Integration of research approaches to the organization of management pool training for the agricultural sector of the region

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Abstract. At the present stage of development of agricultural production, the problem of providing managerial personnel exists in almost every region. Moreover, only an insignificant part of agricultural enterprises begins to accumulate experience in mutually beneficial cooperation with institutions of the professional training and retraining system. The authors paid considerable attention to the theoretical component of the topic in this study, namely, they justified the importance of agricultural personnel as a strategic resource for the development of the territory, gave a description of the totality of factors that determine the personnel potential, updated the need for an analytical study of the composition, structure and dynamics of the training of managerial personnel in modern conditions. The analytical study was based on the results of the preparation of a reserve of managerial personnel for the agro-industrial complex of the Novgorod region and its changes under the influence of the existing regional policy. Particular attention was paid to the study of the directions of the development of the personnel policy of the agro-industrial complex at the regional level, its goals, objectives, and measures by analyzing the implementation of the Law “On state support for the personnel potential of the agro-industrial complex of the Novgorod Region for 2008-2020”. The authors conclude that it is advisable to develop partnerships between agricultural educational institutions and leading enterprises of the agricultural sector based on the analysis of annual reports on the staffing of the agro-industrial complex in the Novgorod region, a survey of employers on satisfaction with the level of training of specialists and areas of partnership development. The relevance of research conducted in this direction is confirmed by the fact that the integration of research approaches (professionally-competent, adaptive-innovative and practice-oriented) in the organization of training the pool of managerial personnel for agricultural production, the use of modern technologies based on innovation in managerial fields of knowledge, increases the demand for young specialists and significantly improves the situation with staffing in the industry. The result of the joint work of agricultural educational institutions and employers has a positive impact on staff training and ensures the production of new generation managers, increases the level of training of specialists who are able to solve the strategic tasks of sustainable development of the industry.

1. Introduction
At the present stage, the country's economic development largely depends on high-tech industries, the introduction of innovative scientific developments and digital technologies in agricultural production. All this makes fundamentally new requirements for the staffing of the agricultural sector. World practice
in the development of agribusiness sectors and many researchers, including B.I. Shaitan et al. [1], A. Kuznetsova et al. [2], L.G. Bolman, et al. [3], S.X. Huang, [4], A. M. Kozina et al. [5], confirmed that the strategic potential for development and the fundamental factor that ensures the necessary level of enterprise competitiveness is the human potential and the preparation of a pool of managerial personnel.

According to I.V. Mitrofanova et al. [6], Antero Olakivi et al. [7], enterprises at any production site must have the necessary number of qualified and motivated specialists whose potential would meet the modern requirements of agribusiness management. At the same time, the development of resource potential, primarily with the aim of increasing labor productivity, is impossible without systemic qualitative changes in the educational environment. Integration of educational institutions implementing programs of various levels is required, which allows creating conditions for continuous training and retraining of personnel.

According to a number of authors [6], [5] higher professional agricultural education is a process of purposeful, organized, planned and systematic mastery of knowledge, skills, and communication methods under the guidance of experienced teachers, mentors, specialists, and leaders. However, as noted by I.P. Malichenko and A.M. Sidorova [8], the joint cooperation of professional and corporate education in the current conditions is very advisable and can benefit all agents of the educational services market.

Along with this, innovative changes have occurred in higher education: the transition to a two-level training system, which includes the first stage - undergraduate and second - master's degrees. This transition has led to qualitative changes of a substantive nature and a more active use of new educational technologies (interactive learning, problem-oriented teaching methods, implementation of project activities).

According to Daneykin Yu. V. [9], Kazarova O. A. et al. [9], the main adaptation-innovation mechanisms that ensure the effectiveness of project management are the following: modification, transformation, and combination. The conditions of educational practice are characterized by a wide range of ways to optimize project activities, due to adaptive-innovative mechanisms used to achieve high sustainable results.

At the same time, a number of scientists, namely A. M. Kozina et al. [5], O.Y. Frolova et al. [10], A. Djedovic, et al. [11] believe that it is necessary to organize a unified professionally-competent approach in the training of managerial specialists of a new generation in order to solve the existing problem.

In this regard, an attempt was made at the Institute of Agriculture and Natural Resources to rethink its role and place in the ongoing processes of education and agribusiness. Currently, there is an acute shortage of qualified managerial personnel. Therefore, it is necessary to propose effective measures to solve this problem, since the sustainable development of production and territories depends on the professionalism of managers.

2. Objects and methods of research
The object of the study was to assess the impact of integrated research approaches on the level of training of agricultural production personnel. The work included application of the methods of monographic, comparative and system analysis, a logical approach, questionnaires and standardized survey.

As one of the main research methods, a theoretical analysis of sources – publications of foreign authors [2, 3, 4, 5, 7, 9, 10, 11] was chosen, which made it possible to identify trends and the main mechanisms for integrating research approaches that are characteristic for organizing the training of a reserve of senior personnel in the production systems of the agro-industrial complex using project technology.

Studies of domestic scientists on this issue were studied.

