

## Staffing for the modernization of agriculture in the northern and Arctic territories (case study of the Komi Republic)\*

*The article substantiates the necessity of modernization and the role of highly qualified personnel in the technological and socio-economic development of the agrarian sector in the Komi Republic. The article considers the provision of agriculture with personnel in the pre-reform period and describes the current situation concerning the professional level of managers, specialists of agricultural enterprises and workers of mass professions. The factors impeding the retaining of personnel in rural areas have been revealed. Besides, the article proposes a set of managerial, organizational and economic measures for the staffing of modernization and innovation development of agricultural production.*

*Modernization, staffing, human potential, agriculture, agrarian enterprises, rural periphery, Arctic territories, Komi Republic.*



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### The need to modernize agricultural production in the Komi Republic

Modernization of agricultural production in the republic is conditioned by the necessity to overcome its technological and engineering backwardness, to enhance its positions in the provision of population with local agricultural products, the necessity to create competitive advantages on the local and regional markets, to use natural and human capital rationally, improving the level and quality of life of agricultural workers.

In the course of transformation of market relations and agrarian reforms, the Northern territories faced the deterioration of facilities, equipment and infrastructural base in agri-

culture, the reduction in areas under crops, cattle population and the number of agricultural workers; production of all kinds of agricultural products declined, as well as the standard of living of rural community [1].

Basic production assets in cattle breeding in the Komi Republic are worn out by 70%, due to a sharp reduction in the construction and reconstruction of facilities. The number of tractors in agricultural organizations in 1990–2011 decreased 7.2-fold, seeding machines – 8.6-fold, balers – 11.1-fold, solid organic fertilizer applicators – 24.4-fold, liquid organic fertilizer applicators – 10.6-fold, milking machines – 10.9-fold, the amount of energy facilities – 5.4-fold.

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The manifold reduction in the purchases of machinery and equipment adversely affected their upgrading. The retirement rate of machinery 1.5–2 times exceeds the rate of its renewal. Consequently, the equipment and machinery are rapidly ageing. Agricultural organizations have only 4% of tractors aged under 3 years, and the share of vehicles aged 9 years and over amounts to 84%; the figures are 8% and 75% respectively concerning farms and individual entrepreneurs.

During the years of reforms, the commissioning of production facilities for cattle decreased 7 times, land clearing stopped in the early 2000s, land reclamation hasn't been carried out since 2007. The application of mineral fertilizers related to 100% of nutrients per 1 ha of crops decreased from 135 kg in 1990 to 22 kg in 2011, application of organic fertilizers – from 18 to 4.2 tons, respectively.

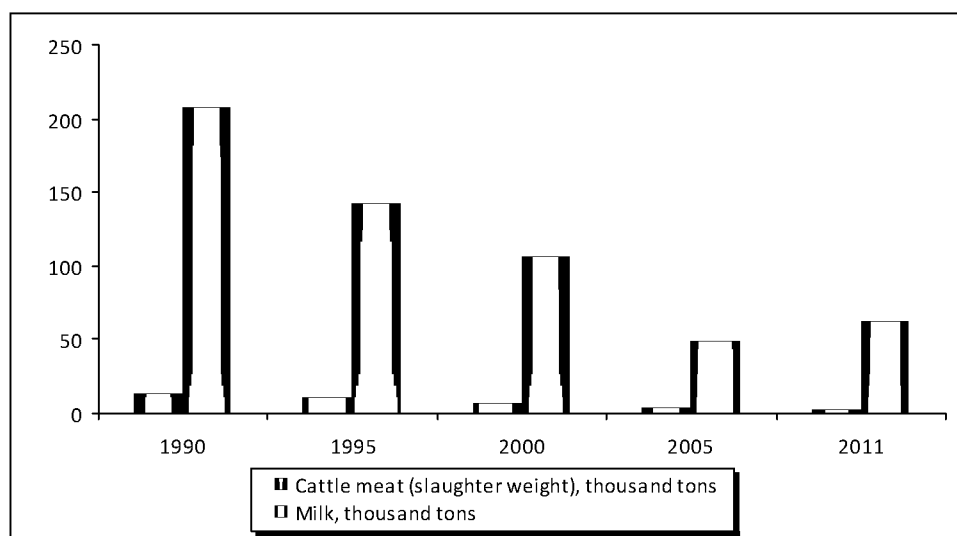
Milk production in all categories of farms declined 3.3-fold, beef and veal production – 4.6-fold (*fig. 1*). The drop in production output was especially significant at collective farms: the production of milk declined 9.2-fold, meat –

22.5-fold, potato – 30.1-fold, vegetables – 108.3-fold. Decline in production has been caused by the decrease in the area of arable land and livestock population.

