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**METHODOLOGICAL APPROACHES TO THE FORMATION OF THE
MELIORATIVE COMPLEX'S PERSONNEL SUPPORT IN THE RUSSIAN
FEDERAL DISTRICTS**

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ABSTRACT

In the context of reducing the significance of development of irrigated agriculture's extensive factors, first of all, it is necessary to pay attention to the activation of factors providing intensive conditions for development and growth. This factor is the personnel potential of the industry.

It is necessary to know the regulatory, scientific and practical foundations and the current state of the land reclamation industry to determine a more effective methodological approach to the formation of the ameliorative sector of agriculture's personnel potential in Russia.

It is necessary to rely on the scientific, methodological, regulatory and technical documents governing economic mechanisms in agricultural production and water consumption, when forming personnel support in the land reclamation of the agro-industrial complex and the development of relevant regulations,

As a result of the analysis of regulatory, scientific and practical foundations on the issues of methodological approaches to staffing the land reclamation industry, the following conclusions can be drawn:

- regulatory approach in the formation of the ameliorative sector's personnel support involves the area of the reclaimed lands, the volume and complexity of technical and operational, repair works, taking into account the category of ameliorative farms;
- the developed normative-methodical approach allows to determine the necessary personnel composition of line managers, engineering and technical workers, workers of organisations in the amelioration system;
- application of the regulatory approach involves to integrate the requirements of professional industry standards and competency-based approach, contributing to the definition of standards for compliance (non-compliance) of a specialist with the functional requirements of the standard and professional competencies.

According to the results of the study on the formation of personnel support for the melioration sector of the agro-industrial complex of Russia, the following conclusions were made:

- to recommend to the Department of Land Reclamation for the implementation of a regulatory approach in determining the optimal number of personnel subordinate structures;
- in the regions, in order to identify the interdependencies of the proposed standards and indicators of labor productivity, organize and conduct monitoring of the staffing of the ameliorative complex of the AIC of Russia;
- to develop and introduce reference and recommendatory collections of labor standards and calculation of the personnel's number of the land reclamation industry, taking into account professional and competence requirements for a specialist.

Keywords: human resources, land reclamation facilities, reclaimed land, staff standards, personnel structure, staffing of land reclamation industry.

INTRODUCTION

Under the conditions of the implementation of the State program "Development of agriculture and regulation of agricultural products, raw materials and food for 2014-2020" and the Federal Target Program "Development of Land Reclamation in the Russian Federation for 2014-2020" special attention is paid to the studying and identification of personnel problems in the agricultural industry [6].

The importance of addressing personnel issues is emphasised in his speech by First Deputy Minister of Agriculture of the Russian Federation Jambulat Khatuov: "We must combine the efforts of relevant departments and interested departments in order to provide the industry with young professionals in the near future, which will give additional impetus to the development of land reclamation" [5]. Methodical approaches to staffing the land reclamation complex of Russia are legally regulated by the Labor Code of the Russian Federation on December 30th, 2001 No. 197-FL as amended on October 11th, 2018, in which all 16 sections of the code relate to varying degrees to the personnel of the land reclamation industry.

Republican and regional organisations of land reclamation in their activities, in addition to the Labor Code of the Russian Federation, are governed by the Civil Code of the Russian Federation, laws and decrees of the President of the Russian Federation, Decrees of the Government of the Russian Federation, the Ministry of Agriculture of the Russian Federation, regional orders of ministries and committees of agriculture, as well as orders public authorities of the Russian Federation [1], [3].

It is necessary to know the regulatory, scientific and practical foundations and the current state of the land reclamation industry to determine a more effective methodological approach to the formation of personnel potential of the ameliorative sector of agriculture in Russia [2].

It is necessary to rely on the scientific, methodological and regulatory and technical documents governing economic mechanisms in agricultural production and water consumption while forming personnel support in the land reclamation of the agro-industrial complex and the development of relevant regulations [8].

The specifics of building staffing in the land reclamation system are determined by: Decrees of the Ministry of Labor of the Russian Federation, Orders of the Ministry of Health and Social Development of the Russian Federation, Decrees of the State standard of the Russian Federation, National Report on the progress and results of the implementation for 2017 state program of agricultural development and regulation for 2011-2020, professional standards, etc. [9].

