

REGULATION OF THE LABOR MARKET AND HUMAN CAPITAL IN THE AGRICULTURE OF THE NOVOSIBIRSK REGION

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Abstract: *Agricultural production is one of the key areas in the real sector of economy of the Novosibirsk Region. According to the volumes of cattle breeding production it holds one of the leading positions in the Siberian Federal District of the Russian Federation. Without modernizing the system of financing and using the human capital in the area in accordance with challenges of the innovational economy, it is impossible to solve the tasks of the sectoral economic growth set by the Concept of the Long-term Social and Economic Development of the Russian Federation up to 2020, Doctrine of Food Safety of the Russian Federation, State Program Related to Developing Agriculture, Raw Materials and Food for 2013-2020. The agriculture of the Novosibirsk Region needs qualified specialists and top managers. Low level of employees' education causes the impossibility to fully use the animals' potential, correctly handle and deal with livestock breeding. The article considers basic demographic indicators of the Novosibirsk region, analyzes the average salary in this sector of economy, and singles out basic reasons that point at the necessity to estimate the human capital in agriculture. It describes the areas of state support in agriculture, and analyzes the level of managers' and agrarians' education.*

Keywords: *human capital, agricultural personnel, salary investment resources, state support.*

1. INTRODUCTION

Today the importance of the role of specialists involved in intellectual labor grows, while the role and value of the non-qualified labor tend to decrease. The developed countries are characterized by changing the physical labor by the human capital, and investments in the human capital are a top-priority area for developing the national economy.

Thus, when moving to a post-industrial stage, knowledge and intellectual features of the individual started holding the leading place in the economy development.

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The creation of material benefits maintains its importance. However, the increase in the economic efficiency is related to implementing new technologies and obtaining new knowledge. Nowadays the human capital is the most important production factor.

Considering the agriculture of the Novosibirsk Region, it is possible to make the conclusion that the majority of employees have an insufficient level of qualification. Low accomplishment causes the disability to fully use the animals' potential, correctly handle and deal with livestock breeding. The lack of the relevant education among veterinarians causes the fact that animals' diseases are often diagnosed incorrectly, animals are not entirely vaccinated, and preventive measures are not fully taken.

The works of I.V. Virina, B.M. Genkin, A.I. Dobrynin, L.A. Kalinina, R.I. Kapelushnikov, A.V. Koritskiy, Yu.A. Korchagin, V.A. Kundius, S.A. Kurganskiy, V.Mau, A.T. Stadnik, V.F. Stukach, E.D. Tsyrenova, and S.A. Shelkovnikov are devoted to the problem related to the development, content, formation, and use of the human capital in the agriculture (Virina 2007; Genkin 2011; Dobrynin, et. al. 1999; Kalinina and Ovechkina 2015; Kapeliushnikov and Lukianov 2010; Koritskiy 2011; Korchagin 2005; Kundius and Podoliak 2007; Kurganskiy 1999; Mau 2012; Stadnik, et. al. 2011; Stukach, et. al. 2013; Labor and Employment in Russia. Collection of Statistical Works; Tsyrenova and Tsyrenova 2011; Shelkovnikov, et. al. 2015).

2. METHODOLOGY

The goal of the research is to analyze the provision of highly qualified agricultural managers and specialists of the Novosibirsk Region, as well as to define the need in highly qualified personnel of the region agriculture.

The object of the research is the relations that arise when forming and using the human capital in the agrarian sector of economy.

The subject of the research is factors and tools related to forming and improving the efficiency of using the human capital in the agrarian sector of economy.

The object of observation is rural inhabitants, agricultural organizations, and state agricultural regulatory bodies of the Novosibirsk Region.

The work will use the following methods of research: informational, expert estimation, statistical, analytical, abstract and logical, causative-consecutive, economic and mathematic, graphic, etc.

Theoretic and methodological basis includes scientific works of national and foreign researchers on the problem under study, legislative and regulatory acts of the Russian Federation, including the Novosibirsk Region, recommendations of research establishments, materials of the Ministry of Agriculture of the Novosibirsk Region, program documents and reports of agricultural organizations, data of the inquiry of citizens of agricultural territories of the Novosibirsk Region, statistical data of the Territorial Body of the Federal Service of State Statistics and Department of Labor and Population's Employment of the Novosibirsk Region.

3. RESULTS

1. Today the development of the human capital is one of the most important factors when improving the efficiency of economic processes, as well as increasing the competitiveness of economic areas. Benefits from the human capital considerably exceed benefits from the physical capital. Employees with a high level of education have a smaller risk to remain unemployed during the economic crisis. They have a bigger competitive advantage on the labor market.
2. Creation and development of the human capital in the agriculture is related to the technological development of the area. The development of scientific technologies stipulates the need to distribute and increase requirements to the professional level of employees that would comply with the conditions of the modern development of the area.
3. The decrease in agricultural production in the Novosibirsk Region caused the release of labor resources. A high level of unemployment and lack of work in the rural area contribute to considerable outflow of labor resources to the urban area. In addition, young specialists are afraid of arduous working conditions and low salary in agriculture. The reduction of the number of employees is related to the steady decrease in livestock on farms, as well as to the implementation of automation technologies in organizations. In the future the problem of the deficit in personnel will only worsen. It is stipulated both by the reduction of the number of rural population of employable age or younger, and stigma of labor in the area.
4. Over the recent decade it has been possible to observe unchangeable ageing of the personnel: the number of retired managers and specialists increases, and the level of the qualification of the agrarian managers decreases. Today 69% of managers and 46% of specialists have a higher professional education. At the same time the number of managers without a special education increases. The number of managers of enterprises of the agro-industrial complex who attended occupational and advanced retraining decreased. Thus, in 2014 only 4.6% of the total number of managers and specialists improved their skills in the system of professional education. The breakdown of the age structure of regular labor force is registered: the number of young people aged up to 30 years old is only 14.5%. There is a strongly marked deficit of regular labor forces. Herewith, it is now when every third young person in the village does not have a profession, does not study, and does not have a job.
5. In order to provide the agriculture with high quality indicators of the human capital, it is necessary to take a number of measures on attracting young people to agrarian higher educational establishments. Firstly, this is the increase in the material motivation by state bodies, and improvement of the social infrastructure of the rural area. Secondly, it is necessary to reconstruct the system of reallocating graduates of higher educational establishments at enterprises as it used to be before. Thirdly, it is necessary to establish close relations between managers of