One should bear in mind that agriculture fulfills diverse economic functions. It provides people with fresh wholesome food, promotes the development of the food industry, stabilizes employment and prevents monopolization of local food markets by individual suppliers of products, controls food prices thus enhancing the standard of living of the region's population. Agriculture preserves the traditional lifestyle of rural population, spirituality, culture, traditions of indigenous peoples, improves the demographic situation, population's settlement, conservation of environment and natural landscapes. Agriculture also satisfies the recreation needs of society (rural tourism).

The current trends in the agricultural sector may lead to the elimination and reduction of rural Northern territories that have been inhabited for centuries. Modernization is the

Figure 1. Production of milk and cattle meat in all categories of farms in the Komi Republic for 1990 – 2011, thousand tons



key factor in overcoming the crisis situation in agriculture. An important role in enhancing modernization and innovation development of agriculture belongs to highly qualified workers, managers and specialists.

Staffing, as a complex socio-economic phenomenon of social production, being its mandatory component at all management levels, is characterized by a variety of external and internal relations and performed functions [2]. The basic problem of personnel policy consists in the socio-professional orientation of the younger generation toward qualified labour in agriculture, as well as the selection, education, retraining and improvement of qualification of employees, their placement in accordance with their abilities and knowledge, their retaining at the chosen workplace, labour motivation of managers, specialists and representatives of mass working professions.

#### **Staffing of agriculture in the pre-reform period**

The 1960s–1980s was the most favourable period in the history of agriculture development of the Komi Republic. Annual average growth rate of gross production amounted to 4.3%, and labour productivity in the public sector grew by 4.4% per year [3] as a result of facilities and infrastructure upgrading and personnel potential improvement. The enhancement of the conditions and standard of living of rural population, bringing them closer to those of urban residents, was the major area of social policy.

The level of agricultural labour mechanization was steadily increasing, progressive trends were observed in educational and professional level of agricultural workers, in the development of villages; there was an increase in aggregate income of rural families, its level was approaching urban indicators. In 1989, the average monthly wages of agricultural workers in relation to the average in the region's economy was 81%. The employment of population was no problem at all.

The training of qualified personnel for agriculture in these years was mainly carried out at vocational schools and directly on site: at state farms, training centres of the Ministry of Agriculture and the USSR State Committee for Technology and Infrastructure Support of Agriculture (Goskomselkhoztekhnika) that had a network of training facilities on the basis of district associations, and in rural secondary schools. In the mid-1980s agriculture received about 2.3 thousand qualified workers annually. The distribution of people by professions calculated per 1000 of workers trained for agriculture each year was as follows: tractor-drivers – 228 people, car drivers – 215 people, livestock breeders – 60 people. Full-time vocational education institutions trained 4.3 thousand qualified workers for agriculture in 1985–1990 alone. And at that, the number of workers trained on-site 1.9 times exceeded the number of those trained at vocational schools. State farms trained the personnel for 20 occupations and professions, mostly subspecialists, that don't require long-term learning.

Rural secondary school contributed a lot to the professional training of young people. 52 secondary schools of the republic trained annually about 1000 farm machinery operators, 700 milking machine operators, a significant number of car drivers. In 1981–1985 secondary schools fulfilled an additional need for livestock breeding personnel by 11.2%, tractor drivers – by 17.6%, car drivers – by 4.5%. Annually over 500 secondary school graduates were employed by agricultural enterprises. For example, Storozhevskaya high school of Kortkerossky District trained 892 farm machinery operators for the district's agricultural enterprises in 1962–1998.

In the pre-reform period, much attention was paid to vocational guidance of rural schoolchildren and to their involvement in agricultural labour. The task of educating children and simultaneously guiding them in

the choice of their occupation was solved by combining their studies with participation in socially useful work both during the school year and summer holidays. Pupils' working teams and camps for work and recreation played a very important part in preparing children for working in the fields and farms. In 1983 at state farms and secondary schools there were 53 pupils' working teams, 123 camps for work and recreation, where about 4 thousand schoolchildren annually gained working experience. In fact, virtually all the high school students were involved in this activity. Under the guidance of experienced tutors they cultivated about 500 ha of arable land and grew mostly potatoes and vegetables; in addition, they were engaged in fodder production. Annually they harvested about 9000 tons of hay, 2000 tons of silage, 140 tons of woody forage, weeded over 300 hectares of vegetable and root crops beds, cultivated over 700 tons of potatoes and vegetables.

At the beginning of the 1990s, 25 thousand people worked at state farms of the republic's Ministry of Agriculture, among them there were 5.1 thousand people with higher and secondary vocational education, i.e. one in five working in the industry. Among the specialists with higher education, engineers comprised 25%, agronomists, zootechnicians, vets – 47%, economists – 18%, other professions – 10%. Specialists with higher education were graduates from Timiryazev Agricultural Academy, the Leningrad, Kirov, Vologda and other agricultural universities. Specialists with secondary vocational education were mainly graduates from the Syktyvkar Training College.

