FORMATION OF HUMAN RESOURCES POLICY AND LABOR POTENTIAL OF THE MELIORATIVE INDUSTRY OF THE AGRICULTURAL INDUSTRY OF THE RUSSIAN FEDERATION

Dr. Prof. Alexandra Ugryumova [1]
Assoc. Prof. Mikhail Zamakhovski [2]
Assoc. Prof. Lyudmila Pautova [3]
Assoc. Prof. Denis Olgarenko [4]
[1] Plekhanov Russian University of Economics, Russia
[2, 3, 4] Federal State Research Institution All-Russia Scientific and Research Institute for Irrigation and Farming Water Supply Systems "Raduga", Russia

ABSTRACT

Scientifically substantiated personnel industry policy contributes to the implementation of an innovative development scenario, provides better results with reduced production costs, which determines the relevance of the studying. The main goal of the work was to identify factors and indicators which have a regulatory influence on the state and development of the personnel potential of the industry. Diagnostics of the labor potential of land reclamation by federal districts revealed leaders and outsiders of sectoral development. The studying made it possible to justify the steady trend of the shortage of reclamation personnel in comparison with the calculated indicators. Objective and subjective reasons and factors that hinder the effective use of the industry's personnel potential are distinguished. The concept of industry's labor potential is clarified. The studying of changes in labor productivity in agriculture has confirmed a twofold increase in this indicator for the period from 2014 to 2018. Methodological approaches to the indicators of assessing the labor potential of the reclamation industry are substantiated. The groups of socio-economic indicators of the reclamation industry's effectiveness are identified. The methodology for determining the quantitative characteristics of labor potential on irrigated lands is specified, which is depended on the area of irrigated lands. The labor potential of the reclamation industry in terms of staffing the industry is studied. The main positive and negative trends of the personnel policy and the labor potential's formation of the agro-industrial complex's reclamation sector of the Russian Federation are specified, the industry personnel policy is assessed as passive, which does not allow predicting the needs for industry personnel, evaluate staff activities and analyze personnel problems. Highlighted characteristic trends in personnel potential in the federal district and regions of the Russian Federation allow: to develop unified approaches to manage this industry development factor; to develop recommendations to improve the efficiency of advanced training and retraining of personnel in irrigated agriculture. The implementation of the recommendations will contribute to increasing the efficiency of managing the human potential's process of irrigated agriculture at the level of federal, regional

and municipal authorities of the reclamation sector of the agro-industrial complex of Russia.

Keywords: *labor potential, national qualification structure, increasing competitiveness, high-tech jobs, investment in agricultural education*

INTRODUCTION

The most important regulatory factor determining the vector of the personnel policy's development of the Department of Land Reclamation of the Russian Federation is the official documents of the Russian Federation, which are focused on the formation of the personnel potential of the country. In the concept of long-term socio-economic development of the Russian Federation for the period until 2020 (it was approved by the order of the Government of the Russian Federation on November 17th, 2008 No.1662p) was noted that "the formation of a national qualification structure should take into account the long-term requirements for the accelerated development of an innovative economy and professional mobility of citizens, updating state educational standards and modernizing training programs at all levels on the basis of qualification requirements of the NQF (national qualification system)"[1]. Thus, in this directive document, the importance of the quality of personnel policy is most closely linked to three the most important areas: the prospects for innovative development of the national economy of the Russian Federation, professional mobility and the restructuring of the system of qualification requirements for employees in the new conditions of the country's socio-economic development [2].

METHODS AND METHODOLOGY

The authors used a system analysis, which made it possible to comprehensively identify the objective and subjective factors in the formation of the personnel potential of the industry, the positive and negative trends in personnel management in the industry. The authors used such research methods as logical, situational and statistical. The experimental base of the studying is federal state budgetary institutions (FSBI) in the amount of 52 pieces out of 85 pieces, which are subordinate to the Department of Land Reclamation of the Ministry of Agriculture of the Russian Federation by federal districts (1 - Central Federal District; 2 - North-Western Federal District; 3 - Southern Federal District; 4 - Volga Federal District; 5 - North Caucasian Federal District; 6 - Ural Federal District; 7 - Siberian Federal District; 8 - Far Eastern Federal District) for the period 2014-2017.

RESULTS AND DISCUSSION

The formation and development of the personnel policy of the Department is strongly influenced by the real conditions, which are prevailing in the current state of the industry. The decrease in the proportion of reclaimed land has a direct effect on the quantitative size of industry personnel. According to the order of the Government of the Russian Federation, which is dated by 01.10.2005 No.1564-r "On approval of the Federal target program "Preservation and restoration of soil fertility of agricultural lands and agrolandscapes as Russia's national heritage for

2006-2010", the area of reclaimed agricultural land decreased from 11.5 million hectares in 1990 to 9.1 million hectares in 2012, including the area of irrigated agricultural land reduced to 4.3 million hectares, and drained to 4.8 million hectares respectively.