3. Results and discussion
Currently, the development of human resources and the training of managers for the Novgorod region are an important process, including the formation of professional competence in the agricultural production systems. Crisis phenomena have a negative impact on improving training. At the same time,
in the agro-industrial complex, the increasing role of highly qualified specialists is dictated by the need for progressive transformation into a high-tech industry due to new approaches to managing and introducing new high-performance and resource-saving technologies.

We conducted monitoring to assess the professional level of managers and specialists of agricultural enterprises in order to assess the state of staffing in the region. Information from annual reports of agricultural organizations (Form 1 PC) was taken as a basis, and the results of a survey were used in a scientific study. A sampling frame was determined, the volume of which amounted to 86 people from 15 agricultural enterprises specializing in milk production as part of the study. The questionnaire included the question about a priority in personnel policy for enterprises to identify the main areas of HR management: survey results show that 59% of respondents noted the improvement of the personnel management system. At the same time, the remaining respondents equally expressed their opinion that the optimization of the number of personnel and the development of human resources are more significant in modern conditions.

The number of specialists in agricultural production is declining in the region along with this, while there is an acute shortage of highly qualified managerial personnel. Consequently, the need of the agricultural industry for good specialists is growing, and the requirements for the level of their professional training are increasing.

It should be noted that the problem of providing managerial personnel exists in almost every region at the present stage of development of agricultural production. Moreover, only a small part of agricultural enterprises begins to gain experience in mutually beneficial cooperation with institutions of the system of professional training and retraining of personnel.

At the same time, the promotion of investments in agricultural production is facilitated by the training of highly qualified specialists who meet the requirements of world educational standards. It is known that the urgent task of agribusiness is the formation of advanced innovative agricultural industries and a serious competitive breakthrough of the country in the international economic space. The launch of such industries needs qualified personnel. It is precisely this need that the agricultural enterprises of the Novgorod Region have faced today.

New requirements dictate the need to improve the system of training and retraining. Agricultural universities need to improve the work on the programs of additional professional education. The innovative development of the agro-industrial complex in modern conditions requires the integration of research approaches to professional retraining. In this regard, the important tasks that higher agricultural education sets itself are the integration of the requirements of employers in the industry and modern educational standards, as well as the management training of specialists and teachers.

In our opinion, the educational process in the system of additional professional education in these conditions becomes a means of providing deeper innovative processes through personnel trained in accordance with the requirements of the time. Consequently, management education is now becoming an instrument of interpenetration not only of knowledge and technology, but also a tool in solving geopolitical problems.

In modern conditions, competition in the innovation sphere is based on professional competencies, where the fundamental role goes to digital technologies. It is extremely important for agricultural managers to use scientific approaches for the development of agribusiness in their managerial activities. The task of enhancing the innovative development of the industry and improving the interaction of agricultural science, practice, government, and agribusiness becomes urgent in today’s conditions. Therefore, we need qualified personnel with innovative thinking, capable of developing a marketing strategy and putting management knowledge and skills into practice. In this regard, the importance of professional retraining of leading cadres is especially growing.

Due to the circumstances and taking into account the ongoing changes in higher education, it should be noted that the contact class of managerial and economic modules has significantly decreased in the bachelors’ curriculum. In this regard, Institute of Agriculture and Natural Resources of the Yaroslav-the-Wise Novgorod State University has successfully developed and successfully implemented the professional management training program “Management in the agro-industrial complex”. This made it
possible for students to master additional competencies oriented to the agricultural industry, while at the same time creating and consolidating in practice professional knowledge and skills.

In this regard, the main objective of the program is to provide the agro-industrial complex of the Novgorod region with competitive managers who have the professional competencies necessary for effective business in the production and processing of agricultural products.

A lot of attention is paid to industrial training, implementation activities, the innovation base is being formed and constantly updated to increase the efficiency and dynamism of the educational process. It should be noted that the proposed solution for contact work with program participants was the active use of synchronous network technologies: voice and video conferencing on the “Zoom”, “WhatsApp” platforms in the first half of the year in connection with the spread of coronavirus infection (COVID19).

The joint activity of the institute with the governing bodies of the agro-industrial complex is aimed at increasing the demand for young specialists. Field classes and excursions to high-tech agricultural enterprises of the region are organized and conducted during the training. Students learn about the successful experience of leading agricultural enterprises. After completion of training, graduates of the program are included into the pool of young managerial personnel in the agro-industrial complex of the Novgorod region. At the same time, successful undergraduate students are given priority who have good indicators in mastering the curriculum and have business communication and organizational skills in the organization of this work at the institute.

In turn, the regional law “On state support of human resources of the agro-industrial complex of the Novgorod region for 2008–2024” defines the procedure for state support of young specialists in order to provide the agro-industrial complex of the Novgorod region with qualified personnel. State support to young specialists (a lump sum of money in the amount of 100 thousand rubles and a quarterly cash benefit of 21 thousand rubles for graduates of higher education institutions) is provided by the Government of the Novgorod region or the executive body of the Novgorod region authorized by it. In addition, young specialists are building and acquiring housing under the program “Sustainable Development of Rural Areas in the Novgorod Region for 2014–2020”. Social benefits account for 70% of its estimated value. During the program, several hundred people improved their living conditions; most of them are graduates, including those who underwent professional retraining under the “Management in the Agro-Industrial Complex” program and young families living and working in rural areas. We believe that only by the joint efforts of integration - agricultural education, employers, agro-industrial complex management bodies, it is possible to improve the quality of education, train competitive specialists in the modern labor market and thereby create a pool of leading personnel for the region.