In the pre-reform period, the Komi Republic carried out significant work aimed at enhancing the skills and qualification of agriculture staff. 10.9 thousand agricultural workers out of 37 thousand, or one in three, attended advanced training courses in 1989. Training was conducted at management schools, at production and economic courses,

specialized courses, schools for the study of advanced work techniques and methods. Each farm conducted annual winter advanced training courses in all spheres of agriculture with the subsequent certification of employees. Farm machinery operators were awarded the title of tractor operator of I and II class, workers of animal husbandry – the title of master of livestock breeding of I and II class. They were given a premium to their wages in the amount of 20% and 10% respectively. The share of tractor operators of I and II class reached 50%, and the share of milkmaids – 30% at the state farms of the Komi Republic in 1989.

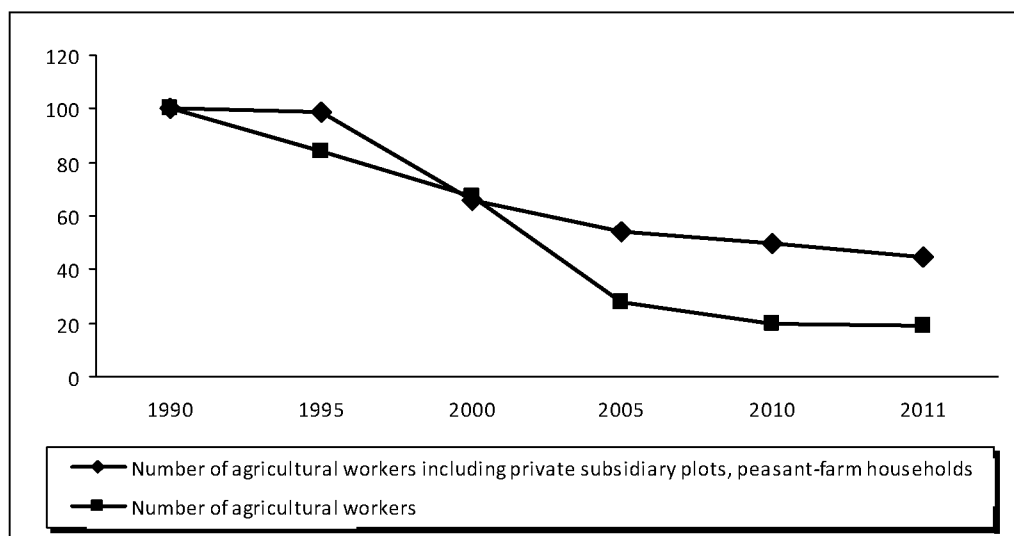
#### **Current situation in the human resources potential of agriculture**

Specific features of the modern Russian rural labour market include a limited choice and low quality of jobs; underdeveloped infrastructure of labour market; endemic unemployment; low price of agricultural labour, remuneration in kind; low level of human capital development; absence of bargaining skills in workers and lack of contractual relations between employees and their employer; violations of labour legislation by employers that remain unpunished [4]. These features are characteristic for the Komi Republic as well.

During the years of agrarian reforms, the number of people employed in agriculture in the Komi Republic reduced 2.2-fold, in agricultural enterprises – 5.3-fold (*fig. 2*). This was caused by the ill-considered reorganization of collective farms, the weakening of state regulation of the agrarian sector.

Demographic processes serve as the natural basis for providing the village with labour resources and personnel potential. For 1990–2011 the number of rural population, despite the administrative-territorial transformations of urban settlements into rural ones, decreased by 101 thousand people or by 33.3%. The share of people under working age decreased from 31% to 18.8%, the share of persons over working age

Figure 2. Dynamics of the annual average number of workers in agriculture of the Komi Republic for 1990 – 2011 (1990 = 100%)



increased from 15% to 20.2%. The number of deaths per 1000 people exceeded the number of births by 0.9 people. Thus, we witness the reduction in human resources capacity for the development of agriculture and other sectors of rural economy.

The most acute problems of the rural labour market are as follows: unemployment, poor employment in the agricultural sector, weak entrepreneurial activity, trends of returning to primitive technologies and manual labour, orientation toward low-profit activities in private subsidiary plots, underdevelopment of non-agricultural labour in rural areas; besides, rural residents don't feel very confident about the future. At the end of 2011 the number of unemployed citizens in rural areas was 15.5 thousand, and the number of the registered unemployed was only 5.8 thousand people. Labour market tension in rural areas amounted to 11 persons per one vacancy. The level of total unemployment in relation to the number of economically active rural population amounted to 13.7%, and the registered unemployment rate was 5.2%. Currently, when the need of the agricultural sector in labour resources is

generally satisfied, it is necessary to enhance the quality of labour force. Labour supply in the labour market by qualitative parameters doesn't match the structure of demand for qualified personnel.