regions and agricultural organizations where it is possible to observe a severe shortage of employees. They must pay a scholarship to the appointed students. Fourthly, this is the contract education that guarantees a job to the graduate after graduating from the higher educational establishment. Fifthly, it includes active advertising activity and further improvement of the reputation of the university and departments.

4. DISCUSSION

4.1. Basic Conditions Affecting the Formation of the Human Capital in the Rural Area of the Region

A great number of factors have an impact on the formation of the human capital. The most important ones include education, intellectual level of development, quality of life, level of medical service of the population, sophistication of the social infrastructure, and development of new technologies.

Creation and development of the human capital in the agriculture is related to the technological development of the area. The development of scientific technologies stipulates the need to distribute and increase requirements to the professional level of employees that would comply with the conditions of the modern development of the area.

Thanks to the agro-industrial complex, the country ensures its food safety, because it is the agriculture that produces vitally important food. The development of high quality indicators of the human activity is the most urgent problem for the country's economy, including for the Novosibirsk Region.

It is necessary to note that with a flow of life the level of tear and wear greatly affects the human capital. Thus, the obtained professional knowledge outmodes with time, and the individual's health gets worse when he gets older. In this case the phrase of one of literature characters is much appropriate: "In order to stay up, it is necessary

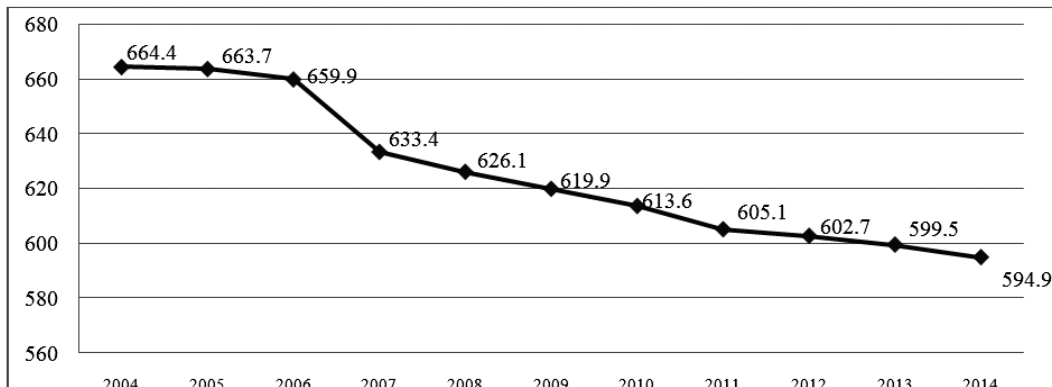


Figure 1: Dynamics of Rural Population Size in the Novosibirsk Region in 2004-2014

to run by main force. And in order to move forward, it is necessary to run twice faster". Thus, in order to provide the human capital on a high level, it is necessary to constantly take a number of particular specific measures. It is necessary to note that any investments in the development of human capital contribute only to his further development. For the considered period the size of rural population has decreased by above 11%. The basic reason is the population's migration to the urban area (Figure 1).

According to the consolidated return of agricultural organizations of the Novosibirsk Region, there is a decrease in the general average yearly number of the employees of agricultural enterprises by 46.1%. Thus, there is a decrease in the number of employees involved in agriculture. In the Novosibirsk region where the average annual number of people involved in the economy is 1,352.1 thous. people, and 112.9 thous. people are involved in agriculture. It is 8.4%.

Trading is the most leading sector according to the number of population involved in the economy. The agrarian sector holds position 5. Thus, to compare, 283.6 thous. people are involved in wholesaling and trading, 176.7 – in the processing production, 133.1 – in the transportation and communications sector, 144.0 – operations with real estate, rent, and services provision, and 112.9 thous. people – agrarian sector (Agriculture, Hunting and Forestry, 2015).

Considering the level of life and the level of the population's incomes in the region, it is necessary to take into account the poverty level and salary (Table 1).

For the period from 2009-2015 the poverty level increased 1.6 times and was RUB 10,451. The minimum salary in the Novosibirsk Region increased by 73%.

Up to 2011 the Novosibirsk Region displayed the growth of the ratio of the population with the incomes that are below the poverty level. However, starting from 2011, it started decreasing.

The average salary in the economy of the Novosibirsk Region increased by 62.5%, and was RUB 27,327.2. It almost 3 times surpasses the poverty level.

The increase in the average salary in agriculture for the period under analysis was 100%. It surpasses the poverty level in the region only 1.6 times. If we take into account that the poverty level of the Novosibirsk Region citizens is RUB 10,451, and the salary is RUB 14,825, it is possible to make a conclusion that this salary is not enough for the productive life of employees and their family members. The average salary of agricultural employees is twice lower than the salary as a whole in the economy.