According to the provisions of the Food Security Doctrine of the Russian Federation, which is approved by Decree of the President of the Russian Federation on January 30th, 2010 No.120, and the Concept of Socio-Economic Development of the Russian Federation for the period until 2020, which is approved by order of the Government of the Russian Federation on November 17th, 2008 No.1662p, the main objectives of the development of the modern land reclamation complex of the Russian Federation are improving the competitiveness, profitability and sustainability of agricultural production funds integrated land reclamation under conditions of climate change and natural anomalies due to the reconstruction and construction of land reclamation systems on an innovative technological basis and the efficient use of natural resources. All of the indicated directions for the development of land reclamation in the Russian Federation require a close analysis of the reasons that cause a decrease in the potential of the land reclamation complex of the country.

The objective reasons, which are caused a decrease in reclaimed land and, as a consequence, a decrease in the need for specialized personnel can be attributed to the transfer of reclaimed land to non-reclaimed land on the basis of write-off of reclamation systems and hydraulic structures due to depreciation (in some constituent entities of the Russian Federation, the wear of irrigation systems reaches 90%), as a result of accidents of various nature, in connection with the loss of the source of irrigation, etc. [3] The destructive factor in the development of land reclamation in the country is also the high cost of irrigation equipment and the significant payback period; problems of coordination with various inspection and control organisations, as well as a lack of qualified workers who can service highly productive and complex reclamation systems.

The most negative trend in the personnel potential of the Department of Land Reclamation is decreasing in the actual number of personnel compared to the necessary (scientifically based) number. This trend is confirmed by the results of the studying of the personnel structure of the FSBI of the Department of Land Reclamation in the context of federal districts for 2014-2017. The data made it possible to calculate regional deficits/surpluses of staffing (Table 1).

Table 1. - Assessment of staffing of the Department of Land Reclamation in the Federal District of the Russian Federation for 2014-2017, people

Federal District of the Russian Federation	Deficit/surplus of staffing in total, people				FD deficiency rank 2017
	2014г.	2015г.	2016г.	2017г.	
Central Federal District	-679	-679	-643	-676	4
North-Western Federal District	-31	-219	-32	-269	5
Southern Federal District	-2636	-2014	-2268	-3571	1
Volga Federal District	-175	-1291	-4947	-1418	3
North Caucasian Federal District	-2015	-73	-739	-2076	2
Ural Federal District	-18	7	-22	-24	7
Siberian Federal District	-111	-111	-159	-199	6
Far Eastern Federal District	-40	-31	-30	8	8

Source: compiled by the authors

It can be determined that the first three places in terms of the personnel's deficit are occupied by the Southern Federal District, North-Western Federal District and the Volga Federal District, it's based on the results of the data (Table 1). The greatest staffing is demonstrated by the Far Eastern Federal District, the Ural Federal District and the Siberian Federal District. Objective factors which are worsening the personnel potential's state of the industry include the negative dynamics of investments in agricultural education, are presented in (Fig. 1). According to the research of A. Kozlov, the amount of investments in agricultural education in the total share of budgetary investments in agriculture during the period of market reforms has decreased about two times in the country.

Subjective reasons which are affect the Russian Federation reclaimed fund include local acts of local and regional administrations that apply the legal hatches available in Russian law to transfer reclaimed land to the category of rainfed land or even non-agricultural land.

The most important task facing the Ministry of Agriculture of the Russian Federation and the Department of Land Reclamation is the formation of legal and regulatory conditions for the integrated development of land reclamation and the efficient using of its facilities. Such a way, issues which are related to the implementation of a long-term personnel policy aimed at solving the tasks outlined come first [4], [5].

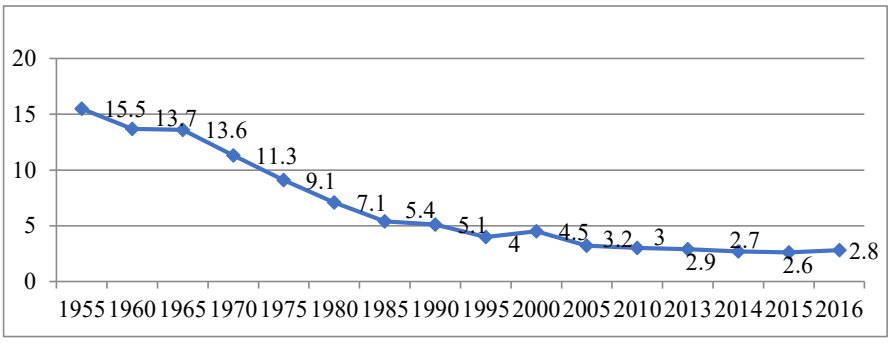

Fig. 1 - Dynamics of investments in agricultural education, in % of total budget investments in agriculture

Source: [6].