Tension in the demographic situation and socio-labour sphere of the village is caused by the unattractiveness of working conditions and the quality of life in rural areas.

The characteristics of human resources include age, health, personal qualities, professional training and the lifelong education ability, work experience in this specialty, etc. Agriculture remains the branch, in which the share of workers with professional education has dropped over the last decade. Agrarian transformations focus on the formation of private sector, development of small-scale production, small business entities. The motivation of employees has been undermined, the level and quality of life of rural population have worsened dramatically; the number of medium and large agricultural enterprises has reduced greatly, as well as the number of specialists in agriculture; socio-professional characteristics of managers

and specialists deteriorated by the level of professional education, age, work experience of managerial activity. The system of lifelong and further professional education has become inefficient. This led to serious problems in the system of staffing in agriculture. In 1990 the share of agricultural enterprises' managers with higher education was 77.8%, in 2012 – only 45.3%. In 1990 only 0.7% of managers didn't have higher and secondary vocational education, and in 2012 – 21.1%. The share of managers with the work experience exceeding 10 years has decreased over the period from 21% to 17%.

Negative trends are evident in the educational level of specialists. In the mid-1980s, the share of chief specialists with higher education was over 72%, but it reduced to 57% in 2012. According to the data for 2012, 3.9% of chief specialists and 20.1% of specialists, 28.7% of middle managers did not have higher or secondary vocational education (*tab. 1*). Many highly qualified managers and specialists have moved into other spheres of activity and commercial structures. The level of qualification among the representatives of working professions is also low.

Some results of the monitoring of agriculture staffing show that in 2000 – 2012 there is

a tendency of increase in number of retirement age workers: heads of agricultural enterprises – from 1.7% to 7.8%, chief specialists – from 1.3% to 7.8%.

The situation has become complicated in the sphere of improvement of specialists' qualification. In 2012 only one in 30 managers and specialists of agriculture attended advanced training courses.

The peculiarity of the modern condition of agricultural labour market lies in the fact that agriculture still experiences a lack of qualified personnel even at a significant reduction in production volumes.

The dropout rate of qualified staff, particularly managers and specialists, remains significant (13.3%). Low prestige of the profession, low motivation, and poor mechanization of labour make it difficult to cover the deficit of personnel.

An insufficient staffing of agricultural organizations with specialists arouses serious concern. For example, in 2012 medium and large agricultural enterprises were staffed with chief specialists by 87%, with specialists – by 93%, with middle managers – by 96%. The enterprises experience a shortage of chief specialists, agronomists, livestock experts, veterinarians, engineers, accountants, technicians.

Table 1. The level of education of the managers and specialists in agricultural organizations of the Komi Republic in 2012, %

Managers and specialists	Education		
	Higher	Secondary vocational	Don't have higher education or secondary vocational education
Managers and specialists	39.0	42.3	18.7
Heads of organizations	45.3	33.6	21.1
Chief specialists, among them	57.1	39.0	3.9
agronomists	63.6	36.4	-
livestock experts	50.0	50.0	-
veterinarians	81.8	18.2	-
engineers	50.0	40.6	9.4
economists	83.3	16.7	-
accountants	49.2	46.0	4.8
Specialists, excluding chief specialists	34.2	45.7	20.1
Middle managers	28.7	42.6	28.7

In many small enterprises there is only one employee in agronomic, zootechnical, engineering services. The number of employees of economic service decreased as well. For instance, in the 1980s there were an average of 8 specialists with higher professional education and 40 specialists with secondary vocational education per state farm, nowadays one agricultural enterprise has only 4 specialists with higher professional education and 4 specialists – with secondary vocational education. At the same time, over a thousand people with secondary vocational education, and more than four hundred people with higher professional education are mere workpeople.

In the total number of workers of agro-industrial complex 9.7% are with higher professional education, 21.3% – with secondary vocational education, 28.5% – with initial vocational education, and 40.5% – without vocational education; the qualification of farm employees is also low. Meanwhile, in 1991–2010 the annual number of graduates from secondary vocational education institutions decreased from 217 to 117. Employment rate of young specialists is also low. Agricultural enterprises of the Komi Republic take not more than 10–15% of the graduates from universities and agricultural colleges.

Research conducted by the agrarian economics laboratory at the Institute of Socio-Economic and Energy Problems of the North Komi Science Centre of the Ural RAS Department in the late 2000s showed that only 8% of respondents were willing to work in agriculture, and 92% were determined to stay in town and find a job there. Specialists don't want to go to rural areas mainly because of low wages in agriculture (pointed out by 70% of respondents), underdeveloped social infrastructure (65%), lack of decent housing (43%), limited career prospects (33%), poor facilities and infrastructure at agricultural enterprises (20%).