Considering the average monthly salary of employees of the Novosibirsk Region according to the types of economic activity, it is possible to make a conclusion that the salary of employees of the agrarian sector is the most low-paid (Table 2). The employees involved in the financial sector have the highest salary - RUB 48,448.5, those working in the transportation sector - RUB 31,190.3.

Table 1
Level of Salary of Employees of the Novosibirsk Region in 2009-2015,
thous. persons

<i>Indicators</i>	2009	2010	2011	2012	2013	2014	2015
Poverty level	5,391.0	6,000.0	6,482.0	6,989.0	7,764.0	8,234.0	10,451.0
Minimum salary	7,000.0	7,800.0	7,800.0	7,800.0	9,030.0	9,030.0	9,030.0
Average salary in the economy	16,798.5	18,229.7	20,308.5	23,245.8	25,527.9	27,231.0	27,327.2
Average salary in agriculture	7,576.8	8,497.1	10,165.7	11,475.1	12,892.4	14,129.0	5,724.3
Share of population with the income that is lower than the poverty level, %	16.2	16.7	16.5	14.1	15.3	16.2	17.3

Table 2
Average Monthly Salary of Employees of the Novosibirsk Region according to
Types of Economic Activity in 2008- 2014, RUB

<i>Type of economic activity</i>	2008	2009	2010	2011	2012	2013	2014
Total in the economy	15,713.6	16,798.5	18,229.7	20,308.5	23,245.8	25,527.9	27,231.0
agriculture, hunting and forestry	6,591.2	7,576.8	8,497.1	10,165.7	11,475.1	12,892.4	14,141.3
Financial activity	37,592.6	34,199.8	38,577.7	43,645.1	46,436.4	49,146.6	48,448.5
Transportation and communications	18,865.8	20,666.9	22,873.9	25,336.4	27,884.8	29,908.7	31,190.3
Production and allocation of electrical power, gas and water	16,280.3	17,389.8	19,181.3	22,006.4	23,824.0	26,248.8	29,040.0
Education	11,500.0	13,716.8	14,318.1	15,561.8	18,319.0	22,246.7	25,560.1

Thus, the agriculture is the most low-profit sector. In spite of the fact that over the recent few years the decrease of this arrearage has been observed, the salary of employees of the agrarian sector is much lower than in other sectors of economy.

4.2. Impact of Social Infrastructure in the Human Capital of Agricultural Employees

The agriculture is that area where the personnel's potential is extremely important. The current level of salary cannot get employees interested in the production activity results. The low salary causes the fact that every year the total number of rural population prefer to work in other, better paid areas. Very often they are young and ambitious people.

In addition to the low material interest of employees, a lot of young specialists are afraid of the state of public services and amenities in the rural area. This state defines the person's health and quality of his life, as well as habits and peculiarities of spending his spare time. As Table 3 shows, the public services and amenities related to the residential fund differ in the urban and rural area.

The third factor lies in the fact that the quality and number of the services offered in the village lag behind similar urban services. Above all, especially it affects the level of the rural population's payment capacity.

Table 3
Public Services and Amenities of the Residential Fund of the
Novosibirsk region for 2009 – 2014 (in %)

	2009	2010	2011	2012	2013	2014
Urban area						
Ratio of the residential area equipped with: public water supply	87.8	88.0	88.4	88.5	88.9	89.6
sewerage	84.9	85.2	85.7	85.9	86.1	86.7
central heating	83.7	83.5	83.6	83.3	83.3	83.7
baths	78.3	78.5	78.8	78.8	79.1	79.8
gas	17.7	17.8	17.8	17.9	18.3	18.5
hot water	75.3	75.5	75.8	75.6	75.9	76.6
floor hot plates	69.9	70.2	70.9	70.9	71.1	72.1
Rural area						
Ratio of the residential area equipped with:public water supply	46.2	48.0	48.2	48.5	57.4	63.0
sewerage	32.1	33.2	33.6	33.7	37.0	35.7
central heating	23.8	24.0	23.9	23.8	20.5	18.5
baths	18.4	18.4	18.4	18.4	19.5	21.4
gas	66.5	63.9	65.5	65.1	60.8	58.6
hot water	11.5	11.5	11.5	11.5	13.4	10.3
floor hot plates	12.4	12.7	12.7	12.8	20.2	22.9

The increase in the quality of the services provided to the population depends on such economic factors as the level of the population's incomes, financial opportunities of establishments themselves, as well as state support of the rural area (Table 4).

Table 4
Indicators of the Social Infrastructure of the Rural Area of the Novosibirsk Region in 2005–2013

Indicator	2005	2009	2010	2011	2012	2013
Rural residential fund in total, area of apartments, thous. sq. M.	12,082.6	12,585.1	12,663.2	12,854.2	13,029.8	12,865.2
Pre-school establishments in total, units	325	306	301	284	275	266
General educational establishments in total	-	-	693	682	665	646
Generally accessible (public) libraries	717	716	716	329	330	331
Cultural and leisure establishments	580	1,064	1,061	1,050	1,053	1,035
Cinema units	312	173	160	109	94	88
Museums	9	11	11	7	8	8
Sports facilities in total	1,495	1,710	1,770	1,733	1,923	1,937

The remoteness of the inhabited locality from the city or central roads is extremely important for the development of the social infrastructure. Remoted areas are peculiar of gradual dying of social infrastructures, and transportation isolation. At the enterprises related to the social infrastructure the capital tends to turnover slowly.