In modern conditions, the creation and development of the personnel potential of the industry is influenced by a number of factors that are drivers of the development of the industry. They can rightfully include:

- reduction of the share of state property of the Russian Federation in the total volume of reclamation systems and hydraulic structures, and, consequently, an increasing of a number and significance of personnel serving private reclamation systems;
- implementation of investment projects by private agricultural producers related to the construction (reconstruction, modernisation) of reclamation facilities, which can provide the parallel creation of high-tech jobs;
- preservation of existing and creation by 2020 of 92.89 thousand new high-tech jobs for agricultural producers in the operation of reclamation systems, hydraulic structures and reclaimed agricultural land [7], which definitely puts forward the tasks of training, retraining and advanced training of reclamation personnel, clarification of the list of necessary competencies, processing of state educational standards and training programs (in accordance with modern requirements), adaptation of the qualification characteristics of specialists of land reclamation systems to the requirements of the national qualification system and the technological cycle;
- implementation of work to restore and improve the efficiency of land reclamation systems, which determines the need for the formation of a scientifically-based list of competencies for personnel serving these systems.

The implementation of the personnel policy of the Department of Land Reclamation has distinctive features from the personnel policy of the Ministry of Agriculture of the Russian Federation as a whole, while maintaining the orientation of the main vectors of sectoral development. These features are in the following indicators:

- smaller specific weight of the reclaimed land compared with the total number of arable lands, which affects the number of specialists needed to service the reclaimed land;
- connection with the seasonal employment of land reclamation workers and the frequent combination of functional duties in the field of rainfed farming; there is a need to obtain combined competencies to ensure maximum labor mobility for these workers;
- due to the existing differentiation of reclamation areas into irrigated and drained lands, the formation of specialized competencies of workers serving cultivated areas in various conditions is required.

At the same time, the implementation of the personnel policy of the Department of Land Reclamation reflects some common features of a similar policy of the Ministry of Agriculture. In particular, such factors as:

- lower average indicators of the level of remuneration of agricultural workers, compared with other industries, which reduces motivational incentives for workers in the industry;
- poor mobility of industry workers, caused by unequal price characteristics for residential real estate in the city and the village, insufficient development of rural infrastructure (primarily the poor quality of the road network), the dominant remoteness of rural workers from educational institutions;
- negative demographic processes characteristic of most regions of the Russian Federation and exacerbated by the outflow of able-bodied youth from rural areas to cities;
- the negative stereotype prevailing in society about the prestige of agricultural labor negatively affects the preservation and replenishment of the personnel potential of the industry.

Thus, based on the analysis of the leading trends in the personnel policy of the Department of Land Reclamation, we will determine the most important directions for its implementation:

- the need for comprehensive reform of the wage system in agriculture and specifically in land reclamation, focused on the formation of a competitive employee in the industry, interested in the results of his work;
- ensuring a close relationship of the necessary competencies of land reclamation workers with the results and remuneration, focused on the formation of a portfolio of competencies for each industry specialty;
- stimulation of infrastructural development of the village, as the basis for consciousness of an attractive place to work and rest;
- implementation of policies that ensure positive demographic shifts in the formation of the rural population;
- the introduction of a differentiated approach to the formation of the labor potential of reclamation specialists in the context of federal districts and regions of the Russian Federation.

The labor potential of an industry should be understood as a synthesis of its three components: the number and structure of people employed in the industry, the qualitative composition and productivity of workers, the quality and size of the managerial potential of the industry. The distribution of employed by the main types of farms can be graphically presented in (Table 2).

