

MTSDT 2019

Modern Tools for Sustainable Development of Territories. Special Topic: Project Management in the Regions of Russia

METHODOLOGICAL APPROACHES IN IMPROVING HUMAN RESOURCES POTENTIAL OF AGRO-INDUSTRIAL COMPLEX

A. M. Kozina (a), L. P. Semkiv (b)*, N. I. Grishakina (c)

*Corresponding author

(a) Yaroslav-the-Wise Novgorod State University, ul. B. St. Peterburgskaya, 41, Veliky Novgorod, Russia,
Anna.Kozina@novsu.ru

(b) Yaroslav-the-Wise Novgorod State University, ul. B. St. Peterburgskaya, 41, Veliky Novgorod, Russia,
Lidiya.Semkiv@novsu.ru

(c) Yaroslav-the-Wise Novgorod State University, ul. B. St. Peterburgskaya, 41, Veliky Novgorod, Russia,
Nadezhda.Grishakina@novsu.ru

Abstract

An important component of a dynamically developing agricultural production is its personnel potential, which depends on the professionalism of managers. It should be noted that the number and quality of agricultural specialists is reduced, their rotation is violated at all levels of management. There is an acute shortage of highly qualified managerial personnel, and there is a natural aging of specialists. A paradoxical situation arises when, on the one hand, the sustainable development of the agro-industrial complex is possible only through the introduction of innovations, and on the other hand, the possibilities of introducing innovations are hindered by the lack of managers who are familiar with modern methods of innovation management. To solve the existing problem, it is necessary to form a professionally competent approach in providing the agricultural sector with new generation personnel. To increase the effectiveness of human resources, it is necessary to be familiar with the methodology for its assessment and, in each case, determine the main directions for its improvement. It should be based on the methodological position that without the presence of a team staffed by specialists, agricultural production cannot be effective and competitive. Highly skilled personnel, as shown by the practice of advanced agricultural organizations, have 5 to 10 times greater labor productivity than those who work intuitively. The article clarifies the concept of personnel potential, sets out methodological approaches to its assessment and discusses issues of improving the staffing of the agricultural sector in modern conditions and for the future.

© 2019 Published by Future Academy www.FutureAcademy.org.UK

Keywords: Agro-industrial complex, innovations, staff potential.



This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 Unported License, permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

1. Introduction

Many researchers (Shaitan & Medvedev, 2017; Kuznetsova, Kolevid, Kostyaev, Nikonova, & Akhmetyanova, 2019; Henke, Schmitt, & Theuvsen, 2012; Bolman & Deal, 2017; Huang, 2019; Djedovic, Karabegovic, Avdagic, & Omanovic, 2018) confirmed that the fundamental factor that provides the necessary level of competitiveness of the enterprise is the personnel potential. Of course, this is the leading, but not the only activator of achieving competitive advantages. The world practice of developing agribusiness sectors shows that in the context of high technology, human resources are the main strategic resource for the development of an enterprise, industry, territory, capable of solving the long-term problems of sustainable development, economic growth, security and competitiveness of the real sector of the economy. This is due to the deep qualitative transformations in the process of changing technological patterns that cause dramatic social changes, in particular, the strengthening of the role of human capital in all areas of modern life.

In domestic and foreign literature there is no generally accepted concept of personnel potential, which complicates the objective assessment and development of measures for its development. Many authors consider human resources as knowledge, skills and abilities of the organization's personnel. In their opinion, personnel potential is a combination of personal characteristics of personnel, their special knowledge, qualifications and experience, as well as potential opportunities that can be activated in the course of labor activity and used by an organization to achieve its goals (Yakushkin & Safiullof, 2017).

According to Kozlov (2015), the personnel potential depends on the education of workers, their professional competence, contribution to the results of production activities, age, state of health, adaptability to changes in working conditions, and the ability to perform assigned work. Each of the formulations has the right to exist, in each of them the emphasis is placed on one or more of the most important, from the point of view of their authors, characteristics of human resources.

The key factor in increasing the efficiency and competitiveness of the agro-industrial complex in the conditions of innovative development is the formation of human resources to solve modern problems facing the industry. It is well known that in all developed countries of the world, funds allocated for labor remuneration are among the highest in the structure of production costs and are equated with the cost items for the reproduction of fixed and working capital. This circumstance makes it necessary to highly value skilled labor and apply the austerity of living labor. This, in turn, requires high qualifications, increased motivation and responsibility of personnel.