This factor affects the interest of private entrepreneurs to invest their capital in the infrastructure. Today public authorities of the subjects of the Russian Federation solve the majority of issues related to the social area, and social area is financed on leftovers.

The economic state of agriculture remains deflationary regardless of a number of relevant supporting measures from the Government of the Russian Federation.

The implementation of the State Program on Developing Agriculture for the Period of 2013-2020 undoubtedly requires considerable investments and development of measures to form the personnel for the agrarian sector.

The agricultural production must be subsequently increased with the availability of all production resources such as land, labor and capital.

These were economists of the classical political economy who had singled out the fourth separate factor of production – entrepreneurial ability. The essence of this factor is in the person's ability to combine economic resources to obtain the maximum efficiency of production. As the experience shows, economic achievements and economic growth of many countries directly depends on the formed human capital.

4.3. Basic Indicators Related to Providing Agriculture of the Novosibirsk Region with the Qualified Personnel

When estimating the human capital of agricultural employees, the basic indicators include the level of education and age of employees. Young employees contribute to the improvement of the area, increase in the labor efficiency, growth of the economic efficiency, etc. (Reforming and Increasing Efficiency of Agrarian Production by Retraining Management and Specialists on the Basis of Perspective educational Programs).

We will start analyzing the level of provision with highly qualified agricultural personnel with estimating the management, because it is the management that includes planning, control and motivation. The latter is extremely important when setting and achieving goals. A good manager must be a professional in his business. In order to become the one, it is necessary to constantly improve knowledge and skills to succeed in undertakings. In addition, a good manager must be an exemplar for his employees, a specialist one can always address for advice (Novosibirsk Region in Figures).

In the Novosibirsk region 77% of agricultural managers have a higher education, 16% - dual education, 7% - only basic education (Figure 2).

For the researched period, it is possible to observe obvious ageing of managing personnel. Considering the age composition of top management, it is possible to make a conclusion that the greatest number of managers is retired. In particular, the increase in the number of pensionary managers comes with the decrease in the number of managers aged up to 40 (Statistical Annual. Novosibirsk region, 2014). It is related to the reluctance of young people to work in the rural area.

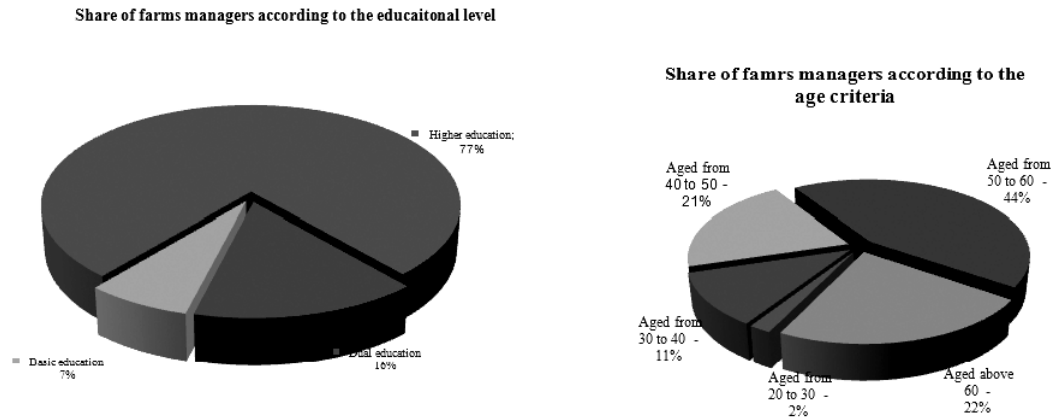


Figure 2: Educational Level and Age of Organizations Managers in the Agro-industrial Complex of the Novosibirsk Region

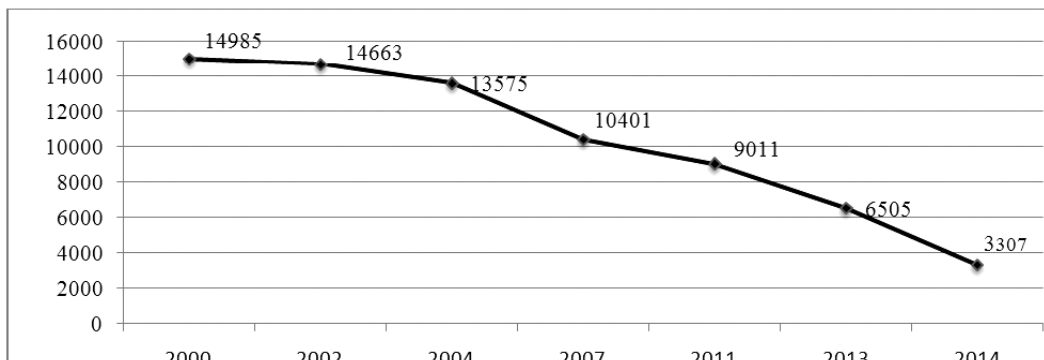


Figure 3: Dynamics of the Number of Managers of the Agro-industrial Complex of the Novosibirsk Region for the Period of 2000-2014, thous. persons

Age groups are allocated as follows:

- Managers from 20 to 30 years old – 1.9 %;
- Aged from 30 to 40 years - 11%;
- Aged from 40 to 50 years - 21%;
- Aged from 50 to 60 years - 44%; and
- Aged above 60 years old - 22%.

