

Innovations in the Personnel Management of an Agricultural Enterprise

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Abstract—The research made it possible to substantiate recommendations for improving the personnel management of agro-industrial enterprises in the context of these areas. A proposal has been developed to improve information support on the state and movement of human resources of agro-industrial enterprises. Recommendations for managing the innovative activity of human resources of agro-industrial enterprises, including organizational and economic measures for the development of mass innovation creativity and project activities, are proposed. To manage mass innovation creativity in an agro-industrial enterprise, it is necessary to: create and maintain the database "Innovation proposals"; develop and apply the "Procedure for considering innovation proposals and material remuneration for innovation activity"; form a production and technical commission to evaluate innovation proposals and organize its work. To manage the activity of employees for the initiation of innovative projects and subsequent stages of the project life cycle, the staff of agro-industrial enterprises should be supplemented with the position "Specialist for working with investment projects". The article presents a promising methodology for evaluating personnel based on professional standards. The normative basis for evaluating personnel is a description of the work functions included in the professional standard.

Keywords—*innovations, personnel management, agro-industrial enterprises, staff turnover, professional standards, innovation activity, staff assessment*

I. INTRODUCTION

In recent years, Russian agro-industrial enterprises have achieved significant results in increasing the volume of production of agricultural products and products of its processing. At the same time, long-established trends of rural population decline and corresponding reduction of human resources of the agricultural economy persist. Therefore, one of the promising tasks in further improving the functioning of agricultural enterprises is to use effective novelties that increase labor productivity to a level that compensates for the

loss of human resources and provides solutions to problems in the field of food security of the country.

According to the generally accepted classification, novelties introduced in the practice of personnel management belong to the organizational type of innovation. Organizational innovations create prerequisites for technological and marketing innovations, which are also relevant for agro-industrial enterprises. The main point is the differentiation of the concepts "novelty" and "innovation". V. G. Larionov gives definitions that distinguish these concepts in personnel management: "HR novelty is a product of intellectual activity in the field of personnel management (a new tool, technology or a new combination of methods of personnel work), issued in accordance with the established procedure in the form of a document (standard, methodology, instructions, recommendations, regulations). HR innovation is the final result of implementing an innovation that leads to a partial change in HR work as an object of management and obtaining an economic, social or other type of effect" [9]. O. E. Savitskaya and O. P. Lukyanova understand HR novelties as a special activity for the development and implementation of novelties aimed at improving the ability of personnel to effectively solve problems aimed at the development of enterprises in difficult conditions of severe competition [11].

It follows from the above material that novelty is a broader concept than innovation. Not every novelty is an innovation, but only one that has a positive effect. This provision should be considered as a starting point for the development of innovative proposals in personnel management. Refusal from it will be associated with low efficiency of the implemented novelties. This leads to the main rule: only those novelties that are likely to bring a significant positive effect should be introduced.

Yu. N. Lobas and E. A. Yeresko believe that the research area of innovative personnel management is the issues of development, renewal, needs and characteristics of personnel and personnel systems of the enterprise. According to these

authors, the personnel sphere is one of the most difficult from a socio-psychological point of view [10]. N. B. Fateeva considers that innovative personnel management is based on the following basic provisions: the need for close connection of personnel planning with the development strategy of the organization; quantitative assessment of the costs of working with personnel and their impact on the economic indicators of production; determination of the necessary compensation package for effective work in the labor market. Innovations in personnel management occur at the following stages: selection of personnel for work; professional orientation and adaptation of personnel; personnel training; performance evaluation [6]. I. A. Dokukina, Yu. L. Makarova and A.V. Polyanin believe that in order to successfully solve problems, personnel services should actively apply innovative information technologies in their practice in the conditions of digitalization. [5].

