

# PERSONNEL POTENTIAL OF THE AGRARIAN SECTOR OF THE ECONOMY OF THE SOUTHERN RUSSIA: REGULARITIES AND PROSPECTS OF DEVELOPMENT

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## Abstract

The problem of studying the personnel potential of various sectors of the economy is topical and permanent in its importance for ensuring sustainable functioning and consistent development of socio-economic systems. At the same time, ensuring high rates of attracting highly qualified personnel to the agrarian sector of the economy and rational use of human resources in the interests of its dynamic innovative development requires constant diagnosis of the territory's personnel policy implemented and the identification of internal and external factors affecting its transformation. The purpose of the study is to examine the composition of workers of agricultural organizations in the South of Russia, assess the shortage of cadres of mass professions and managers of agricultural organizations in the region, identify factors that affect the changing human resources and form the personnel policy of economic entities in order to identify the potential need for specialties. The study uses methods of interviewing experts and questioning respondents. The authors proposed an algorithm for revealing regularities and prospects for the formation of the cadre potential of territories.

Keywords: agriculture, human resources of territories, personnel policy, training of personnel, education, specialties, profession, job placement, labour resources.

## Introduction

In the agrarian sector of the economy of the South of Russia, 41.7% of the population currently live; most of the municipal districts are represented exclusively by rural areas. At the same time, the level of unemployment in rural areas over the past decade has grown significantly, part of the hiring of labour occurs on an informal basis. The state of the labour market in rural areas is largely determined by the sustainability of the development of agricultural organizations and farms. At the same time, the largest share in the structure of workers is made up of specialists, tractor drivers and poultry industry workers (Table 1).

**Table 1. The composition of employees of the agricultural enterprise of the Stavropol Territory, persons**  
(Source: The data of the annual reports of agricultural enterprises subordinated to the Ministry of Agriculture of the Stavropol Territory)

Indicators	2013	2014	2015	2015 in % to 2013
Number of employees of agricultural enterprises, total	53558	51437	50817	94.9
including workers employed in agricultural production	48757	46777	46191	94.7
including permanent workers, among them	35696	34049	33876	94.9
tractor drivers/machine operators	8500	8246	8295	97.6
machine milking operators	726	700	704	97.0
herdsman of cattle stock	1670	1557	1392	83.4
pig breeding workers	510	433	469	92.0
sheep and goat breeding workers	1145	1058	887	77.5
poultry breeding workers	2704	2933	3281	121.3
horse breeding workers	218	175	163	74.8
temporary and seasonal workers	2293	2306	1961	85.5
Employees, among them	10768	10422	10354	96.2
leaders	2358	2280	2262	95.9
specialists	7311	7137	7163	98.0
Employees employed in subsidiary industrial enterprises and production fields	3587	3499	3335	93.0
Workers of trade and public catering	562	548	585	104.1

Increasingly, in the expert community of the Russian Federation, it is said that a large number of workers and intellectual professions will become obsolete and eventually disappear (accountant, switchboard operator, lawyer-consultant, loan manager, statistician, etc.). At the same time, until 2020, a number of new professions are forecasted in Russia, which will allow agricultural companies to work more efficiently (agronomist-economist, agricultural ecologist, operator of automated agricultural machinery, city-farmer, GMO-agronomist agrobiotechnics).

## Materials and methods

General provisions of the authors' study are compiled on the basis of the theoretical and conceptual provisions presented in the works of Russian and foreign researchers in the field of agricultural development. [Gerasimov A.N., Gromov Y.I., Skripnichenko Y.S. (2015)]; [Erokhin V., Ivolga A., Heijman W. (2014)]; [Bobryshev A.N., Golchenko Y.V., Kazakov M.Y. (2014)]; [Acharya S.S. (1997)]; [Trukhachev V., Ivolga A., Lescheva M. (2015)]; [Taranova I.V., Gunko A.U. (2015)].

In the course of the study, the authors carried out a questionnaire survey of rural residents, which subsequently made it possible to identify the main patterns of human resources development in the territories of the South of Russia.

The study was conducted in accordance with the developed algorithm (Figure 1), for this highly qualified specialists were selected in the field of agriculture, which formed three focus groups: "Leaders of agricultural enterprises", "Workers and specialists", "Experts".