Figure 3 shows that over the recent 15 years the agriculture has been displaying the negative tendency to decrease the number of managers and specialists.

Further we will analyze the specialties related to the agrarian sector. Only 77% of agronomists have higher education, and 23% have dual education. The majority of employees are aged above 50 years old – 35%. The need in agronomists up to 2020 will be 38 persons (Figure 4).

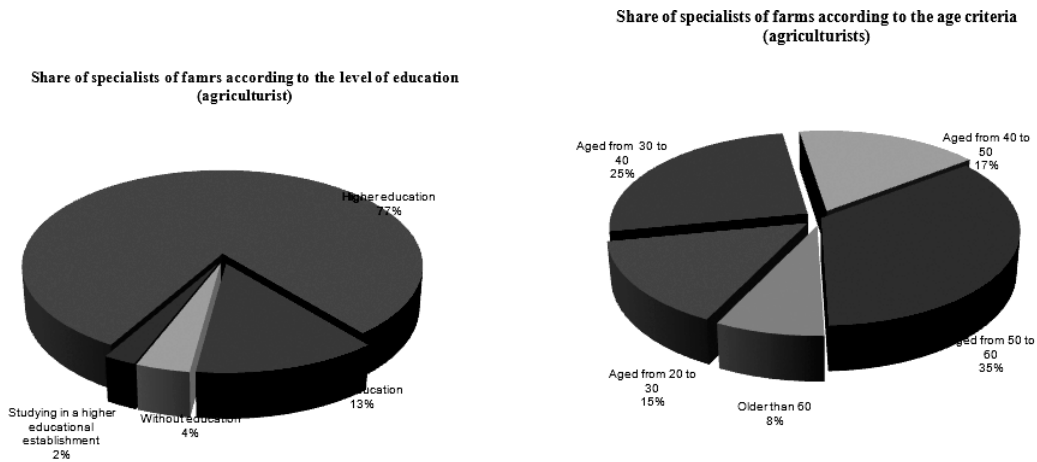


Figure 4. Educational Level and Age of Agriculturists of Organizations of the Agro-industrial Complex of the Novosibirsk Region

Considering the qualification structure of the agriculturists, it is possible to conclude that 52% have a higher education, 13% of employees do not have any education, and 30% of employees are aged above 50. In the nearest years the need in agriculturists is 26 persons (Figure 5).

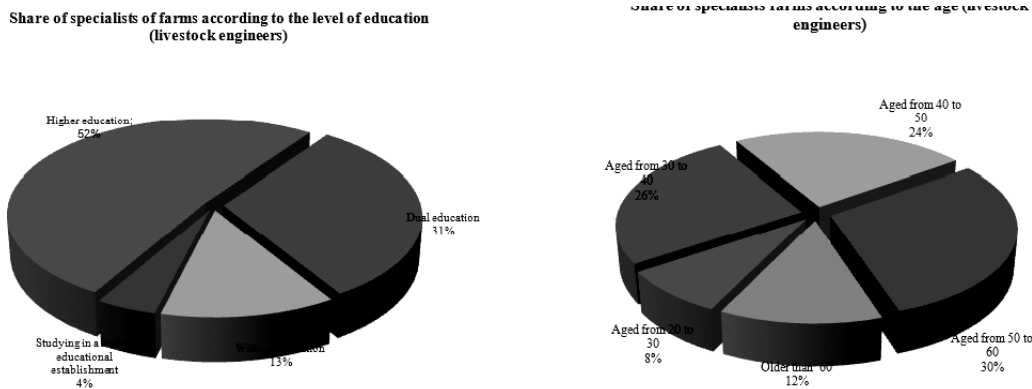


Figure 5: Educational Level and Age of Livestock Engineers of Organizations of the Agro-industrial Complex of the Novosibirsk Region

43% of engineers have higher education. The age of chief engineers is between 30 and 50 years old. Almost half of employees have been retired. The need in engineers is 46 persons (Figure 6).

The situation with veterinarians is a bit better: 50% of veterinarians have a higher education, and 15% perform their professional activity without education. The overwhelming majority of specialists are from 30 to 50 years old – 27% (Labor and

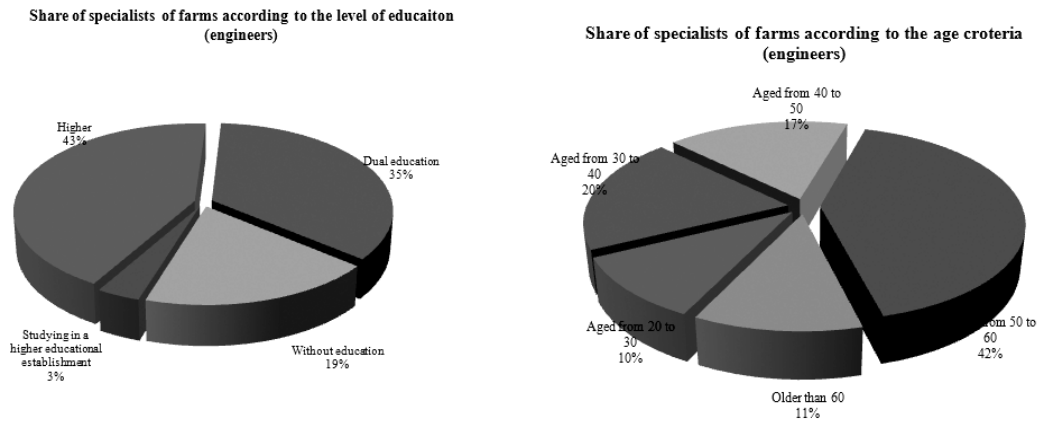


Figure 6: Educational Level and Age of Engineers of Organizations of the Agro-industrial Complex of the Novosibirsk Region

