## DEVELOPMENT OF THE GRAIN INDUSTRY IN THE URAL REGION IN 1940s – BEGINNING OF 1960s\*

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The grain production occupies a key place in the agricultural development of a state. Bread supplies for the people and raw material supplies for the industry directly depend on the level of the grain production development. Traditionally Ural was considered as one of the most important industrial centres in Russia, nevertheless, this region made considerable contribution into the agricultural development of the state. Grain industry in the Ural region started developing with a fast pace in the beginning of the XX century. However, in the further years a share of grain crops dropped. That could be explained by the growth of urban population and development of suburban economy. If in 1913 a share of cereals amounted to 95, 4% from all crops, in 1928 the number was dropped to 92, 5% and in 1940 to 84, 1%. During the last pre-war year grain crops occupied 12,2 millions hectares in the Urals and a share of the Ural region in grain production made up 9, 6% from grain production in the USSR <sup>1</sup>.

The war brought detrimental effects to the Soviet agriculture. The number of able-bodied peasants was reduced considerably due to the conscription. Therefore, the amount of work assigned for a single able-bodied peasant in the region was bigger than in the rest of the country. Many machinery-tractor stations were shut down due to the war. That negatively influenced a highly mechanized economy of the region. Expansion of crops in the beginning of the war also brought negative affects to the agricultural industry. The Ural region did not have necessary conditions for that, because of this mistake, harvest was not gathered from thousands of hectares and was eventually covered by snow. That is how the losses exceeded the growth.

During the war years, the growth of urban population and lack of food supplies caused rapid changes in the agricultural specialization. There were adopted measures to increase potato, vegetable, milk and meat productions. The process of suburban economy development was going simultaneously with a reduction of kolkhoz (collective farm) sector, which consequently led to the reduction of cereal crops. In 1945 cereal crops in the Ural region were reduced on one third and gross yield of grain dropped on one-half in comparison with 1940<sup>2</sup>. Thus, the level of 1945 became the starting point from which the post-war agricultural reconstruction had begun.

During the first post-war years, poor situation around food supplies dictated the adoption of urgent measures to increase the grain production. In 1946 the Council of Ministers of the USSR adopted a decree "On expansion of areas under crops and increase of level of grain yield, especially of spring wheat in the Eastern parts of the USSR" <sup>3</sup>. This decree was aimed at the expansion of the areas under crops in kolkhozes and sovkhozes (Soviet farms) in Kazakhstan, Siberia and Urals to 8 million hectares, among them the areas under grain crops to 6,5 million hectares. As a result, the growth of agricultural production had been achieving through the extensive methods mainly: through the reconstruction and expansion of the areas under crops. Large-scale territories and absence of well-developed agricultural industry made this way of agricultural development as a main one. Cereal crops were reconstructed relatively fast. At the same time, the whole structure of cereal crops had been changed: a

share of wheat grew twice, the areas under buckwheat, barley, leguminous plants remained the same, and the areas under rye were reduced.

The task to increase the level of grain yield became a problem for agriculture. It had been achieving through improvement of agricultural techniques. Special attention was paid to the reconstruction of rotation of crops, expansion of crops of perennial plants, introduction of fallow and fertilizers. However, the process of increase of grain yield was developing slowly. The drought of spring – summer 1946, which was spread on considerable part of the USSR territory including the Ural region, became disastrous to agriculture. Large areas under cereals died. The level of crop in 1946 was lower than in 1945 in all districts of the Ural region except Perm oblast. However, in the other regions of the Soviet Union, the situation was even worse, because of that, a share of Ural bread in the Soviet Union food supply grew.

The next three years in the Urals were unsuccessful. The yields of grain were fluctuating. The situation had been improved by 1950; it was a good year for the grain production. That allowed achieving an increase in gross yield of grain. In comparison with 1945, it increased twice. The results of gross yield of grain were higher in the Ural region than in the RSFSR or USSR in total. Collective farms played a decisive role in grain production. A share of the other categories of holdings made up only 13, 6 % on average during the five year plan period 4.

However, after the successful 1950, the growth of agricultural production stopped and even reduced in the Ural region. The yield of grain decreased considerably. The reasons could be explained by the problems accumulated in the agricultural sector. By the beginning of 1950s, the advantages of agricultural growth connected with its reconstruction had exhausted themselves. That is why in 1953 several measures aimed at the growth of agricultural sector of economy were adopted. The capital investments increased, the new purchase prices on many kinds of production were introduced, the tax system became more efficient, the material incentives aimed at better productivity and planning were improved.