Conditions for the introduction of advanced information technologies in personnel management are significantly expanded after the introduction of the electronic workbook (EWB) in Russia from January 1, 2020. It is expected that the EWB will provide permanent and convenient access for employees to information about their work, and employers will open up new opportunities for personnel accounting. One of the conditions for successful implementation of information technologies is the elimination of inconsistencies in regulatory documents. Thus, the content of the federal statistical observation form no. "II-4 (H3)" does not correspond to the provisions of the Labor code of the Russian Federation. This form does not reflect all the grounds for termination of an employment contract provided for in the Labor code of the Russian Federation, and one of the reasons for the retirement of employees "due to a reduction in the number of employees" does not have an ana-log in the Labor code of the Russian Federation, which together prevents an objective analysis of the movement of personnel.

V. N. Belkin, N. A. Belkina and O. A. Antonova draw attention to another important aspect – the lack of scientific elaboration of problems related to the innovative activity of enterprise personnel. In Economics, many basic theoretical issues remain unclear, including those related to the management of innovation activity of enterprise personnel. An analysis of business practices shows that only about 40% of workers respect and support innovative workers. Numerous results of socio-logical surveys confirm that the real system of labor relations of enterprises is unfavorable for employees to display innovative activity. In order to overcome the negative attitude to the innovative activity of the staff, it is necessary to work on managing the innovative activity of employees [3]. One of the ways to solve this problem is to introduce positions of employees specializing in investment and innovation activities into the staffing of agro-industrial enterprises. Thus, the Order of the Ministry of labor of Russia dated 16.04.2018 ap-proved the professional standard "Specialist in working with investment projects". Analysis of the content of this document shows that it needs to be adapted to the specific conditions of the enterprise, after which it will be suitable for conducting procedures for selecting, hiring and subsequent evaluation of the activities of a specialist in working with investment projects.

A specialist in technical rationing is also in demand, since the introduction of technological innovations usually requires either a revision of existing resource consumption standards

or the development of new standards. However, there is no professional standard for a specialist in technical rationing yet. Despite the fact that, as noted By N. N. Bogdan and M. G. The national qualification system is currently being actively developed in Russia, which is reflected in a number of measures taken: changes to the Labor code are being made, professional standards are being developed to re-place outdated qualification reference books, professional qualification Councils and centers for in-dependent assessment of qualifications are being created [4], and there is a significant shortage of professional standards. As of May 2020 only 22 professional standards have been approved by the Russian Ministry of labor for agricultural professions. For ex-ample, there is no professional standard for zootechnician.

Nevertheless, the development of professional standards, despite all the costs associated with their imperfection and implementation practices, serves as an important normative basis for personnel evaluation. At the same time, it should not be expected that the professional standard ap-proved by the Ministry of labor of the Russian Federation will fully take into account the specifics of professional activity in a particular enterprise. In any case, it is necessary to adapt it to the conditions of the enterprise. The adaptation of an existing professional standard or the development of a new one is a needed innovation in the personnel management of an agro-industrial enterprise, which allows you to carry out a set of actions for the selection and evaluation of human resources.

Thus, innovative activity in personnel management of an agro-industrial enterprise is aimed at regulating the level of three main factors: 1) the quantitative and qualitative state of the enterprise's human resources; 2) wake-up motives and incentives for innovative activities of personnel; 3) methods of human resource management.

II. METHODOLOGY

The empirical basis of the study was open data published on the website of Rosstat and the website of the company "ConsultantPlus", as well as operational information about project management activities in agro-industrial enterprises.

The purpose of the research is to develop innovative proposals for improving the personnel management of agro-industrial enterprises. To achieve this goal, the following tasks were completed: 1) justified proposals for improving the information support of personnel management in accordance with the labor code of the Russian Federation; 2) developed recommendations for the management of innovative activity of human resources; 3) a promising method of personnel evaluation based on professional standards is proposed.

In particular, the analysis of guidelines for filling out the federal statistical observation form no. "II-4 (H3)" and relevant norms of the labor code of the Russian Federation allowed us to form proposals for creating and maintaining a database on the movement of human resources of an agro-industrial enterprise. Assessment of the adequacy of the content of labor functions of the professional standard "Specialist in working with investment projects" to the practice of project management in agro-industrial enterprises allowed us to develop a draft of an adapted professional standard suitable for an objective assessment of the labor activity of a specialist in investment project management.