It is based on the results of the analysis of scientific and practical publications, developments and regulatory, sectoral regulations, methodological tools for the formation of personnel support for the land reclamation industry are defined, which are schematically presented in (Fig. 1) [4].

It is necessary to identify and take into account the following features in the system of land reclamation in calculating the optimal number of all categories' personnel [15]:

- regional, territorial and climatic conditions for the performance of land reclamation works;
- scope of work on inter-farm land reclamation systems;
- the frequency of scheduled and unscheduled repair and maintenance work, etc.

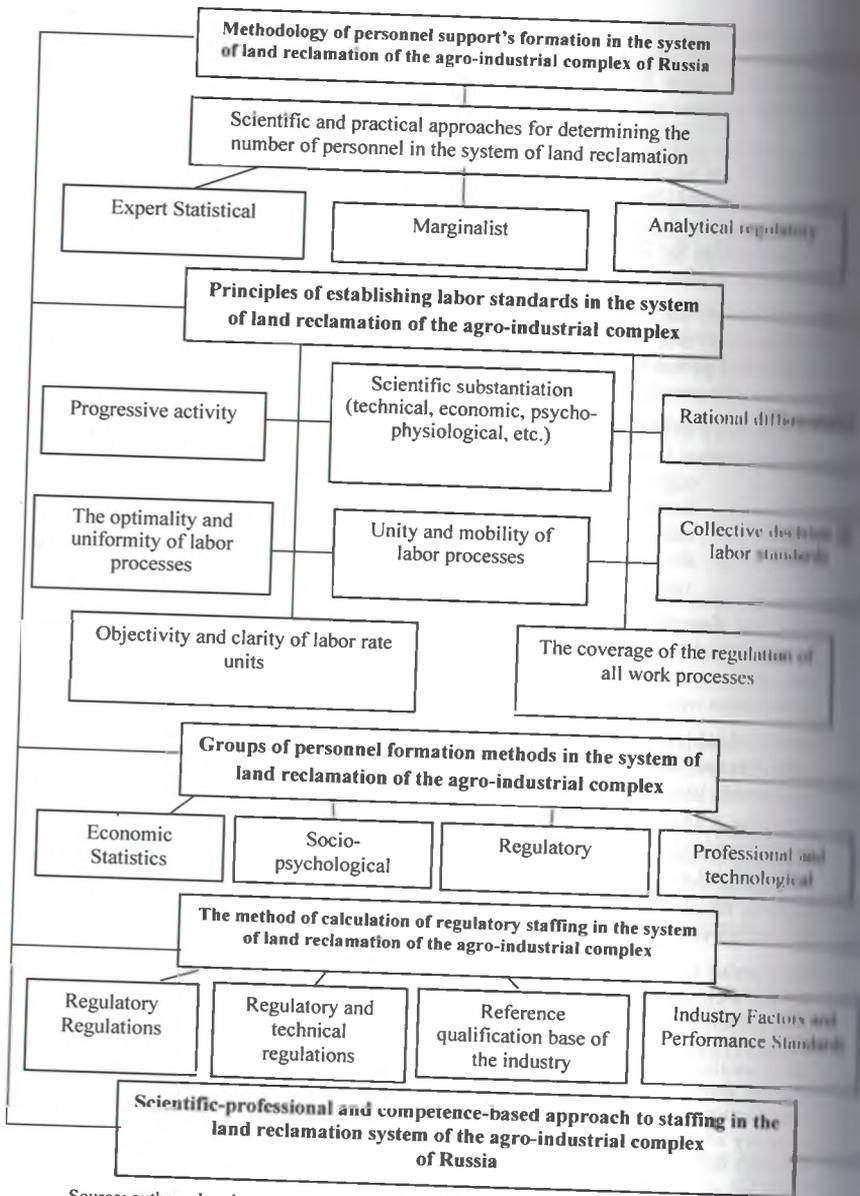
Thus, the formation of personnel potential and the calculation of the number of personnel in the system of amelioration depends on the category of farms, the area of the ameliorated lands which are serviced and the complexity of the repairing and maintenance works [14].