4. Conclusion
The most important factor in the effective development of the agro-industrial complex and rural areas is the availability of qualified personnel. As a result of the study, it was found that the strategic direction of further improving the system of training and retraining of agricultural personnel in the Novgorod region is the integration of innovative educational technologies with the scientific achievements of educational institutions in partnership with leading agricultural enterprises. At the same time, improving the quality of training is necessary on the basis of the integration of educational, scientific and industrial formations in the system of “public administration body of the agro-industrial complex - agricultural university – research institute of the RAS system – agribusiness entities”.

In this regard, the integration of agricultural educational institutions, the further formation of an extensive network of specialized agricultural classes is necessary for the further improvement of the system of continuous agricultural education in the Novgorod region.

The Institute of Agriculture and Natural Resources of the Yaroslav-the-Wise Novgorod State University has developed and successfully implemented the professional management retraining program “Management in the Agro-Industrial Complex”, which trained more than 130 students who possess the professional competencies necessary for efficient agricultural business. Many of the graduates (40%) hold leadership positions in the agricultural sector of the region. In our opinion, there
is a rational grain in this, which is determined in the preparation of qualitatively new personnel owning production management for the agricultural production.

Thus, the creation of a multi-level system of agricultural education based on the integration of universities with colleges is an important priority in the direction of modernizing the training of modern personnel for the agricultural sector. The formation of professional competencies of a specialist and monitoring the needs of personnel in a new format should be carried out in accordance with programs and scenarios for the development of agriculture in the Novgorod region.

In conclusion, it should be noted that the key to successful competitiveness of agricultural education is a complex algorithm of actions: the integration of research approaches (professionally-competent, adaptive-innovative and practice-oriented) in organizing the preparation of a pool of managerial personnel for agricultural production, the use of modern technologies based on innovations in managerial fields of knowledge, increases the demand for young specialists and significantly improves the staffing situation in the industry. The result of the joint work of agricultural educational institutions and employers has a positive impact on staff training and ensures the production of new generation managers, increases the level of training of specialists who are able to solve the strategic tasks of sustainable development of the industry.

References

[1] Shaitan B I and Medvedev A V 2017 Personnel management issues in rural areas Economics, labor, management in agriculture 1 (30) 23–27
[2] Kuznetsova A, Kolevid G, Kostyaev A, Nikonova G and Akhmetyanova A 2019 Reproduction of the qualified personnel of working professions in agriculture 17th International Scientific Conference on Hradec Economic Days Feb 05-06 2019 Hradec Kralove, Czech Republic (Czech Republic: University of Hradec Kralove) III 11–22
[3] Bolman L G and Deal T E 2017 Improving Human Resource Management (USA, Hoboken: John Wiley & Sons INC) 135–56
[4] Huang S X 2019 Research on the function of business administration training in improving enterprise management level Proceedings of the 2018 International Workshop on Advances in Social Sciences (IWASS 2018) (Hongkong: Francis Acad press) 1138–41
[5] Kozina A M, Semkiv L P and Grishakina N I 2019 Methodological approaches in improving human resources potential of agro-industrial complex The European Proceedings of Social & Behavioural Sciences EpSBS - Volume LXXVII -MTSDT 2019 (Future Academy) 391–397 DOI: 10.15405/epbs.2019.12.05.47
[6] Mitrofanova I V, Obyedkova L V and Opeykina T V 2016 Modernization of the training system for agricultural enterprises: regional experience Economics: yesterday, today, tomorrow 5 69–82
[7] Antero O and Miira N 2017 Rethinking managerialism in professional work: from competing logics to overlapping discourses Journal of Professions and Organization 4 (1) 20–35
[8] Malichenko I P and Sidorova A M 2015 Effective technologies of personnel training and development in the corporate training system: issues of choice Management in Russia and abroad 4 90–99
[9] Daneykin Yu V, Kazarova O A, Kozina A M and Grishakina N I 2019 Adaptively innovative management approaches in project activities The European Proceedings of Social & Behavioural Sciences EpSBS - Volume LXXVII -MTSDT 2019 (Future Academy) 849–55 DOI: 10.15405/epbs.2019.12.05.103
[10] Frolova O Y, Fomina L V and Shmeleva Zh N 2020 The personnel competence qualification formation in the agro-industrial complex production systems: managerial aspect Iop Conf. Series: Earth and Environmental Science 421 (2020) 22029
[11] Djedovic A, Karabegovic A, Avdagic Z and Omanovic S 2018 Innovative approach in modeling business processes with a focus on improving the allocation of human resources Mathematical problems in engineering (London: Hindawi LTD) 10–15 DOI: 10.1155/2018/9838560