III. RESULTS AND DISCUSSION

Innovative activity in the personnel management of an agro-industrial enterprise currently has three main aspects. The first is related to the introduction of effective innovations in information support, an example of which is the development of a corporate database that allows you to objectively monitor the movement of human resources and make effective management decisions in the personnel management system [2].

Data on turnover of employees in the database about movement of human resources, in contrast to the forms of Federal statistical observation no. "II-4 (H3)" must include the reasons for the disposal in accordance with the Labour code (table 1).

TABLE I. INFORMATION ON DISPOSAL OF EMPLOYEES

	Reasons for employee disposal
01	dropped out workers from the organization, total
	including:
02	by agreement of the parties
03	due to the expiration of the employment contract
04	at the employee's initiative
05	at the initiative of the employer
06	transfer of an employee to another job (position)
07	refusal of an employee to continue working in connection with a change of owner or reorganization
08	the employee's refusal to continue working due to a change in the terms of the employment contract determined by the parties
09	refusal of the employee to transfer to another job, which is necessary for him in accordance with the medical report, or the employer's lack of appropriate work
10	refusal of an employee to transfer to work in another locality together with the employer
11	circumstances beyond the will of the parties
	among them:
12	conscription of an employee for military service or referral to alternative civil service
13	reinstatement of an employee who previously performed this work by a decision of the state labor inspectorate or a court
14	administrative punishment that excludes the possibility of performing the employee's obligations under the employment contract
15	sentencing an employee to a punishment that excludes the continuation of the previous work
16	recognition of an employee as completely unable to work in accordance with a medical report
17	the death of an employee
18	occurrence of emergency circumstances that prevent the continuation of labor relations

The proposed form will allow to objectively analyze the movement of human resources, in particular, to monitor the

turnover of personnel. It, in contrast to the software system "IC: Enterprise", which calculates the turnover rate as a ratio of the number of dismissed employees to the average number of employees, allows to methodically correctly calculate the turnover rate.

For table 1, the employee turnover rate should be calculated as the ratio of dropped employees indicated in the lines 04, 05, 06, 07, 08, 09, 10, 14, 15, to the average number of employees for the corresponding period.

The second aspect involves managing the innovative activity of human resources involved in all divisions of the agro-industrial enterprise. Two directions are relevant here: 1) mass innovation creativity. Almost all employees who have mastered their profession and have experience of working in a particular enterprise have ideas, suggestions for improving the organization of production and industrial relations, improving technologies, saving material and technical resources, and saving working time; 2) a single, but more focused and large-scale innovative proposal, which is, in fact, the initiation of an investment project.

To manage mass innovation creativity, it is necessary: a) to create and maintain the database "Innovation proposals"; b) to develop and apply the "Procedure for consideration of innovation proposals and material remuneration for innovation activity"; c) to form and organize the work of the production and technical commission for evaluating innovation proposals.

The database "Innovation proposals" should include information about the author of the proposal, the content of the proposal, the timing of its submission and review, the conclusion of the production and technical commission, a description of the implementation results, the amount and nature of remuneration for the author of the proposal. The size and nature of the royalties should be commensurate with the beneficial effect of implementing the promotion. The composition of the production and technical commission for evaluating innovation proposals should correspond to the profile of the considered rationalization proposal. The period of time between submitting the proposal and notifying the author of the decision (conclusion) of the production and technical commission should not exceed 30 days.

To manage the activity of employees for the initiation of innovative projects and subsequent stages of the project life cycle, the staff of agro-industrial enterprises should be supplemented with the position "Specialist for working with investment projects". The description of labor functions included in the professional standard approved by the Ministry of labor of the Russian Federation is given in table 2.