At the federal level, the Department of Land Reclamation of the Ministry of Agriculture of the Russian Federation is engaged in servicing interfarming land reclamation systems that provide irrigation or drainage of agricultural lands.

On January 1st, 2018, there were 9.45 million hectares of reclaimed land in Russia, including irrigated 4.67 million hectares and drained 4.78 million hectares. There are 7.1 million hectares, of which irrigated 3.88 million hectares and drained 3.22 million hectares in agricultural production that require professional qualification staffing for their effective using, processing and commissioning [10].

The number of employees which are serving melioration systems is about 16,0 thousand people, with service personnel reaching 18,5 thousand people. The maximum number of such personnel is in the Southern Federal District (5877 people) and the Volga Federal District (2854 people), the minimum - in the Urals Federal District (155 people).

On the territory of the constituent entities of the Russian Federation, operational organisations which are subordinated to the Department of Land Reclamation of the Ministry of Agriculture of Russia include: federal state budgetary institutions (FGBI) for land reclamation and agricultural water supply, for the operation of hydroelectric facilities, reservoirs and main canals, with branches and operational sites.



Source: authors drawing

Fig. 1. Methodological basis for the formation of personnel potential in the system of land reclamation of the agro-industrial complex of the Russian Federation

Let's consider the structural and functional features of the Federal State Budgetary Institution, which determine the formation of personnel support for the ameliorative complex.

The following basic services in accordance with the functions performed in the Federal State Budgetary Institution "Department of Land Reclamation and Agricultural Water Supply" are organised: administrative and managerial, operation of reclamation systems, water using and cadastre, mechanisation, capital construction and repairing, planning and economic, accounting and legal.

In the departments for the operation of hydroelectric systems of the main canals (Federal state budgetary institution "Management of operation of inter-republican main channels", Federal state budgetary institution "Management of operation of the Greater Stavropol Canal"), we can single out the central management unit (director, deputy director, chief accountant, chief economist, chief mechanic, etc.); line personnel (chief power engineer, leading hydraulic engineer, leading engineer, etc.); production base (head of production base, electrician for repair of power equipment, communications installer, production base workers); mechanical detachments (leading mechanical engineer, drivers, excavator drivers, truck cranes, tractor drivers, etc.) and workshops (turner, carpenter, locksmith, etc.).

We consider it's necessary to apply a regulatory approach to the formation of staffing (considering the identified industry-specific structural and functional features of operating organisations [12]. The main standards for calculating the necessary staffing include:

- serviced area of reclaimed land;
- number of served melioration facilities;
- technical and operational characteristics and functions performed.

In the course of the studying, the authors calculated the staffing standards for workers of line personnel, the number of workers and machine operators for maintenance of inter-farm irrigation and drainage systems.

At the same time, the number of tractor drivers-machinists and the linear composition of workers, which are depending on the volume of service of the reclaimed land, is increasing not in an arithmetic progression, but taking into account conversion factors. So, the area of reclaimed land is 10.0–20.0 thousand hectares and 20.0–30.0 thousand hectares is 0.85; 20.0–40.0 thousand hectares and 40.0–60.0 thousand hectares ratio is 0.8; 60.0–100.0 thousand hectares ratio is 0.75; more than 100.0 thousand hectares coefficient is 0.7.

The authors proposed a regulatory staff of the regional Federal State Budgetary Institution "Department of Land Reclamation and Agricultural Water Supply" depend on the categories of lands which are served. It allows the specific features of these lands take into account when drawing up the staffing table. It should be noted that while creating branches, the staff of line personnel may increase due to the introduction of new staffing units by 20-30%.

Also, for the Federal State Budgetary Institutions "Department of Land Reclamation and Agricultural Water Supply", which have an area of irrigated land from 150 to 250 hectares, the coefficient to the staffing table is introduced 1.2. It is necessary to introduce a coefficient to the staff list equal to 1.4 for Federal State Budgetary

Institutions "Department of Land Reclamation and Agricultural Water Supply", which have a land irrigation area of more than 350 hectares.