In 2012 the Centre for Organizational and Methodological Support of Modernization of Professional Education, Komi Republican Institute of Education Development conducted a monitoring aimed at identifying vocational intentions of 9th and 11th grade students of the Komi Republic. The survey shows that the graduates are not interested in such spheres of professional activity as trade, forestry, and agriculture. Students rank their motives for choosing a career as follows: 1st place – wages, 2nd place – interesting content of a job, 3rd place – prestige of a job.

#### **Personnel potential of the rural periphery and Arctic territories**

Food security is becoming the key problem of agricultural development of the Northern regions. It is understood as the elimination of threats to the health of people living in the North and Arctic on the part of suppliers of inferior (chemically harmful) products. Production of ecologically clean products is an urgent necessity and it could be organized on the agricultural land of the taiga.

But the ill-considered reforming of agricultural organizations had a particularly adverse effect on the composition and structure of labour resources in the rural peripheral areas and Arctic territories of the Komi Republic. Along with the aggravation of long-standing socio-economic problems of the village, such as the narrow scope of labour application, staff turnover, migration of rural population, lag in the development of production and non-production spheres, the new problems have emerged that are connected with the development of the market – employment problems. By the end of 2011 remote areas accounted for 2.4 thousand registered unemployed, or 40% of the unemployed registered in the rural areas of the Komi Republic.

The number of workers employed in agricultural organizations of peripheral areas, due to the reorganization of many state farms,

production decline, unfavourable demographic situation and low wages, decreased 8-fold in 1989–2011, and in the Arctic zone of the Republic – 4.4-fold. Over 15 thousand people were dismissed during this period, mostly livestock breeders and machine operators, i.e. qualified personnel. As a rule, those, who remained, were mainly the specialists of pre-retirement and retirement age, and low-qualified workers. The modern market of agricultural labour is characterized by high labour turnover due to low wages, as well as the low quality of jobs in agriculture.

Educational level of agricultural sector workers is low. In 2011 the share of employees with higher education in agricultural organizations of rural periphery made up 3.5%, with secondary education – 15.3%, with initial vocational education – 22.3%. Among the workers with vocational education 8.6% had higher education, 37.2% – secondary vocational education, and 54.2% – initial vocational education.

The comparison of education level of managers and specialists in the Arctic sub-region and rural periphery with other areas of the Komi Republic is presented in *table 2*.

Almost one in four managers and specialists of agricultural enterprises in peripheral areas and more than half of middle managers don't have higher and secondary vocational education. At that, 64.5% of managers have non-core education, although one in three received economic or managerial education.

Among managers and specialists more than two thirds are women. One in three employees doesn't have higher or secondary vocational education, only few have improved their qualification in the system of continuing professional education.

Currently, the agricultural sector of the peripheral and Arctic areas is experiencing a particularly acute shortage of specialists: livestock specialists, veterinarians, engineers, accountants, middle managers and skilled workers – machine operators and livestock breeders.

High turnover is observed among managers and specialists (10%). Thus, in 2011 there were 22.6% of agricultural enterprises' managers in peripheral areas with work experience under three years, and 12.9% – with the experience of 10 years and more. A similar situation is observed in the Arctic areas.

Such factors as the absence of obligatory job placement for university and college graduates, lack of financial assistance in solving such pressing issues as housing, etc., combined with no motivation to work in the village lead to a poor staffing of agriculture with young specialists. In 2011, agricultural organizations of the peripheral districts recruited only five young specialists graduated in the reporting year. The share of managers and specialists of agricultural enterprises aged under 30 is 9%; a similar situation is observed in the Komi Republic as a whole (12%).

Table 2. Education level of the managers and specialists in agricultural organizations of the Arctic sub-region and peripheral areas of the Komi Republic in 2011, %

Managers and specialists	Higher education			Secondary vocational education			Don't have higher education or secondary vocational education		
	Arctic sub-region	Peripheral areas	The rest of the territories	Arctic sub-region	Peripheral areas	The rest of the territories	Arctic sub-region	Peripheral areas	The rest of the territories
Heads of organizations	52.0	32.2	47.2	32.0	42.0	29.2	16.0	25.8	23.6
Middle managers	19.4	2.4	37.7	43.3	40.5	39.7	37.3	57.1	22.6
Chief specialists	50.9	26.7	62.7	41.5	68.9	31.7	7.6	4.4	5.6
Specialists	24.4	12.7	48.3	45.8	61.8	38.4	29.8	25.5	13.3



Representatives of working occupations are also characterized by the low level of qualification.