The analysis shows that the content of the generalized labor function "B" - The implementation of the investment project does not correspond to practice. Its labour functions are the responsibility of managers and supervisors of investment projects, who are usually chief specialists and managers of agro-industrial enterprises. Taking into account the established practice, a specialist in working with investment projects is called to perform functional project management, providing methodological and organizational assistance in the implementation of projects.

TABLE II. DESCRIPTION OF LABOR FUNCTIONS INCLUDED IN THE PROFESSIONAL STANDARD "SPECIAL LIST FOR WORKING WITH INVESTMENT PROJECTS"

Generalized labor functions		Labor functions		
code	name	name	code	skill level
A	Preparing an investment project	Development of an investment project	A/01.6	6
		Conducting the analytical stage of the investment project examination	A/02.6	6
		Formation of an expert opinion on the possibility of implementing an investment project	A/03.6	6
B	Investment project realization	Managing the effectiveness of an investment project	B/01.7	7
		Communications management of the investment project	B/02.7	7
		Investment project risk management	B/03.7	7

Hence, our proposal is to adapt the content of the generalized labor function "B" in the following wording (table 3).

TABLE III. DRAFT DESCRIPTION OF THE LABOR FUNCTION "B" INCLUDED IN THE PROFESSIONAL STANDARD "SPECIALIST IN WORKING WITH INVESTMENT PROJECTS"

Generalized labor functions		Labor functions		
code	name	name	code	skill level
B	Methodological guidelines for the implementation of an investment project	Development of recommendations for managing the effectiveness of an investment project	B/01.7	7
		Development of recommendations for managing communications of the investment project	B/02.7	7
		Development of recommendations on investment project risk management	B/03.7	7

The development of draft professional standards and the adaptation of existing professional standards make it possible to create an up-to-date regulatory framework for personnel evaluation. The introduction of the position "Specialist in working with investment projects" into the staff schedule and the selection of a competent employee for it will increase the effectiveness of activities for managing the innovative activity of human resources of agro-industrial enterprises.

The third aspect is related to the improvement of personnel assessment based on the implementation of existing professional standards and the development of current projects of professional standards. To assess the performance of labor functions by a specialist working with investment pro-

jects, we suggest using the method of expert assessments. Each expert is asked to evaluate the performance of these employees' work functions using a four-point scale. Previously, the experts hear the employee's report on the work done in the context of labor functions of the professional standard. Each expert in the assessment sheet proposed to him (table 4) notes for each work function the degree of its performance by the employee.

TABLE IV. DRAFT LIST FOR EVALUATING A SPECIALIST WORKING WITH INVESTMENT PROJECTS FOR COMPLIANCE WITH THE PROFESSIONAL STANDARD (FRAGMENT)

Generalized labor functions	Labor functions	Degree of performance of functions	Degree of performance of functions	Expert opinion
A Preparing an investment project	A/01.6 Development of an investment project	high	1,0	1,0
		medium	0,7	
		mediocre	0,3	
	A/02.6 Conducting the analytical stage of the investment project examination	insufficient	0,1	
		high	1,0	1,0
		medium	0,7	
	mediocre	0,3		
	insufficient	0,1		

The completed assessment sheets are summarized in table 5.

Note that the code B/01.7 for the labor function "development of recommendations for managing the effectiveness of an investment project" means that it belongs to the generalized labor function "B", its serial number as part of the generalized function "1", and the required skill level – the 7th.

The consolidated assessment of the expert commission is formed taking into account the significance of labor functions (table 6). In this example, the coefficients of significance of generalized labor functions and particular labor functions are determined in proportion to the required skill level:

$$6 / (6 + 7) = 0,462; 7 / (6 + 7) = 0,538$$

Coefficients of significance of private labour functions were calculated in a similar manner. For example, for a private labor function B/01.7:

$$7 / (7 + 7 + 7 + 7) = 0,25$$

The efficiency coefficient of a specialist working with investment project is calculated using the arithmetic weighted average formula.