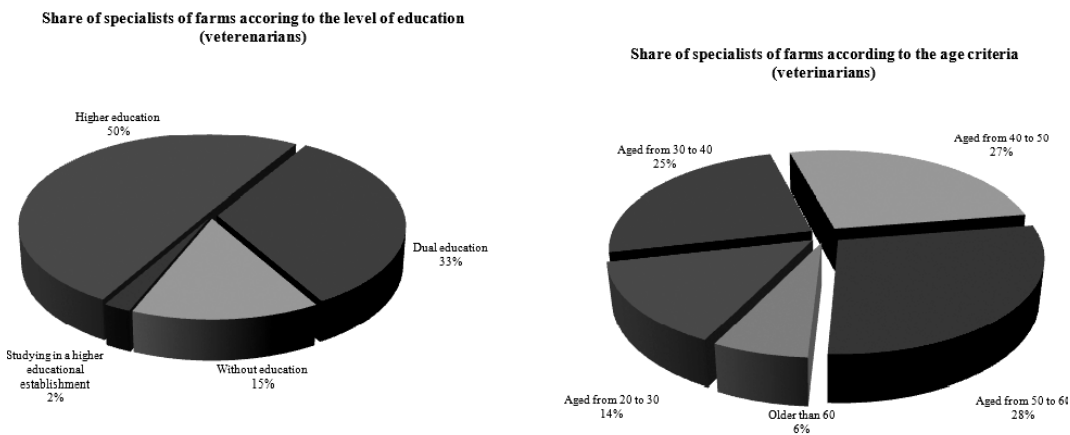


Figure 7: Educational Level and Age of Veterinarians of Organizations of the Agro-industrial Complex of the Novosibirsk Region

Employment in Russia, 2015). The need in veterinarians to successfully implement the State Program on Supporting Agriculture is 27 persons (Figure 7).

The degree of saturation with the graduates of basic services of agricultural organizations tends to decrease. Over the latest decade the number of employees has decreased by above 50%. It goes without saying that the most important reason of worsening of the personnel potential is low social and professional safety.

4.4. Defining the Need of Agricultural Employees in Qualified Personnel in the Novosibirsk Region up to 2020

Indicators of the level of education as a basic component of the human capital do not allow to fully estimate the provision with qualified employees, because it is necessary

to allocate them according to the region territory. In the Novosibirsk region the most favorable situation is in the Vengerovskiy, Iskitimskiy, Kolyvanskiy, Krasnozerskiy, Kuybyshevskiy, Novosibirskiy, and Toguchinskiy areas.

The research showed that the qualification structure of the managing personnel had the following indicators: the share of managers who had higher education was 77.5%, dual education – 15.4%, without education – 7%. The majority of managers with the higher education are found in large regional centers with the developed infrastructure (Table 5).

Table 5
Analysis of Education and Age of Managers of the
Agrarian Sector of the Novosibirsk Region in 2014

Regions	Total number of managers	Education			Age, years old				
		Higher	Dual	Other	From 20 to 30	From 30 to 40	From 40 to 50	From 50 to 60	Older than 60
Baganskiy	12	10	-	2	-	1	3	6	2
Barabinskiy	9	8	1	-	-	1	2	4	2
Bolotninskiy	13	7	3	3	1	2	4	4	2
Vengerovskiy	19	15	3	1	1	-	2	10	6
Dovolenskiy	9	5	3	1	1	-	3	5	-
Zdvinskiy	13	8	4	1	-	2	2	8	1
Iskitimskiy	21	20	1	-	-	3	6	8	4
Karasukskiy	13	11	2	-	-	3	1	5	4
Kargatsiy	7	6	1	-	-	1	-	3	3
Kolyvanskiy	14	13	1	-	-	2	4	4	4
Kochenevskiy	13	13	-	-	1	2	6	4	-
Kochkovskiy	10	9	1	-	-	2	2	5	1
Krasnozerskiy	22	16	2	4	1	4	3	7	7
Kuybyshevskiy	23	19	3	1	-	1	7	11	4
Kupinskiy	17	14	2	1	-	-	1	11	5
Kyshtovskiy	12	6	6	-	-	1	3	5	3
Maslianinsky	4	3	1	-	-	1	-	2	1
Moshkovskiy	13	9	3	1	-	1	4	6	2
Novosibirskiy	38	32	4	2	-	6	13	10	9
Ordynskiy	8	6	2	-	-	-	-	4	4
Severny	10	3	4	3	-	-	2	5	3
Suzunskiy	13	12	-	1	1	2	1	6	3
Tatarskiy	12	7	2	3	1	1	3	4	3
Toguchinskiy	26	22	4	-	1	2	4	14	5
Ubinskiy	7	5	2	-	-	-	-	6	1
Ust-Tarskiy	13	10	3	-	-	1	5	4	3
Chanovskiy	16	8	3	5	-	2	1	7	6
Cherepanovskiy	13	12	1	-	-	2	2	6	3
Chistoozerny	14	12	1	1	-	3	2	6	3
Chulymskiy	7	5	2	-	-	1	1	4	1
Total	421	326	65	30	8	47	87	184	95

Due to the defined prospects of the agricultural production development, the need in professional personnel for the period from 2015 to 2020 was forecasted in order to implement the project of the departmental special-purpose program (Departmental State target Program of the Novosibirsk Region)- State Program of the Novosibirsk region "Stable Development of Rural Territories of the Novosibirsk region for 2015-2017 and for the Period up to 2020" (Table 6).