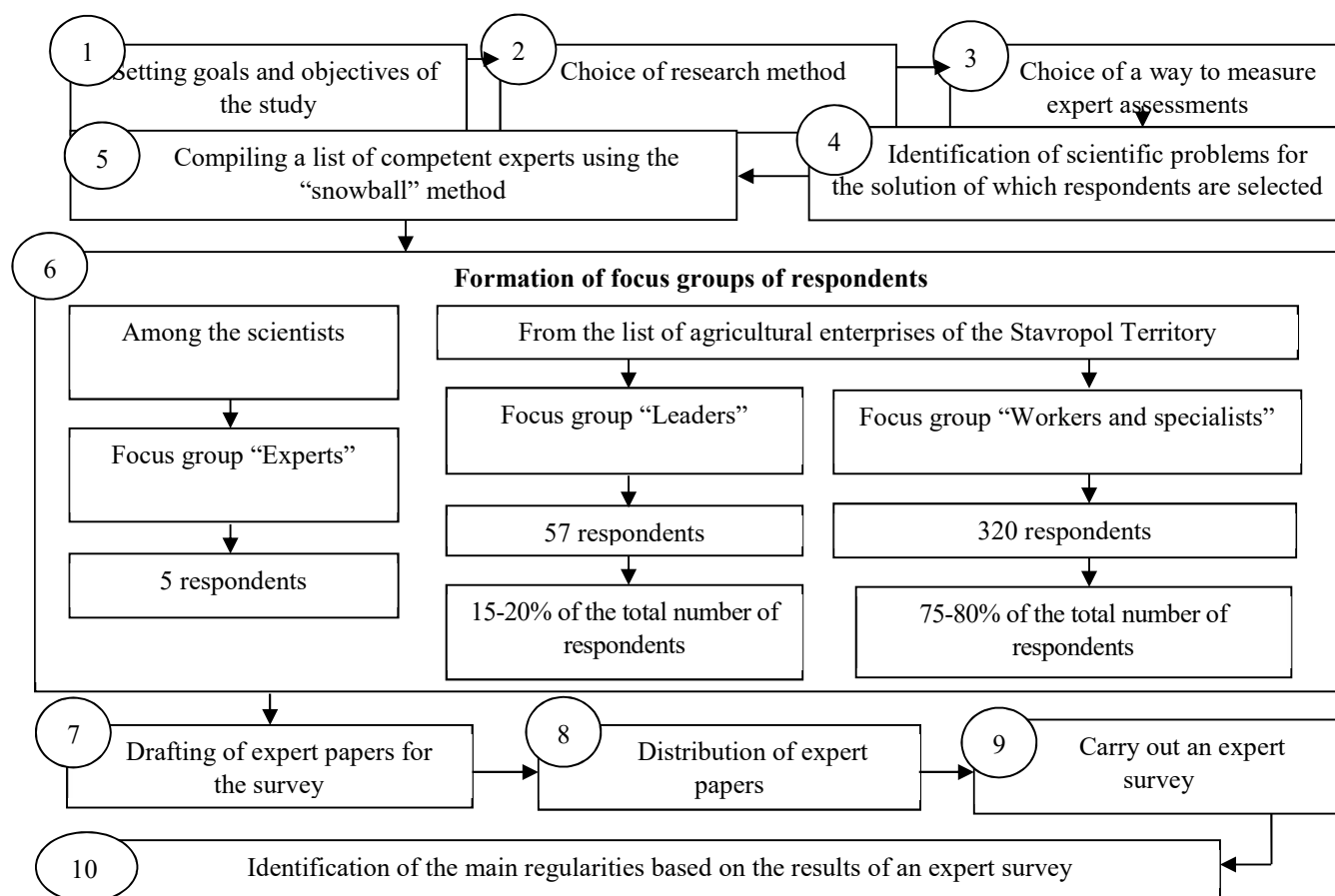
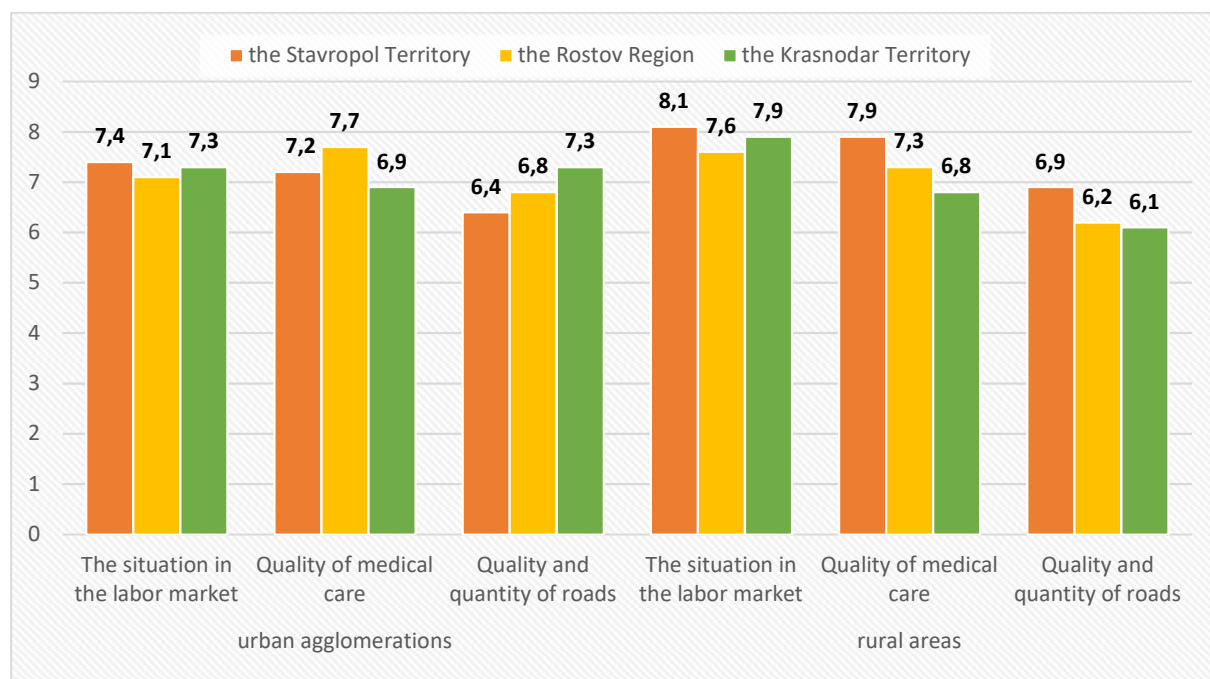