2. Problem Statement

To consider methodological approaches to assessing the personnel potential of the agro-industrial complex based on the results of statistical analysis and assessment of respondents.

To study and summarize the dynamics of statistics on the availability of industry personnel.

3. Research Questions

3.1. What is the personnel potential?

3.2. What are the tasks of improving personnel work at agricultural enterprises?

- 3.3. Based on a study of the trends and strategic development of the agro-industrial complex, to assess the personnel potential of the agro-industrial complex and offer recommendations for improving its quality.

4. Purpose of the Study

To study and summarize the statistics on the staffing of the agro-industrial complex and propose measures for the further development of the staffing potential of the region and improving its quality.

5. Research Methods

In the work, methods of monographic, systemic and comparative analysis, as well as a logical approach, were used.

6. Findings

The problem of staffing the agricultural sector is one of the most important, since in general the development of market relations of the agricultural sector of the region depends on the management efficiency, changes in the structure and location of agricultural production, and the use of innovative technologies (Nikiforov & Semkiv, 2010). To solve the existing problem, it is necessary to create and organize a professionally competent approach in providing the region's industry with new generation personnel, since their insufficient qualification is in many cases the main obstacle to the transition to a new technical and technological system, the introduction of innovations in agricultural production and the implementation of innovative projects (Kozina & Semkiv, 2016). In this regard, research is needed on a wide range of problems that have arisen while ensuring the personnel potential of the agro-industrial complex.

We believe that the pace and results of agricultural production would be much higher if investments in personnel, reproduction of the personnel potential of agricultural workers, and the regional educational complex increased.

The basis for the further development of the agricultural sector should be a quality education that meets the highest requirements for modern production. Currently, the country's competitiveness is determined by the level of education and science, and the competitiveness of university graduates in the labor market is implemented through the knowledge, skills and abilities formed in the university at previous stages of life.

The new conditions for the work of universities are determined by the Law "On Education in the Russian Federation": requirements for the competitiveness of higher education have increased, the system for evaluating the effectiveness of universities has become more complicated. Higher education switched to a two-level training "bachelor-master". The modernization carried out in education is designed to alleviate the acuteness of the problem of staffing the industry. On the agenda today is improving the quality of education and its effective organization: first of all, a significant increase in the level of educational and methodological work, strengthening the material and technical bases of universities. The

modern educational paradigm defines the goal of education as the development of the individual, the creation of conditions for his (her) self-realization in the interests of the individual, society and the state.

The availability of personnel in agricultural production in the Novgorod region at present amounted to 95.3%. The formation of human resources depends on the current demographic situation in the countryside. Over the years of agrarian transformations, it has significantly deteriorated. The processes of aging highly qualified personnel and the outflow of young specialists are ongoing, the technical equipment of the agricultural sector is going on slowly, the prestige of agricultural professions is falling.

The calculation of the saturation coefficient is the most important condition for establishing the optimal ratio of specialists of higher and secondary qualifications, determining rational proportions in the qualification structure. In agriculture, it is 48 highly qualified specialists per 100 secondary specialists. The effectiveness of production activities depends to a greater extent on how purposefully the selection, placement, adaptation, promotion of personnel is carried out.

The development of the promotion system should meet the needs of both the enterprise and the individual employee, ensure long-term and ongoing planning of the promotion, link it with plans for the training and retraining of specialists. When determining the nature of personnel potential, it is necessary to take into account the conditions for the implementation of the labor force of an individual employee, means, objects of labor, forms of its organization (Kozina, 2008).

The problem of the formation and development of the personnel potential of modern agricultural production is complex and multifaceted, requiring a clear, understandable and real state policy to resolve the whole complex of problems that have accumulated in rural regions: economic, social, demographic, since they are all interconnected.

According to the demographic forecast published by the territorial body of the Federal State Statistics Service for the Novgorod region, the population of the region by the beginning of 2031 will be 545 thousand people, which is 9.2% less than at the beginning of 2019 (600.4 thousand people).

Migration is one of the sources of population replenishment. In the interregional flow, due to the proximity of Moscow and St. Petersburg, an annual educational migration decline is noted. One of the important components of the reproduction of human resources in the region is external educational and training migration, due to the satisfaction of the need for education and advanced training. A component of educational migration can be called the flow of educational migrants who are focused on educational institutions. Migration educational processes should become a positive factor contributing to the development of the economy and improving the demographic situation.