A poll of specialists, held in 2012 in Agricultural Production Cooperatives (APC) Pomozdinsky, Chernutyevsky, Yugor, Vashko, Zarya showed that only one out of 64 livestock breeders had the title “Master of livestock breeding of I class”, and five had the title “Master of livestock breeding of II class”. At that, the activities aimed at enhancing the skills of personnel were unsatisfactory.

Thus, it will not be an easy task to take the Komi Republic agriculture out of the crisis, due to the adverse staffing situation in the agrarian sector, especially in the peripheral and Arctic regions. It is becoming especially important to improve the system of training of specialists and qualified workers of mass professions, and to retain them at the enterprises under the ongoing technological re-equipment of agricultural production and transition to the innovation stage of development of the sector.

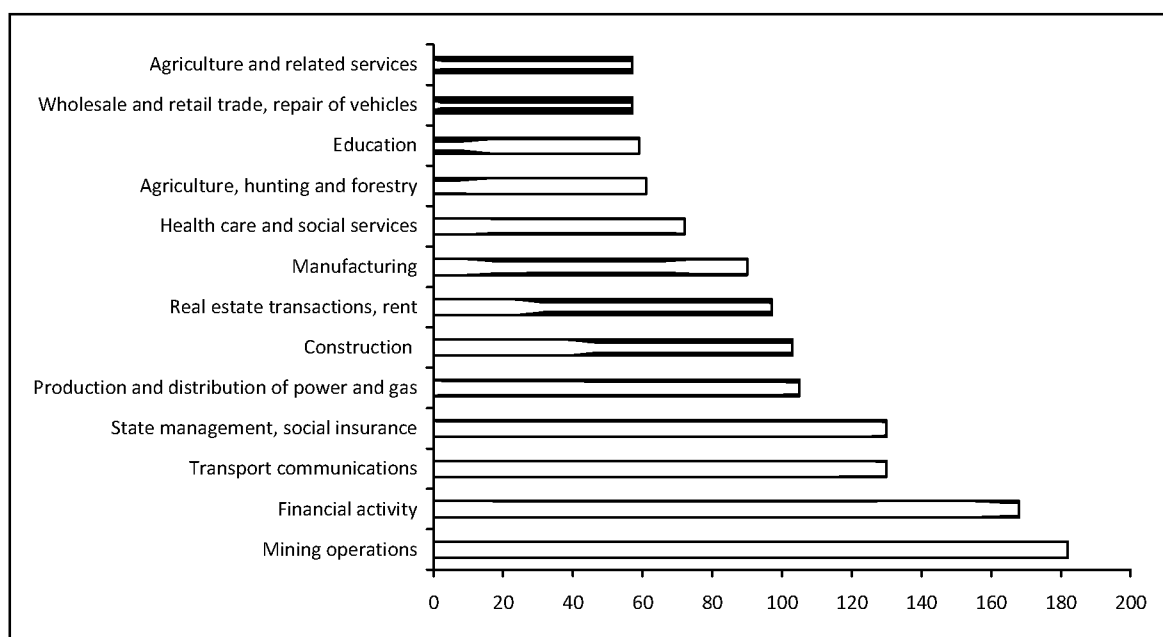
### Current situation with regard to the living conditions in the village

Young people do not want to put up with the existing way of life in the village, since it does not meet their requirements concerning the quality of life.

Low prestige of agricultural work due to arduous working conditions and insufficient level of wages, the absence of decent living conditions along with underdeveloped social infrastructure of rural settlements cause the turnover of specialists and workers, and put off any desire to settle down in the village. Agricultural labour remuneration lags almost twofold behind the economic average in the Komi Republic (*fig. 3*).

In 2011, when the average monthly nominal accrued wages (excluding small businesses) in the Komi Republic amounted to 31.6 thousand rubles, the average monthly wages of agricultural enterprises’ workers amounted to 16.4 thousand rubles, specialists – 21.6 thousand rubles, tractor drivers – 13.3 thousand rubles

Figure 3. The ratio of average wages by individual kinds of economic activities to the average level for the Komi Republic in 2011, %



milking machine operators 12.2 thousand rubles. At the same time, labour remuneration in the agriculture of peripheral districts (Izhemsky, Ust-Tsilemsky, Udorsky, Troitsko-Pechorsky, Ust-Kulomsky, Koygorodsky) was only 26% of that in the Komi Republic economy on the whole, and 50% of the average monthly wages in the republic's agriculture. As a result, part of the rural population lives below the subsistence level.

The situation concerning the personnel of mass working professions, especially machine operators and livestock breeders, needs to be improved. The number of graduates from initial vocational education institutions of agriculture declined from 513 to 108 people in 1991–2010. The majority of livestock breeding personnel received on-site training rather than gained knowledge and skills at educational institutions. That is why it is difficult for them to use the machinery and equipment efficiently as well as the genetic potential of animals. They can't organize rational animal care and create optimal housing conditions for them.