Fig. 1. Algorithm for conducting an expert survey (Source: Authoring)

## Results and discussion

The state of the labour market is a key factor ensuring the quality of life in both rural and urban areas (Figure 2).



**Fig. 2. The respondents' assessment of the parameters that significantly affects the quality of life of the population (points) (Source: Authoring)**

In the agrarian sector of the regions of the South of Russia, a traditionally stable trend is the reduction of labour resources, including the most intellectual. As a result of the survey, it was found that 49.1% of heads of agricultural enterprises in the South of Russia as a whole are satisfied with the quality of the staff potential, but at the same time note the need for its continuous updating. Only 26.3% are fully satisfied with the quality of their employees. Heads of agricultural enterprises allocate the following categories of specialists as the most deficient and in need of replenishment in rural areas (Table 2): 1. Chief agronomist (17.5%); 2. Head veterinarian, electrical supervisor, chief engineer (15.8%); 3. Chief agro chemist (12.3%).

**Table 2. Assessment of staff shortages in agricultural enterprises of the South of Russia in the context of specialties, ratio, % (Source: Authoring)**

№	The most demanded categories of senior management	Focus group			
		"leaders"		"specialists, workers"	
		Demand			
		Current	Potential	Current	Potential
1	Chief agronomist	17.5	19.3	10.63	10.00
2	Chief agro chemist	12.3	15.8	10.31	4.69
3	Head veterinarian	15.8	7.0	5.00	10.63
4	General accountant	3.5	10.5	4.69	7.81
5	Chief engineer	15.8	8.8	8.44	10.00
6	Electrical supervisor	15.8	14.0	7.81	10.94
7	Head of vehicle sprung	7.0	5.3	2.50	4.69
8	Head of planning and economic department	10.5	0.0	3.44	4.69
9	Branch manager (farm, plot)	1.8	12.3	8.44	8.75
The most demanded categories of workers in the mass professions					
1	Book-keeper	12.28	29.82	10.00	9.06
2	Occupational safety engineer	24.56	28.07	6.25	11.88
3	Power engineer	19.30	29.82	5.31	4.38
4	Mechanic	15.79	17.54	7.81	8.44
5	Agronomist	22.81	28.07	6.88	9.38
6	Plant protection agronomist	21.05	15.79	8.13	7.50
7	Seed breeding agronomist	21.05	14.04	3.75	6.88
8	Tractor drivers/ machine operators	38.60	29.82	23.75	20.31
9	Great cattle herdsman	22.81	10.53	8.75	5.63