TABLE V. EXAMPLE OF CALCULATION OF MEAN SCORES FOR THE EMPLOYMENT FUNCTIONS

Labor functions	Degree of performance of functions	Estimation of experts					Average mark	
		I	II	III	IV	V		
A	A/01 .6	high	1,0	1,0			1,0	0,88
		medium			0,7	0,7		
		mediocre						
		insufficient						
	A/02 .6	high	1,0					0,76
		medium		0,7	0,7	0,7	0,7	
		mediocre						
		insufficient						
	A/03 .6	high					1,0	0,76
		medium	0,7	0,7	0,7	0,7		
		mediocre						
		insufficient						
B	B/01 .7	high		1,0				0,76
		medium	0,7		0,7	0,7	0,7	
		mediocre						
		insufficient						
	B/02 .7	high						0,70
		medium	0,7	0,7	0,7	0,7	0,7	
		mediocre						
		insufficient						
	B/03 .7	high	1,0	1,0		1,0	1,0	0,94
		medium			0,7			
		mediocre						
		insufficient						
B/04 .7	high						0,70	
	medium	0,7	0,7	0,7	0,7	0,7		
	mediocre							
	insufficient							

The assessment of the level of the performance coefficient by a specialist in working with investment projects and the analysis of the values of its components makes it possible to draw conclusions about the compliance of the position and measures for the formation of competencies.

TABLE VI. EXAMPLE OF CALCULATION OF THE CONSOLIDATED ASSESSMENT OF THE LABOR ACTIVITY OF A SPECIALIST WORKING WITH INVESTMENT PROJECTS

Generalized labor functions						
A. Preparing an investment project			B. Methodological guidelines for the implementation of an investment project			
The coefficients of significance of the aggregated labor functions						
0,462			0,538			
Labor functions						
A/01.6 Development of an investment project	A/02.6 Conducting the analytical stage of the investment	A/03.6 Formation of an expert opinion on the possibility of	B/01.7 Development of recommendations for managing the	B/02.7 Development of recommendations for managing	B/03.7 Development of recommendations on investment project	B/04.7 Development of recommendations for managing

project examination	implementing an investment project	effectiveness of an investment project	communications of the investment project	risk management	deadlines and monitoring the implementation of an investment project
0,334	0,333	0,333	0,025	0,25	0,25
The coefficient of significance of private labour functions					
Average expert assessment of the degree of performance of labor functions by a specialist					
0,82	0,76	0,76	0,76	0,70	0,94
Calculation of the efficiency coefficient of a specialist working with investment project					
$KE = 0,462 \times (0,334 \times 0,88 + 0,333 \times 0,76 + 0,333 \times 0,76) + 0,538 \times (0,25 \times 0,76 + 0,25 \times 0,70 + 0,25 \times 0,94 + 0,25 \times 0,70) = 0,787$					

IV. CONCLUSIONS

Thus, promising innovations in personnel management of agro-industrial enterprises include: 1) information support for human resource management; 2) management of innovation activity of human resources; 3) personnel assessment based on professional standards (figure 1).

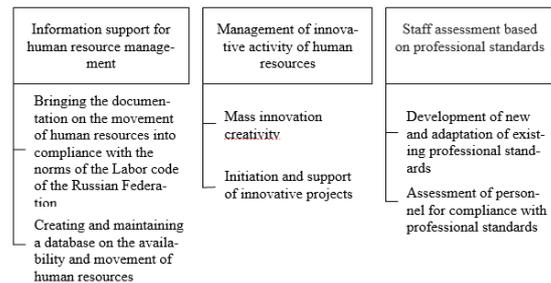


Fig. 1. Promising innovations in personnel management of agro-industrial enterprises

The directions of implementing promising innovations are interrelated. Information support of human resource management closely intersects with the management of innovation activity of personnel. Organizational and economic measures to increase the innovative activity of personnel include, among other things, the introduction of specialists to the staff of agro-industrial enterprises whose activities are regulated by professional standards developed and adapted to the conditions of agro-industrial production. Current professional standards are part of the information support for human resource management. Therefore, the innovative proposals considered in the article must be applied in a comprehensive manner, which will ensure the highest return on them.

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