A survey of household budgets shows the profound differences in well-being of urban and rural population. According to the sample household budget survey, carried out by the bodies of state statistics of the Komi Republic, the level of incomes and expenditures of households on average per person per month in rural households compared to the same indicator in urban households in 2012 was as follows: by disposable resources – 85.8%, by final consumption expenditures – 80.8%, by consumer spending – 76.9%, by cash expenditures – 77.9%, by the purchase of products for domestic supply – 72.2%, by the purchase of non-food goods – 84.1%, by the payment for services – 72.5%. Food and energy value of nutrition in rural households on average per person per day is just 2344 kcal against 2646 kcal in urban households.

The average consumption of foodstuffs per person per month in rural households was less than that in urban households: grain products – by 6.4%, potato – by 13.6%, vegetables and melons – by 14.3%, fruit and berries – by 19.5%, meat and meat products – by 26.8%, milk and dairy products – by 16.1%, eggs – by 11%. Consumption level was the same only with regard to fish and fish products, vegetable oil, fats, sugar and confectionery.

Work in the agricultural sector may be attractive, if the village has a developed social sphere, and a person has a tangible opportunity to get decent housing, decent wages and career prospects. According to our calculations, the state of socio-labour sphere in the village is 1.6 times worse than in town.

For years of reforms, the situation in the social sphere of village has aggravated due to the reduction in residential construction, health care, education, culture, public services and reduction in the funding of these institutions. Many schools and kindergartens, shops, public catering enterprises, clubs, comprehensive reception stations have been closed. Provision of the village with necessary facilities has slowed down. In the pre-reform years (1981–1990), an average of 115 thousand square metres of housing was annually commissioned in the villages of the Komi Republic; as for 2000–2010, this figure decreased to 42 thousand square metres, or by 62%. Over the past two years, the average of 37.5 thousand square metres of housing per year has been commissioned.

The number of young specialists and rural citizens, who received subsidies for improving their housing conditions, decreased from 223 people in 2008 to 73 people in 2009, to 51 people in 2010; in 2011 their number was 60 people and in 2012 – 52 people, the number of young specialists changed accordingly to 86, 38, 25, 29 and 19 people. The amount of subsidies granted in 2012, was 1065 thousand rubles per young specialist, 860 thousand rubles per rural resident.

Individual housing fund of the village, constituting 74% of the total housing fund, is characterized by poor quality and lack of amenities. Rural housing stock is largely deprived of basic conveniences: by the end of 2011 23% of housing had water supply, 33% had central heating, 19% had sewerage and 11% had hot water supply. (For the end of 2010 the rural housing fund of Russia as a whole was better provided with amenities: 48%, 60%, 38%, 25%, respectively.) The gasification issue is also acute in the villages of the Komi Republic: only 26% of housing have gas, while in Russia as a whole – 75%.

At the end of 2011, the provision of rural housing fund lagged behind that of urban housing fund: water supply system – four times, sewerage – five times, central heating – three times, hot water supply – nine times and bathrooms – eight times. Proportion of dilapidated and rundown housing fund in the total area was 22.6% (for comparison: in urban areas – 4.9%).

Unfortunately, the State programme “Development of agriculture and regulation of markets of agricultural products, raw materials and food, development of fishing industry in the Komi Republic in 2013–2020” stipulates the reduction in the amount of state support to the improvement of housing conditions of citizens, young families and young specialists living in rural areas, and to the assistance in the development of gasification and water supply of rural settlements – from 78.0 million rubles in 2013 to 49.5 million rubles in 2015.

During the years of agrarian reforms the core of rural life has been broken. Community relations have weakened. Agricultural organizations have lost their positions in the village, they no longer fulfil environment-forming function. The village faces deterioration of cultural values, and transformation of norms of public morality.

The problem of ensuring innovation development of agriculture through its staffing with highly qualified personnel can be solved by the radical improvement of living conditions in the village, including the increase in the income of agricultural workers, and their provision with comfortable housing, development of the system of socio-cultural and public services.

At present, small agricultural enterprises, farms and other enterprises with small production output, low profitability or unprofitability of production, low labour remuneration and labour productivity, poor facilities and technology base, along with underdeveloped rural social sphere do not attract specialists with higher education and even with vocational secondary education. University and technical school graduates will not seek employment in the agricultural sector unless the standard of living in the village is substantially improved in the near future.