During the Soviet Union, educational migration was quite large-scale. Many graduates (80%) (after graduation the distribution in the Novgorod region was compulsory) remained permanently resident in our region, made a successful career, hold senior management positions in enterprises and organizations, and conduct pedagogical activities at the university.

Recent decades have seen a significant decrease in the number of educational migrants due to the impossibility of legal employment, and frequent trips home (due to the high cost of travel), and many other reasons.

At the Institute of Agriculture and Natural Resources (IANR) of Novgorod State University named after Yaroslav the Wise, the proportion of students from other regions and countries is 24% of the total student body. At present, in the context of increased flows of educational migrants, they can be considered the most desirable category, since, as a rule, it is composed of young and initiative people who are open and willing to accept new knowledge and technologies adapted to the local labor market, besides they are adaptive to the linguistic and cultural environment. It is extremely important to develop rural areas and attract students to work in the agricultural sector.

Much work is being done to organize preparations for the Institute's admission campaign, including attracting foreign students:

- promotional activities. A separate group has been created on social network VKontakte "NovSU Applicant", where all relevant information on recruitment for the Institute's training areas is laid out, live broadcasts are organized, applicants receive answers to questions in real time. The booklets and the advertising-image information were updated (the newspaper "Novgorod University" was distributed). In the program "Alma Mater" career guidance videos are released. Information company with Novgorod regional TV during the reception of documents was planned;
- Olympic movement. Additions have been made to the Rules for admission of NovSU providing for additional points for prize-winners of the Olympiads (additionally from 1 to 3 points). The Olympiads were held in Tashkent (Uzbekistan – 558 people), Bishkek and Osh (Kyrgyzstan – 408 people), Khujand (Tajikistan);
- career guidance. For the first time, a live broadcast with the Institute and the Admissions Committee was organized on the basis of the group "NovSU Applicant". Open Days were held for graduates of technical schools, and colleges;
- recruitment of foreign students. For 2020, NovSU won a competition for a quota among federal state educational organizations, for training foreign citizens in additional general educational programs, which provide training for mastering professional educational programs in Russian. This year, the University took an active part in educational exhibitions abroad (Bishkek, Tashkent, Morocco);
- organization of work of the Admissions Committee. For the first time, documents will be accepted at IC "Applicant" and through the personal account of the applicant.

At the same time, it is possible to note the tasks that the IANR of NovSU named after Yaroslav the Wise faces in organizing work with migrants. This direction can be strengthened with the help of virtual excursions and virtual design tools within the framework of the social-informational, socio-pedagogical, social-labor directions and the types of activities characteristic of them.

The social-informational direction can be represented as a set of virtual excursions, differing from real excursions by a virtual display (for example, by means of different types of presentations) of really existing objects in order to create conditions for collecting the necessary information. In this case, cognitive or information and communication technologies (independent study of information sources, the

integrated use of information technologies for independent replenishment of knowledge) and communication and activity technologies ("immersion" in the environment and modeling of professional activity, narration from the position of representatives of different fields and specialists carrying out various types of activities) can be used.

When organizing work with migrants, virtual design tools can also be effectively applied. For example, orientation in state institutions, educational and public organizations on issues of assistance to migrants, optimization of interaction with specialists can be organized using such a virtual design tool as a "virtual premise" – a software information product that integrates video, audio, graphic and text information, a multimedia photo panorama, which, unlike a series of photographs, has interactivity, which allows moving through active zones from one to another panorama, zooming in or zooming out any object, "looking around" on the sides, carefully considering the entire panorama of the room under study or its individual elements, increasing them if necessary.

In turn, professional counseling and assistance in obtaining professional education can be carried out using the "audio guide" function, which will provide familiarization with information in the language chosen by the migrant, and such a virtual design tool as "online consultation", which is a systematic electronic resource. The "Audio guide" will also be useful for migrants in identifying the main centers of cultural and leisure activities aimed at adapting them to the new conditions.

And, finally, assistance in obtaining basic and additional work, in starting your own business can be provided through a specially designed "professional navigator", including motivational-orientational, cognitive, operational components and an electronic portfolio game as an alternative to a resume.

The active use of various tools in organizing work with migrants which are able in modern conditions to find ways of transformation, will help to form a competitive economy in the region.

7. Conclusion

In recent years, the agricultural sector has been intensively transformed into a high-tech industry, and high-performance and resource-saving technologies are used in production.

The analysis of agrarian transformations revealed serious shortcomings and unresolved problems in the system of reproduction of agricultural personnel, management and regulation of this process. The experience of reforms shows that the personnel potential is a severe limitation in the sustainable development of the agro-industrial complex.