One of the urgent measures targeted to overcome the sluggishness of the agricultural branch was a development of the virgin and long unused lands. It started according to the decision of the February-March 1954 plenum of the CPSU Central Committee <sup>5</sup>. The USSR in general and the Ural region in particular obtained large scale unused land masses suitable for agriculture. Due to cultivation of these lands, the crop scale in Ural grew on 1, 4 times. The growth was achieved at the expense of cereals and especially fodder crops. The cultivated virgin lands were located mainly in the droughty areas and required a new system of agriculture. Unfortunately, serious mistakes were made in agro-technology. The monoculture of wheat was introduced in the virgin lands, at the same time perennial plants were ploughed in, the pure fallows were reduced, and fertilizers were used to a small extent. Because of that the lands were weeded, and became more vulnerable to the wind and water erosion. A level of cereal crops on the virgin lands territories remained low.

In 1950s, the structure of cereal crops was changed. A share of spring wheat started growing rapidly, mostly at the expense of virgin lands in Southern Ural. In 1960, spring wheat made up more than half of all cereal crops in the Ural region. The areas under fodder grain cultures such as barley and oats were expanded in Sverdlovsk oblast. That should have satisfied a demand of animal-breeding industry in the high-calorie food.

Assimilation of the new lands played an important role in the growth of grain production. The scholars use different methods to study the laws of gross yields. One of the most popular methods is a method for finding a mean. The data of gross yield shows that in years of the fifth five-year plan an average annual yield of grain amounted to 8, 5 million of tons and in time of the sixth five-year plan it made up 12, 2 million of tons. That allowed to increase procurements of Ural grain from 3,5 million of tons to 4,9 million of tons <sup>6</sup>. Growth was provided at the expense of the Southern-Ural districts, especially Orenburg oblast. A scale of grain production in regions with poor earth (nechernozemye) changed insignificantly. Grain production in Perm oblast was reduced due to the development of suburban economy. It is worth to notice that the growth of grain production in the state scale was a little lower than in the Ural region.

On the verge of 1950-1960, the Ural agriculture had been going through certain difficulties. They were triggered by the reduction of capital investments into the agricultural branch; reorganization of Machinery-tractor stations (because of that the level of exploitation and maintenance of machinery which had been achieved in the previous years was lowered); total introduction of tilling between rows system, which led to tilling of meadows and pastures. The fallow system was liquidated that brought considerable damage to grain production, especially in the regions with low humidity.

The policy oriented to the change of the structure of crops was short-sided as well. Maize was forced to be planted everywhere. It was planted even in the regions the natural conditions of which were not suitable for maize at all. That is why the productivity of grain crops decreased. The numbers show the following tendency: in the years of the forth five year plan productivity of crops in the Ural region was averaged to 6, 2 quintals from one hectare (in the USSR – 6, 7 quintals from one hectare); in the years of the fifth five year plan it averaged to 6, 7 quintals from one hectare in the Ural region (in the USSR – 8 quintals from one hectare); sixth five year plan it was 9 quintals from one hectare in Ural (in the USSR – 10, 1 quintals from one hectare); seventh five year plan it made up 8, 9 quintals from one hectare in Ural (in the USSR – 10, 2 quintals from one hectare). Decrease of productivity of crops in the Ural region in the first half of 1960s caused deceleration of rates of grain production, despite considerable increase of areas under crops. Both productivity of crops and gross yield of grain were very unstable and fluctuated each year because of high dependency on the weather conditions. For example in 1965 the gross yield of grain was on 27,9% (4 million of tons) lesser than in the previous year <sup>7</sup>.

One of the methods of analysis of dynamics of grain production is a method that reveals annual average sizes of growth and annual average rates of growth for the different periods. The calculations show that during the years of forth and sixth five year plans gross yield of grain increased in average and in the fifth and seventh five year plans it reduced. For the forth five year plan years the annual average rate made up 23, 0% and for the sixth one – 25, for the fifth – 1% and for the seventh – 5%. The influence of the areas under crops and productivity of crops to the changes of gross yield could be determined through division of the absolute growth on different factors. For example, in 1946, 4196,6 thousands of tons were gathered from 8151 thousands of hectares in the Urals, an average productivity was 5,15 quintals from one hectare. In 1965 10372,1 thousands of tons were gathered from 14448,1 thousands of hectares and an average productivity of crops equaled to 7,18 quintals from one hectare. That means that the growth at the expense of the areas under crops expansion made up 3243 thousands of tons and the growth at the expense of productivity of crops was 2933 thousands of tons. The influence of these factors could be shown in percents as well: In general growth

of the gross yield on 6176 thousands of tons an expansion of the areas under crops made up 52,5% and increase of productivity of crops made up 47,5%. Thus, the calculations prove that the role of the intensive and extensive factors in growth of grain production in the Ural region was almost the same with insignificantly bigger influence of the extensive factors <sup>8</sup>.

A question of the social structure of grain production deserves a special attention as well. Kolkhozes (collective farms) were the major producers of grain in the Ural region in the first post-war decade. A share of the other categories of holdings such as subsidiary holdings of industrial enterprises, Sovkhozes (Soviet farms), individual holdings of population made up less than 15%. A role of kolkhozes decreased in the second half of 1950s due to the rapid development of Sovkhoz sector. Assimilation of the virgin lands and mass transformation of kolkhozes to sovkhozes caused growth of grain production on more than ten times. Thus, a gap between kolkhoz and state sector productions became much narrower. Grain crops in individual holdings of peasants and in the gardens of blue-color and white-color workers almost disappeared. The reorganization of the forms of agricultural production conducted in 1950s – 1960s as well as the fluctuations of harvest made it very difficult to reveal the general laws of crops. That is why the best method, which could be used to achieve this goal, is a method of sliding mean.