The Novosibirsk Region implements a number of residential programs aiming at assisting inhabitants in purchasing and constructing residential property. Thus, according to law on state support of agricultural production in the Novosibirsk region No. 61 dated 07.11.2011 and No. 140, the residential property is constructed for specialists who work in agricultural organizations.

The Novosibirsk Region supports higher, professional and additional professional educational establishments on the state level:

- 1) For professional training, re-training, and improvement of qualification of managers and specialists of agricultural organizations, agricultural consumer co-operatives, members of peasant' (farmers') holdings,
- 2) For training students according to agricultural specialties one the purposeful contract basis.

Table 6
Need in Agricultural Specialists up to 2020

Specialty	According to the staff schedule	Actually	Education			Needed up to 2020				
			Higher	Dual	Other	2016	2017	2018	2019	2020
Agronomist	333	258	208	34	12	92	43	48	40	38
Zootechnician	248	204	105	64	29	101	31	24	21	26
Veterinarian	320	282	142	93	43	96	37	27	35	27
Mechanic engineer	326	286	122	100	54	70	49	43	38	46
Accountant	836	760	332	250	83	116	71	56	52	56
Economist	205	165	124	38	1	60	21	26	26	23
Lawyer	60	50	48	1		27	7	6	6	5
Total in the region	2333	2006	1069	668	221	550	261	230	208	222

According to the law, young specialists who obtained tertiary education are provided with one-time payment:

- RUB 30,000 for young specialists employed within a year since the graduation at agricultural organizations in areas of the Novosibirsk region located on the territory remoted above 300 kilometers from Novosibirsk, and RUB 20,000 – on the territory remoted up to 300 kilometers from Novosibirsk.

In addition, during two years young specialists are paid from RUB 2 to 4 thousand on a monthly basis.

Managers of agricultural organizations who have worked in this office for not less than 15 years, achieved the pensionable age, and were retired according to the age from this office get the long-service pension in addition to the old-age retirement pension in the amount of nine minimum wages based on the standard amount defined by the federal legislation for social payments taking into account the regional index (The Law of Regional, 2006).

In spite of the state support, the agrarian sector lacks a system of motivations for young people. Material interest must be provided by increasing the employees' income, and improving the rural infrastructure, particularly, improving residential conditions, leisure events, and social infrastructure, as a whole.

Taking into account insufficient prestige of agro-technical areas among young people, it is necessary to pay special attention to continuous career-guidance activity. It is necessary to establish specialized agro-technical forms in comprehensive schools. Pupils' production brigades are an important area of the career-guidance work. Firstly, pupils and their teachers obtain a theoretical block of knowledge in a higher educational establishment, and then they perform their practical activity at one of farms. Pupils are trained in such areas as milkers, gardeners, crop producers, etc. According to the results of the regional meeting, a team is formed to represent the region on the all-Russian level.

In the system of secondary education, it is necessary to establish a Faculty of Pre-university Training, define several areas for training, and invite pupils of the 10th form who want to build a career in the agro-industrial complex to specialized forms. It is necessary to make the basic emphasis on studying scientific subjects, and performing scientific and research works with teachers of higher educational establishments. For the period of studying pupils can adapt to the students' life, explore themselves in panel games, musical and art subdivisions.

The graduates who have successfully passed the final test have a privileged right to enter the department they choose.

In order to improve the pupils' awareness, it is offered to implement the program of a summer agrarian school in the region. At classes of the summer school it is offered to show the modern equipment used for the technological process. It is also suggested to introduce lessons on zootechnics and veterinary science, as well as to arrange excursions to the leading farms of the Novosibirsk Region. As the experience shows, a lot of school children who live in cities have never seen cows and other animals. Due to the above, the summer agrarian school is required for the selection of the further career. This project can become interesting for school children and increase the prestige of agrarian professions. It is critically important to form the situation when only those young people who do want to work in the agrarian sector enter agrarian higher educational establishments.

It is necessary to develop social advertising in federal mass media aiming at improving the prestige of rural territories.

5. CONCLUSION

It is impossible to consider the development of the human capital separately from the social and material needs of the individual. It is an obligatory condition for the development of the human capital to meet physiological, material and moral needs of the person. If it does not happen, the human capital moves to another area of activity. Thus, there is an acute need to create basic conditions for developing the human capital in the agricultural sector.

Insufficient level of education causes the impossibility to fully use the animals' potential, correctly handle and deal with livestock breeding. Low level of education among veterinarians causes the fact that animals' diseases are often diagnosed incorrectly, animals are not entirely vaccinated, and preventive measures are not fully taken.

Thus, in order to provide the agriculture with high quality indicators of the human capital, it is necessary to take a number of measures on attracting young people to agrarian higher educational establishments. Firstly, this is the increase in the material motivation by state bodies, and improvement of the social infrastructure of the rural area. Secondly, it is necessary to reconstruct the system of reallocating graduates of higher educational establishments at enterprises as it used to be before. Thirdly, it is necessary to establish close relations between managers of regions and agricultural organizations where it is possible to observe severe shortage of employees. They must pay a scholarship to the appointed students. Fourthly, this is contract education that guarantees a job to the graduate after graduating from the higher educational establishment. Fifthly, it includes active advertising activity and further improvement of the reputation of the university and departments.

