire are also extremely important: the absolute value of the costs, their correlation with income, and, therefore, the possible profitability of business, depend on it [4, 5].

The main reason for the increased price disparity in agriculture during the formation of market interconnections was the deformation of economic relations between agricultural producers and monopolists supplying agricultural production, as well as processors (distributors) of agricultural products [6]. Elimination of the centralized pricing system for agricultural products and the agro-industrial complex as a whole led to the dominance (monopolism) of the enterprises of the first and third areas of the agro-industrial complex. In this connection, the disparity of prices has increased significantly, which led to a significant drop in income and led to a deterioration of conditions for the implementation of reproduction in the agricultural sector. Under current conditions, there was an urgent need to develop and apply a system of measures to optimize price proportions between prices for agricultural products and prices of other sectors of the economy, in order to ensure a stable profitability of agricultural production, market saturation with agricultural products, raw materials and high value-added products. Thus, the question arises about the role of state regulation of price proportions in the agro-industrial sector and the need for state support for agricultural producers in order to overcome the negative consequences of price disparities and ensure food security. Strengthening the role of the state contributed to the development of the industry and increase production, increasing the export potential of the region.

### IV. CONCLUSION

State policy and the stability of economic legislation have a huge impact on the economic activities of enterprises. It should be noted that the characteristic feature of the Russian legislation is that it should serve as a prerequisite and basis for the normal, effective and stable functioning of the economic mechanism in all conditions. And above all, it should be called upon to ensure external conditions, the order of effective functioning of all components while ensuring the sovereignty of the producer, freedom of entrepreneurship and private property [7].

Scientifically and practically, all of this requires the resolution of many issues, such as:

- Definition of necessary district, allows recovering the reproductive processes in agriculture I equivalent price;
- Determination of sources and amounts of compensation for financial losses of agricultural producers;
- Scientific substantiation and selection of effective forms of compensating financial losses and adjusting the territorial and sectoral differentiation of price support;
- Promoting the formation of competitive and efficient markets for agri-food products;
- Without imposing strict restrictions on the determination of prices for industrial means of production for agriculture, at first to restrain their growth, and then gradually move to price parity.

Consequently, the mechanism of state regulation of prices for agricultural products should help to establish the level of price parity acceptable and sufficient for the realization of the economic interests of the subjects of the agrarian market, ensuring the purchasing power of consumers of agricultural products and equality of parties in the exchange [8]. To solve these problems, it is necessary to take appropriate economic measures:

To increase customs duties on imported food;

To reduce the volume of import quotas, for food gradually, as the volume of own production grows;

It is more efficient to apply economic measures of price regulation on the basis of target, collateral, settlement and parity prices and to conduct constant price monitoring;

To increase direct budget allocations for agriculture at the expense of the funds of the Development Bank and the Stabilization Fund;

To develop state programs for the development of material and technical base in low-profitable and unprofitable agricultural organizations, to restore production in the territory of bankrupt enterprises;

To make wider use of investment tax incentives for the period of implementation and development of capital investments in agricultural production;

Of course, the implementation of these areas of improving the economic mechanism of agricultural management will require a significant change in the existing state public policy in the agricultural sector policy should be aimed at creating conditions for such economic activities of major producers, that they were profitable to increase, raises production. In addition, we believe that to solve the problem of price disparity is impossible without a significant increase in the effective demand of the population. Otherwise, prices for agricultural products will not be able to grow faster than for the means of production and services. In order for demand to grow, a general recovery of the country's economy is needed.

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