To use this method, the most abrupt fluctuations, caused by the weather conditions, should be excluded. The main point of this method is that real data for each year should be substituted to an average data calculated from several real adjacent levels. The starting point of calculation should be placed in the middle of each period. The periods for the complete dynamic row should be of the same length. They should slide gradually down on one period from the first row. While using this method, real data is leveling and that is how the general tendency reveals. Accuracy of such mean numbers depends on the length of the sliding period and fluctuations of the examined symptom or from the length of the fluctuation period. If we use sliding mean method to analyze five year plans cycles we can notice a tendency of gross yield of grain increase in the Ural region in the first post-war years. Then, the following cycles could be singled out: 1951—1955, 1957—1961, 1960—1964, 1961—1965. These cycles show that the post-war tendency was broken. At the same time, sliding mean that analyses ten-year cycles proves that gross yield of grain in the Urals was constantly growing with different pace.

Analysis of dynamics proves that more than three quarters of Ural grain was produced in Sothern Ural. In 1946—1965 Orenburg oblast harvested most of grain; 48,7 million of tons were gathered in this oblast, which made up 24,6% of gross yield of grain in the Urals. The next place after Orenburg oblast could be split between Bashkiria, Kurgan oblast, Chelyabinsk oblast, Perm oblast, Sverdlovsk oblast and Udmurtia. During those years 198,2 million of tons of grain were harvested in the Ural region, which made up 9,8% from the all-state grain production. Approximately, the same share of Ural grain was presented in procurements. In 1951-1965 the Ural region gave 69,7 million of tons of grain to the state which made up 10,4% of grain procurements and purchases. That is a very impressive number, considering that only 6,8% of the Soviet Union agricultural population lived in the Ural region. Calculations per capita show that the Ural region produced grain 1,3 times more than the RSFSR and 1,6 times more than the USSR. The Ural region not only supplied itself with grain, but also gave part of the grain production to the Soviet Union fund <sup>9</sup>. Mainly these results were achieved at the expense of Orenburg oblast and Bashkiria – main granaries of the region. The scale of grain production in the territories with poor lands grew inconsiderably.

Documents from the archives and publications allow concluding that agriculture in the Ural economic district in 1940s - beginning of 1960s went through several stages. During the war years the production dropped, the first eight post-war years could be characterized as gradual development of agricultural production, in the second half of 1950s, agricultural production grew rapidly and in the beginning of 1960, it went to depression. Despite of the growth of grain production, the role of the Ural region in the formation of the Soviet Union food supply fund decreased. Grain became the only exception form this tendency though. Ural provided 9,1% of grain to the Soviet Union food supply fund in the time of the forth five year plan, 9,6% in the years of fifth five year plan, 10% in the sixth, and 10,1% in the seventh one. That definitely enhanced the bread supply fund of the country. At the same time, Ural agriculture was not diverse and focused primarily on grain production. That short-sided agricultural policy limited the Ural region population in provision with the other categories of food supplies.

## References

- \* During the chronological period considered in this paper the Ural region included: Udmurtskaya Autonomous Soviet Socialist Republic, Bashkirskaya Autonomous Soviet Socialist Republic, Kurgan oblast, Orenburg oblast, Perm oblast, Sverdlovsk oblast and Chelyabinsk oblast.
  - 1. Russian State Archive of Economics (hereafter RGAE), fond 1562, opis 324, delo 5295 lists 1, 57, 69-74 (hereafter f., op., d., l.)
  - 2. Ibid. d. 5296, l. 59-66.
  - 3. Resheniya partii i pravitelstva po khozaystvennim voprosam. Vol. 3, Moscow, 1968. P., 368.
  - 4. RGAE, f. 1562, op. 324, d. 5295, l. 1, 69-75; d. 5296, l. 1, 59-66.
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  - 6. RGAE, f. 1562, op. 324. d. 5302, l. 58, 70-76; d. 5304, l. 58, 70-76; d. 5520, l. 59,71-77; d. 5916, l. 59, 73-79; d. 6176. l. 22, 58-63; d. 6437, l. 58-64.
  - 7. Ibid. f. 1562, op. 37, d. 1364, l. 1, 63, 75-81
  - 8. Ibid. f. 1562, op. 37, d. 1364, l. 63, 75-81; op. 44, d. 1497, l. 70,83-89.
  - 9. Naselenie SSSR (Chislennost, sostav I dvizhenie naseleniya). 1973. Moscow, 1974, P. 16-17; RGAE, f. 1562, op. 324, d. 6437, l. 1, 2, 58-64.

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