Active involvement of young people in science is an important step on the way to improve the level of agrarian education. The interest in scientific research must be formed with students starting with the first course of studying. In order to monitor scientific activity of students, it is necessary to make up a register of scientific achievements. The most assiduous and talented students must be motivated to take their post-graduate studies at universities.

In the future it is necessary to develop basic perspectives of developing the human capital in agriculture of the region by active implementation of the target contract training of specialists both at the expense of state budget and employers. It will be rather reasonable to rely on the state budget when offsetting the personnel deficit in agriculture.

References

- Agriculture, Hunting and Forestry, (2015), Moscow: Rosstat, pp. 203
Departmental State target Program of the Novosibirsk Region "Stable Development of Rural

- territories in the Novosibirsk region for 2015-2017 and for the Period up to 2020" of 07.04.2016.
- Dobrynin, A.I., Diatlov, S.A. and Tsyrenova, E.D., (1999), *Chelovecheskiy kapital v tranzitivnoy ekonomike: formirovanie, otsenka, effektivnost ispolzovaniya* [Human Capital in Transitive Economy: Formation, Estimation, and Use Efficiency]. Saint-Petersburg: Science, pp. 309.
- Genkin, B.M., (2011), *Ekonomika o sociologiyatruda* [Economics of Labor Sociology]. International Bulletin of Experimental Education, 7, 97-100.
- Kalinina, L.A. and Ovechkina, E.P., (2015), *Metodicheskoy podhod k otsenke chelovecheskogo kapitala selskogo khozyaystva* [Methodological Approach to Estimating Human Capital in Agriculture]. Kazan Science, 11, 70-75.
- Kapeliushnikov, R.I. and Lukianov, A.L., (2010), *Transformatsiya chelovecheskogo kapitala v Rossiyskom obshchestve* [Transformation of Human Capital in the Russian Society]. Moscow: Liberal Mission Fund, pp. 189.
- Koritskiy, A.V., (2011), *Chelovecheskiy kapital kak faktor ekonomicheskogo razvitiya v regionakh Rossii* [Human Capital as a Factor of Economic Development of the Russian Regions]. Saarbrücken: Lambert Academic Publishing, pp. 472.
- Korchagin, Yu.A., (2005), *Rossiyskiy chelovecheskiy kapital: faktor razvitiya ili degradatsiya?* [Russian Human Capital: Factor of Development or Degradation?]. Voronezh: TSIREË, pp. 2.
- Kundius, V.A. and Podoliak, G.A., (2007), *Problemy motivatsii trudarabotnikov selskogo khozyaystva* [Problems of Motivating Labor of Agricultural Employees]. Bulletin of the Altai State Agrarian University, 8, 66 – 70.
- Kurganskiy, S.A., (1999), *Chelovecheskiy kapital: suchnost, struktura, otsenka* [Human Capital: Essence, Structure, and Estimation]. Irkutsk: IGEA, pp. 304.
- Labor and Employment in Russia. Collection of Statistical Works, (2015), Moscow: Rosstat, pp. 246.
- Mau, V., (2012), *Chelovecheskiy kapital: vyzovy dlya Rossii* [Human Capital: Challenges for Russia]. Issues of Economy, 7, 114-132.
- Novosibirsk Region in Figures. 2010-2013: Short Statistical Collection of Data, (2014), Novosibirsk: Rosstat, pp. 42.
- Reforming and Increasing Efficiency of Agrarian Production by Re-training Management and Specialists on the Basis of Perspective educational Programs, (2001), Materials of the International Scientific and Production Conference. Saint-Petersburg: AMA NZ RD, pp. 228.
- Shelkovnikov, S.A., Kuznetsova, I.G. and Petuhova, M.S., (2015), *Ispolzovanie chelovecheskogo kapitala v selskom khozyaystve Novosibirskoy oblasti* [Use of the Human Capital in Agriculture of the Novosibirsk Region]. Economy and Entrepreneurship, 5 (1) (58-1), 289-292.
- Stadnik, A.T., Shelkovnikov, S.A., Stadnik, S.A., Dog, T.-E. and Grigoriev, N.V., (2011), *Dolgosrochnoe razvitiye selskogo khozyaystvennogo proizvodstva na regionalnom urovne* [Long-term Development of Agricultural Production on the Regional Level]. Agro-Industrial Complex: Economy, Management, 7, 31-34.

Statistical Annual. Novosibirsk region, 2014, (2015), Moscow: Rosstat, pp. 74.

Stukach, V.F., Sychevskaya, L.A. and Zinich, A.V., (2013), *Adaptatsiamolodezhy k rynkuagrarnogotruda* [Adaptation of the Youth to the Market of Agrarian Labor]. Omsk: IPCSfera LLC, pp. 160.

The Law of Regional "On State Support of Agricultural Production in the Novosibirsk Region" of 8.12.2006 #61 – OZ(as amended on 07.11.2011 # 140 – OZ).

Tsyrenova, E.D. and Tsyrenova, v A.R., (2011), *Gosudarstvennoeregulirovaniyachelovecheskogokapitala v postkrizisnoyekonomike* [State Regulation of the Process Related to Forming the Human Capital in the Post-Crisis Economy]. Bulletin of VSGUTU, 2 (33), 31 –35.

Virina, I.V., (2007), *Formirovanieirazvitiekonkurentosposobnostimolodyhspecialistovnarynketruda* [Formation and Development of Young Specialists' Competitiveness on the Labor Market]. Abstract of the Ph.D. thesis. Moscow State University, Moscow, p. 23.