#### **Main areas of personnel potential development**

In order to provide modernization and innovation development of agriculture with qualified personnel, it is necessary to carry out a complex of the following main measures:

- development of target programmes for providing agriculture with personnel at the level of agricultural enterprises, municipalities and the Republic;
- expansion of the system of qualified personnel training under leading agricultural universities of Russia, the Komi Republic and Komi Republican agricultural college; training of workers of mass professions, should be carried out at district and inter-district vocational schools, the training of workers of highly demanded professions that are in short supply should be carried out using contracts between agricultural organizations, employment agencies and educational institutions;

- upgrading of facilities, educational and technological base for practical training of future specialists at educational institutions and agricultural enterprises;
- restoration of advanced training at agricultural enterprises, organization of agricultural training courses in winter with the subsequent certification of students;
- introduction of probation of newly appointed managers and chief specialists at the leading farms;
- organisation of on-the-job training for agricultural managers, specialists and farmers, not less than once in three – five years at the Komi Republic Institute for Retraining and Advanced Training of Agricultural Specialists and at other universities;
- switch to the target training, retraining and advanced training of workers and specialists for enterprises on the basis of permanent monitoring of demand, analysis of their qualitative and quantitative composition, compilation of balances of qualified personnel; use of state order for training, retraining and improvement of their professional skills, introduction of a quota system for jobs and preferential admission of the rural youth to universities for obtaining the specialties that are in demand in the village;
- restoration of the work on vocational guidance in rural science at rural schools, creation of groups of professional education;
- gradual transition to the system of continuous agricultural education for the rural youth, consisting of several educational levels: the first – school education, the second – initial professional, the third – secondary vocational agricultural, the fourth – higher professional education, the fifth – institute for retraining and advanced training of agricultural specialists;
- preference to students of rural schools in the selection and training of applicants for secondary vocational and higher educational institutions of agriculture;
- development of training of specialists on a contractual-target basis, on the terms of a tripartite agreement: student – agricultural organization – university (technical school);
- expansion of the search for new forms and methods of training, aimed at the creation of a new employee, implementation of distance learning when necessary and possible;
- constant analysis and assessment of staffing of agricultural organizations with managers, specialists and personnel of mass working professions; organization of monitoring for the study of professional and qualification structure of personnel; creation of data banks on the staffing needs; strengthening of HR management service;
- assessment (once every 3–5 years) of the activities of agricultural managers and specialists for evaluating their professional competence, the ability to handle production issues efficiently, identification of promising management employees to form the reserve of agricultural managerial personnel, for additional material and moral incentives;
- approval of the annual statements on the “Young specialist” database, so as to keep a record of newly employed young specialists, to control their provision with housing and reasons for quitting the industry;
- establishment of lump sum payments to graduates, directed to work in the village in the agrarian sector, from the Komi Republic budget (to university graduates – up to 500 thousand roubles, to technical school graduates – 300 thousand roubles), the payments in the peripheral regions will be 1.5 times higher and in the Arctic regions – 2 times higher; in turn, a young specialist must work at the enterprise not less than five years;
- forecasting of professional and qualification structure of personnel for the future on the basis of the state programme “Development of agriculture and regulation of markets of agricultural products, raw materials and food, development of fishery

complex of the Komi Republic for 2013–2020” (the forecast outlines the ways to form a contingent of qualified personnel required for innovation development of agriculture, to identify the needs for the training of specialists and qualified workers for new professions and occupations, to switch to the new educational standards and enhance the quality of education at all levels);

- formation of district, inter-district information and advisory services and enhancement of their role in innovation process;

- increase in the incomes of agricultural workers; establishment of a socially just system of labour remuneration that could ensure the reproduction of qualified personnel, satisfaction of their material and moral demands on the basis of enhancing state support to agriculture, increasing labour productivity, personnel skills development, efficient use of material resources (taking into account the conditions of the North, challenges of agricultural production and difficulty of labour, technological re-equipment of the industry, we emphasize that the wages in the agricultural sector should not be lower than the average level in the Komi Republic economy in general);

- cardinal improvement of social environment, provision of people with comfortable housing, provision of access to socio-cultural, trade and household services, medical care, improvement of road conditions, etc., through the development and implementation of

the republican programme for sustainable development of rural areas and programmes of municipal entities up to 2020.

Citizens, young families and young specialists in rural areas should be given the opportunity to receive long-term housing loans for the purchase or construction of housing at a discounted rate (up to 3%) up to 20–25 years based on the market value and the social norm of living space. At the birth of children, it would be appropriate to write off a portion of debt for fiscal mortgage. It is necessary to allow families to repay the monthly payment in kind, by agricultural goods, produced in their households. Construction of new modern housing in rural areas should be financed by the federal, republican and local budgets, it should be carried out by specialized construction organizations and made available to the public through the long-term rent with the right of subsequent purchase [5].

Thus, one of the main tasks and a necessary condition for staffing of agriculture with qualified personnel consist in the enlargement of agricultural enterprises, their technological re-equipment, enhancement of the standard of living of rural residents. The latter can be achieved by increasing incomes, providing people with comfortable housing, developing a network of preschool institutions, secondary schools, objects of culture, health care, sports, trade, public catering and consumer services, road construction and transportation.

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