According to respondents, the most demanded professions are: chief agronomist (10.6%), chief agro chemist (10.31%), chief engineer (8.44%), electrical supervisor (7.81%), Branch manager (farm, plot) (8.44%). The steady potential need, in the opinion of employees and specialists, persists with regard to the following managerial professions: Head veterinarian (10.63%); chief agronomist (10%); chief engineer (10%); electrical supervisor (10.44%). Among the rare professions, the preparation of which is carried out fragmentarily, the respondents have noted as the most popular the following professions: zoo technician in the breeding business, accountants-analysts, geneticist-breeder, storage and processing technician of crop production.

Studies show that in the Rostov region “over the past 15 years, the number of working chief specialists per 100 agricultural enterprises has decreased by almost 30%; the greatest reduction occurred in respect of the main livestock specialists and veterinarians (62% and 59%), chief economists and chief agronomists, the number of chief engineers has decreased noticeably”.

The need to ensure food security in individual countries and the solution of the global hunger problem, the problems of raising the level and quality of life of the population, the need for further development of human resources in the agricultural sector of the economy require study of the state and prospects of the agrarian sector of the Russian economy.

Based on a comparison of the data on the graduates of educational institutions in the South of Russia in the context of specialties according to the All-Russian classifier of specialties, data of the Ministry of Education and Science of the Russian Federation, a sociological survey and personal observations of the authors, a table of employment probabilities has been obtained in the context of sections of the all-Russian classifier of economic activities (Table 3).

**Table 1. The table of probabilities of employment not on a specialty for regions of the South of Russia, %**

Specialties of training	Basic directions of employment													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Agriculture, hunting and forestry	33	1	10	3	2	7	6	4	3	15	5	2	1	8
Fishery, fish farming	10	80	-	-	-	-	-	-	-	10	-	-	-	-
Manufacture of food products, including drinks and tobacco	2	-	36	-	-	-	6	4	5	22	16	5	4	-
Wood processing and production of wood products	-	-	-	50	25	-	-	-	-	25	-	-	-	-

Note: the lines are the corresponding specialties; the columns are the types of activities that are employed. Explanation of symbols: 1 - Agriculture, hunting and forestry; 2 - Fishery, fish farming; 3 - Manufacture of food products, including drinks and tobacco; 4 - Wood processing and production of wood products; 5 - Pulp and paper industry; publishing and printing activities; 6 - Manufacture of other non-metallic mineral products; 7 - Other production; 8 - Production and distribution of electricity, gas and water; 9 - Construction; 10 - Wholesale and retail trade; repair of motor vehicles, motorcycles, household products and personal items; 11 - Hotels and restaurants; 12 - Transport and communication; 13 - Financial activities; 14 - Public administration and military security; compulsory social security.

Note that in general, 30.9% of the population of the Stavropol Territory of the total number of employees works in the informal sector, while in the Krasnodar Territory 28.7%. The number of specialists with higher education in the region is more than ready to accept the labor market for positions corresponding to this level. Such a high level of supply, not supported by the demand from employers, leads to a strong redistribution of graduates to other sectors of the economy and, first of all, to places that do not require the highest qualification. In the region there is a surplus of specialists with higher education in the field of financial services, real estate transactions and the provision of legal services, public administration.

Another important trend is the shortage of mid-level professionals. The economy of the region has the greatest needs in the frames of secondary professional education in the field of health and education, as well as in the transport sector and in agriculture.

The study has shown that the personnel potential of the region is quite unbalanced (Table 4).

**Table 4. Balance of labor resources with higher education**

Present		Forecast to 2025	
Profitit	Deficit	Profitit	Deficit
1. – A	1. – E	1. – A	1. – G
2. – B	2. – D	2. – B	2. – D
3. – C	3. – F	3. – E	3. – F

A - Operations with real estate, renting and provision of services; B - Financial activities; C - Public administration and military security; compulsory social security; D - Health and social services; E - Education; F - Manufacturing Processes; G - Wholesale and retail trade; repair of motor vehicles, motorcycles, household products and personal items.

Potential opportunity and the degree of influence on the personnel policy of economic entities were evaluated by us expertly. As a result of the survey, it has been concluded that the identified factors have a high probability of affecting the personnel policies of agricultural organizations in the South of Russia.