Table 2. - The share of crop production in agricultural products in 2018, in actual prices; % of agricultural products

	Farms of all categories	Agricultural organizations	Households	Peasant (farm) enterprises, individual entrepreneurs
Russia	50,2	45,7	48,0	76,9
Central Federal District	48,9	41,5	61,0	84,4
North-Western Federal District	33,6	17,9	74,7	60,1
Southern Federal District	66,2	73,4	42,5	86,3
Volga Federal District	55,9	70,6	41,7	58,8
North Caucasian Federal District	46,6	40,6	46,4	73,9
Ural Federal District	40,1	26,0	52,9	75,2
Siberian Federal District	43,6	40,2	35,5	76,4
Far Eastern Federal District	51,6	54,7	45,9	62,7

Source: gks.ru - the official website of the Federal State Statistics Service

As we can see from (Table. 2), the most significant group is peasant (farm) enterprises and individual entrepreneurs. The creation and stimulation of jobs, in this particular sector, ensures dominant employment and agricultural output [8]. At the same time, the development of large agricultural organizations is characteristic of such federal districts as the Southern Federal District and North Caucasian Federal District, which are associated with the traditional orientation of these territories towards large-scale agricultural production. Let's consider the productivity of labor in the agricultural sector. As the most common indicator, labor productivity is determined as the quotient of the division of gross value added in the industry (in order to exclude double counting) and the average annual number of employees (Table 3).

Table 3 - using of labor resources in agriculture, hunting and forestry for 2014-2018

Indicators	Years					Variation (+, -)	2018 to 2014
	2014	2015	2016	2017	2018		%
Gross value added of the industry at basic prices, billion rubles	2 665,9	2 665,9	2 665,9	3 270,3	3 268,6	30020,1	122,6
The average annual number of workers in the industry, thousand people	6247,0	5418,0	5374,0	5059,3	5 340,0	-907	117,0
Labor productivity, thousand rubles for 1 employee	426,7	426,7	426,7	646,4	612,1	185,4	230,2

Source: gks.ru - the official website of the Federal State Statistics Service

The result, which is obtained for the period 2014-2018 (table. 3), is, in fact, a twofold increasing of labor productivity in the country's agriculture needs certain clarifications and comments.

The growth rate of labor productivity in national agriculture is lower than in market developed countries. So, according to Json & Partners Consulting, labor productivity in Russian agriculture lags behind German productivity by three times, and productivity in our country is 2.5-3 times lower [9].

In our opinion, the real productivity growth will be less, and its objective assessment is hampered by both the specifics of the information collected by Federal State Statistics Service and the industry specifics of the country's agricultural development. In particular, the above calculations should be adjusted for the influence of the following factors:

- a number of people which are employed in the sub-sectors of hunting and forestry should be allocated as a separate group, since it distorts the real estimate of labor productivity of workers directly employed in agriculture of the Russian Federation;
- it is also necessary to divide the workers which are employed directly in agriculture into two sub-sectors that differ in working conditions: crop production and animal husbandry, since employment in crop production has pronounced seasonal character, and animal husbandry is characterized by year-round use of wage labor;
- the tendency to increase the average age of agricultural workers is characteristic not only of the national economy, but also of sectoral employment in the developed countries of the world (over the past thirty years, the average age of an American farmer has grown from

50.5 years to 58.3 years, and the average age of a farmer in Japan is 66 years old [10]);

- the most important factor that has a significant impact on the current rate of labor productivity is the fixed asset retirement rate due to the high degree of depreciation (46.6%) of fixed assets in agriculture. Thus, according to a number of studies, increasing in the drop-out rate by 1% with the update coefficient at the 2007 level reduces the number of employees by 2.1%, a similar increasing in the update rate leads to a decrease in a number of employees by 1.5% [11];
- in addition to the state of fixed assets, the objective trend in the development of scientific and technical progress and the turnover of technological cycles also affect the decreasing in a number of people which are employed in agriculture. Elements of partial and full automation naturally cause a decrease in the using of living labor and, as a result, a reduction in available jobs. According to D. Teplov, today in the world one farmer provides an average of 155 people with products, with the development of digital technologies in agriculture, this figure will increase to 255 [10].

According to published prospective forecasts, the number of people which are employed in agriculture in Russia is excessive, and by 2030 it should be reduced to a level no higher than 3 million people. [12].

All the characteristic features of the labor potential of the agricultural sector noted above must be taken into account during implementing its personnel policy, which provides the most important sectoral resource - the possibility of intensive development. In this regard, the reclamation industry needs a set of measures to assess, maintain and effectively manage labor potential. The presented targets for the personnel policy of the industry must be specified for the specialized conditions of irrigated agriculture.

CONCLUSION

Thus, on the basis of the presented studying, a number of conclusions can be drawn that allow us to formulate the main trends in the personnel policy and the formation of the labor potential of the reclamation industry of the Russian agro-industrial complex. The choice of the final path for the development of the personnel potential of the reclamation industry and the implementation of the personnel policy will largely determine the possibility of the industry itself as a system providing agricultural insurance against adverse climatic conditions.

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