This staffing is calculated without taking into account the office of the branch, which includes the branch head, deputy and accountant.

It is necessary to determine the appropriate number of engineering and technical workers in order to ensure the efficient operation and maintenance of reclaimed land on an area of 7.1 million hectares and working professionals. The data of the calculation are presented in (Table 1) [11].

Table 1
Calculations of the number of specialists in the maintenance of reclaimed land

Specialist	Unit measuring	For irrigated lands (3.88 million hectares)	For drained lands (3.22 million hectares)
Chief engineer	people	1550	1100
Senior engineer	people	1950	1290
Engineer	people	7760	4030
Technician	people	8620	3220
Total of engineering and technical workers	people	19880	9640
Workers specialists	people	19400	12880
Total	people	39280	22520
Total irrigation + drainage	people	61800	

Source: Olgarenko G.V., Bulgakov V.I., Zakharova E.S. Report of the Federal State Research Institution All-Russia Scientific and Research Institute for Irrigation and Farming Water Supply Systems "Raduga" on the topic of the researches: Staff standard for workers in the land reclamation sector for regional Federal State Budgetary Institutions "Department of Land Reclamation and Agricultural Water Supply", pp.33,2014

Thus, on the basis of the calculation data of the standard number of personnel for different ameliorative objects, it was determined that to ensure and improve agricultural efficiency, respect for the environmental safety of reclaimed land, the number of engineers and technical workers, except of administrative and managerial staff, should be within 62.0 – 65.0 thousand people, and engineering and technical workers - 10.0-20.0 thousand people. The annual replenishment and renewal of personnel, in all regional Federal State Budgetary Institutions should be from 8.9 thousand to 9.1 thousand people, including engineers and technical workers 1.5-2.9 thousand people.

Let's note that according to the Department of Land Reclamation of the Ministry of Agriculture of the Russian Federation in 2017, the actual number of administrative and managerial staff, engineers and workers in 70 Federal State Budgetary Institutions "Department of Land Reclamation and Agricultural Water Supply", 1 Federal state budgetary institution "Management of operation of inter-republican main channels" and 1 Federal state budgetary institution "Management of operation of the Greater Stavropol Canal" was respectively 1025, 2272 and 6660 people, a total of 9957 people.

The application of the regulatory approach to the formation of staffing in the melioration complex of the Russian agro-industrial complex provides the possibility of introducing a system of labor rationing for specialists to grow, ensuring a more rational and efficient using of labor resources [7]. We offer the main standards include:

- serviced area of reclaimed land;
- number of served melioration facilities;
- technical and operational characteristics and functions performed.

CONCLUSION

The following conclusions can be drawn which are based on the results of the analysis of regulatory, scientific and practical foundations on the issues of methodological approaches to staffing the land reclamation industry [13]:

- regulatory approach in the formation of personnel support of the ameliorative sector involves taking into account the category of ameliorative farms, the area of the reclaimed lands which are serviced, the volume and complexity of technical and operational, repair work;
- the developed normative-methodical approach allows to determine the necessary personnel composition of line managers, engineering and technical workers, workers of organisations' specialists in the system of land reclamation;
- application of the regulatory approach involves the integration with the requirements of professional industry standards and competence-based approach, contributing to the definition of standards for compliance (non-compliance) of a specialist with the functional requirements of the standard and professional competencies.

According to the results of the studying of the formation of personnel support for the ameliorative sector of the agricultural sector of the Russian Federation, we consider it necessary to identify measures to improve the system of effective personnel support for the industry:

- to recommend to the Department of Land Reclamation for the implementation of a regulatory approach in determining the optimal number of personnel subordinate structures;
- in the regions, in order to identify the interdependencies of the proposed standards and indicators of labor productivity, organize and conduct monitoring of the staffing of the ameliorative complex of the agro-industrial complex of Russia;
- to develop and introduce reference and recommendatory collections on labor standards and calculation of the number of personnel of the land reclamation industry, taking into account professional and competence requirements for a specialist.

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