**Table 5. Evaluation of the factors affecting the personnel policy of agricultural enterprises of the South of Russia**

The most probable events affecting the personnel policy of agricultural enterprises <sup>1</sup>	Focus group					Sum of points	Probability
	1	2	3	4	5		
1. In the coming years, the agrarian sector of the economy of the South of Russia will develop more dynamically than the Russian economy as a whole	4	5	3	4	4	20	High
2. Business activity of agricultural producers significantly (in terms of impact on personnel policy) will increase	1	2	2	3	1	9	Low
3. The number of graduates of profile for the agricultural sector of universities will grow in comparison with previous years	1	2	2	2	1	8	Low
4. Own investments in the personnel potential of economic entities will grow substantially	2	2	2	1	2	9	Low
5. The tendency of demand for workers with the lowest qualification for agricultural work will be preserved or will increase	3	4	4	4	4	19	High
6. Mass retraining of specialists will reduce the deficit of cadres of some professions due to the surplus of other	4	3	3	2	3	15	Medium
7. Employers will take a more active part in training specialists:							
7.1 creation of endowment funds	1	1	2	1	1	6	Low
7.2 formation of basic departments of enterprises in universities	2	1	1	1	1	6	Low
7.3 introduction of scholarship programs	2	2	3	2	2	11	Medium
7.4 joint research	4	3	3	4	3	17	Medium
7.5 contractual work	3	4	4	4	4	19	High
7.6 training in higher education programs on orders of enterprises and with payment for them	3	3	3	2	3	14	Medium
7.7 active employment of graduates	4	4	3	4	4	19	High
8. The development of technology, automation and mechanization will significantly reduce the need for cadres in rural areas	2	3	3	2	1	11	Medium
9. The development of technologies, means of automation and mechanization will contribute to the need to train new, more qualified personnel, increasing the investment of economic entities in the development of the personnel potential of the enterprise	4	4	5	4	4	21	High
10. The main motivation for potential staff turnover in the medium term until 2020 will be the following factors:							
10.1 migration flows	3	2	4	3	3	15	
10.2 wage level	4	5	4	5	5	23	High
10.3 development of small-scale agrarian business (opening own business, peasant farm enterprise, personal subsidiary plot)	2	3	2	2	1	10	Medium
10.4 competition between agricultural producers for qualified personnel	4	3	4	4	5	20	High
10.5 the impact of crisis processes in the economy	3	4	3	5	4	19	High
10.6 level of development of social infrastructure in rural areas	3	4	4	4	4	19	High

It should be noted that with the acceleration of economic growth in the agrarian sector of the economy of the South of Russia, conditions will be created to increase the business activity of agricultural producers, which will substantially exacerbate the situation with the lack of highly qualified personnel. At the same time, the personnel potential of an economic entity depends on the amount of investment in it. In these conditions, part of the profit of agricultural producers should be directed to the development of human resources, this will contribute to strengthening the financial condition of economic entities since the amount of accumulated knowledge and information determine the state of intellectual capital of an economic entity that is one of the key types of capital in the conditions of postindustrial processes in the economy. At the regional level, the success of the economy as a whole is directly related to the level of sustainability of individual business structures and, accordingly with the level of training of the personnel of organizations. This requires the formation of a flexible and effective personnel management system in the sectoral management system, which in turn will create the necessary environment for the creation and diffusion of innovations in the agricultural sector of the economy.

The strategic task in the system of sectoral management is the formation of human resources capable of implementing and mastering innovations based on stimulating employment at enterprises of the agro industrial

<sup>1</sup> Experts assessed the probability of an event according to a scale of standard significance: from "1" to "5", where "5" means the most likely occurrence of events, "1" is the least likely

complex, increase of labor attractiveness in the sphere of agricultural production, search for effective forms of development of agrarian education and its integration with science.

## Conclusion

Weak differentiation in the sphere of employment and low labor mobility of rural residents put the personnel of agricultural enterprises directly dependent on their availability, age, gender characteristics, and intensity of migration processes. These factors directly influence the formation of the human resources potential of agricultural enterprises at the present time and will determine it in the future.

The personnel situation in the region can be improved through active investment policies to create jobs, primarily in sectors with excessive supply of personnel: “real estate transactions, rental and provision of services” and “financial activities”. Specialists in this field could find employment in knowledge-intensive industries, for example, software development, scientific research in the field of chemistry, medicine, agriculture and others.

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