The implementation of the Law "On State Support to the Human Resources of the Agro-Industrial Complex of the Novgorod Region for 2008-2020" has a positive effect on staff retention. Graduates of secondary professional institutions and graduates of higher educational institutions receive supplements to their basic earnings in the amount of 15.7 and 21 thousand rubles. In addition, a one-time allowance of 60 thousand rubles is paid to technical school graduates and 100 thousand rubles to university graduates. The Ministry of Agriculture of the Novgorod Region has prepared a bill to increase lump sum payments three times. To provide housing for graduates, federal and regional targeted programs "Sustainable Development of Rural Areas for the Period until 2020" have been adopted.

However, for most young people, work and living in rural areas are not attractive, and therefore high-quality and comprehensive popularization of agricultural education and work in the agricultural sector are necessary.

An important place in joint work should be occupied by a comprehensive school. It is imperative to develop partnerships and find effective ways to work with schools. Leaders of leading enterprises need to find time for meetings with schoolchildren at work. It is necessary to intensify work on the organization of field trips, which contributes to the choice of agricultural areas of preparation for admission to the University and in the future to the occupation in agricultural enterprises.

It must be remembered that Russia has always historically been an agrarian country and its well-being largely depended on the effective development of agriculture.

The main task of the country's development is the improvement of territories, in which the agricultural education plays a key role.

We believe that the measures taken in recent years to improve the system of training and retraining of agricultural personnel, in our opinion, will strengthen the position in this direction of the economy and bring it to a higher level, which will have a positive impact on improving the living standards of the rural population.

References

- Bolman, L. G., & Deal, T. E. (2017). *Reframing Organizations: Artistry, Choice, and Leadership*. Hoboken, NJ USA: John Wiley & Sons INC.
- Djedovic, A., Karabegovic, A., Avdagic, Z., & Omanovic, S. (2018). Innovative Approach in Modeling Business Processes with a Focus on Improving the Allocation of Human Resources. *Mathematical problems in engineering*, vol. 2018, article ID 9838560. <https://doi.org/10.1155/2018/9838560>.
- Henke, S., Schmitt, C., & Theuvsen, L. (2012). Personnel management in agriculture: Overview of the state of research. *Berichte uber Landwirtschaft*, 90, 317-329.
- Huang, S. X. (2019). *Research on the Function of Business Administration Training in Improving Enterprise Management Level*. In W. Strielkowski, J. Cheng (Eds.) International Workshop on Advances in Social Sciences (IWASS 2018) (pp. 1138-1141). Hongkong, Francis Acad press.
- Kozina, A. M. (2008). Village staffing. *Economics of agricultural and processing enterprises*, 3, 64-65.
- Kozina, A. M., & Semkiv, L. P. (2016). *Human resources in the management of milk production*. In A. M. Kozin, N. N. Maksimiyuk (Eds.) Effective management in dairy cattle breeding - a condition for the competitiveness of milk production: materials of the All-Russian scientific-practical conference (pp. 26-27). RF, Veliky Novgorod: Yaroslav-the-Wise NovSU. [in Russ.].
- Kozlov, A. V. (2015). *Staffing system of agriculture: theory and practice*. Monograph. Germany, Saarbrücken: Lambert Academic Publishing.
- Kuznetsova, A., Kolevid, G., Kostyaev, A., Nikonova, G., & Akhmetyanova, A. (2019). *Reproduction of the Qualified Personnel of Working Professions in Agriculture*. In V. Mantulenko (Ed.) Hradec Economic Days, Proceedings of the 17th International Scientific Conference (pp.11-22). Hradec Kralove, Czech Republic.
- Nikiforov, P. V., & Semkiv, L. P. (2010). Social and economic consequences of formation and development of corporate agro-industrial groups. *Nikon readings*, 15, 107-108. [In Russ.].
- Shaitan, B. I., & Medvedev, A. V. (2017). Personnel management issues in rural areas. *Economics, labor, management in agriculture*, 1(30), 23-27.
- Yakushkin, N. M., & Safiulloev, R. H. (2017). *Staffing of the agro-industrial complex and issues of its improvement*. In N. M. Yakushkin, V. N. Fomin, V. N. Shilov, M. M. Minnehametova (Eds.) Problems of the innovative development of the agro-industrial complex: personnel, technologies, efficiency (pp. 12-13). Issue 11. Kazan: "Brig" Publishing House.