PART OF SCIENTIFIC-TECHNICAL PROGRESS IN EFFICIENCY OF USING LABOUR RESOURCES (AT THE EXAMPLE OF AGRARIAN SECTOR OF ECONOMY)

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The article studies basic aspects of using labour resources in agrarian sector of economy and increase in efficiency on basis of scientific-technical progress.

As known, factors and indicators of social-economic efficiency of using labour form a methodological foundation for developing methodics of defining demand in personnel for agrarian enterprises. In this case term "labour" includes explanation of the implemented methods and basic factors that have influence upon them, means of calculating that consider various professional groups, region, district, enterprise. A specific result of any methodic is development of methodical approaches, models, labour regulations.

Theoretical aspects of predicting demand of agricultural enterprises for labour are not studied sufficiently. Therefore, bibliographic sources suggest various approaches and methods of defining an enterprise's need in workforce (prediction of demand in labour can be received upon extrapolation of legislations in change of workers' number for different functions that was formed in many years of practice (linear, parabolic, etc.) [1]; the foundation of planning staff needs is perspective labouriousness of product; prediction of the demand in labour costs must be carried out via normative method, calculated per labour costs per 1 hectare of land, 1 animal, etc) [3]. However, the suggested methodics contain a great difficulty of defining total labouriousness, temper of its reduction, possible structural shifts in perspective [2].

A more reliable method of defining planned number of workers is calculation according to labour efficiency forecast, as less errors are allowed in prediction. In order to predict labour efficiency different methods are implemented: calculative-construction, normative, method of enlarged calculations, extrapolation, method of factor modeling, method of experts' evaluations.

A special significance is devoted to difference between defining demand for labour during the current year and future periods in terms of separate professions, enterprises and district/region/country. At the same time, planning of labour indexes for the current year is carried out in detail at enterprises, they consider professional specifics, basic and auxiliary sectors with facilitation of technological cards, existing forms of cattle care, etc.

Methodic of perspective planning for labour indicators is also insufficiently developed. For example, while predicting demand for labour in separate enterprises, it is possible to foresee possible changes, but the prediction might already be made according to global indications. In predicting demand for labour in totality of enterprises/region enlarged calculations are applicable as they allow for less errors.

We should underline that predicting enterprises' demand for labour embraces different sides of labour economy and, therefore, requires not one, but a totality of methods. In order forecast employment in agricultural sector one certain methods can be used, and to explain the demand for employees of certain profession it is necessary to implement different approaches, correlation between constant and seasonal labour will require yet other means of analysis.

Therefore, the foundation of defining demand for labour at agricultural production, personnel number of which is a calculated value, must be prediction of labour efficiency. The most widespread method of economic prediction, particularly prediction of labour efficiency, is multi-factoral modeling at the foundation of correlation-regressive analysis. Advantage of this method is in possibility to influence value of certain factor in order to receive the desired result.

Research has shown that increase in yearly time fund and implementation of hired labour testifies for imbalance in labour provision among enterprises.

As researches show, actual labour provision of various agricultural enterprises of a region is close to 100%, and it is even higher in collective and state enterprises. Calculated labour provision is slightly lower, and all agricultural formations are unprovided with labour. Basic reasons of it are: low level of works mechanization, irrational work organization, reduction in personnel number. Staff deficit can be decreased or removed completely at improved enterprises cue to economy of labour, reduction of time losses, improvement in output organization and work discipline.

Among many labour regulations the defining part is devoted to hourly labour efficiency, expressed in output of total agricultural product in calculation per 1 human/hour. It is an enlarged, generalizing indicator that serves as final one within the system. In order to define demand for labour at a agricultural production it is necessary to predict hourly labour output. Yearly labour efficiency (output of total product per 1 worker) depends completely on hourly indicator in terms of socially-required level of employment.

Correlation analysis requires overview of basic factors that impact labour efficiency. We have studied their totality. Correlations have been established between labour efficiency, effectiveness of using workforce and facilitation of land, fund provision of labour, provision of funds and employment, employment of workers, their composition, wage level and work regime, development of non-productive sector. Depending on nature and relations between factors and final result, we have outlined direct and opposite relations.

Formation of seasonal labour market has a great significance for agriculture. There is no more free transition of workforce from cities, as there was before, attraction of staff now exists on contract basis with a corresponding wage. As attraction of labour for seasonal works becomes costly, agricultural enterprises must have definite data on their demand for seasonal workforce. Enteprices also need monthly balance calculations for this group of employees.

Village market of labour also includes motion of staff from the sector, and it is expressed in liberation of constant and seasonal workforce, personnel flow, exclusion of employees from working teams. Employable part of population that comes from agriculture transits to other branches of economy. At the same time, vacant positions that emerge in regard to personnel flow in agricultural enterprises, must be replaced by flow from other sectors and enterprises.

Within village market of labour we must outline market of constant and seasonal workforce. Market of constant workforce is formed of demand for constant employees among agricultural enterprises. In total labour market village part occupies a significant share. According to our calculations, over 20% is formed of constant labour market for agricultural enterprises. In reality this sector of market is significantly bigger as it includes seasonal workforce as well.

The liberated seasonal workforce will come through labour market in volume that is defined by number of employable workers. Besides, additional demand for seasonal workforce that is not covered by local labour resources, will also go through labour market. Enterprises should address claims to official bodies of labour provision with indication of time period and specific aspects of work. At the same time these institutions will form supply of seasonal workforce. Information on regions and enterprises is accumulated in district labour management and employment bodies. Thus, market of seasonal labour is formed of demand for it on behalf of enterprises and supply of workforce.

It is reasonable that seasonal labour market is totally dependent on seasonal nature of employment. In case of 10% seasonal work 9,8 seasonal employees per 100 constant workers are required in may, up to 18 workers – in august, in case of 15% seasonal nature – 18,7 and 34,3 employees correspondingly.

Efficiency of labour market is expressed in positive and negative aspects. On the one hand, personnel flow is targeted, and significance of work quality, its discipline, and value grows, on the other hand, unemployment and category of the unemployed emerges. Social protection of workers will be regulated by system of social-economic relations. In its foundation must lay system of material interest, formation of favourable conditions of workers' life in the village.

As the analysis shows, final results of production are greatly dependent on labour resources' provision. In order to make agricultural labour attractive, it is necessary to improve work conditions and review programmes of social development in village.

1. First of all, it is necessary to create favourable conditions of economic environment for consumers and producers of socially-infrastructural services through taxing, price, and budget mechanisms as well as via investing from local and federal budget in order to carry out certain key directions that have general state significance (construction of roads, etc).

2. Create the required market infrastructure and establish development of market processes that will provide for increasing volume of output and growth in income of village producers

3. Develop profitable conditions of market economy in village that will align with agriculture and enrich its forms of activity such as subsidiary trades, procession of agricultural products, production of construction materials from local raw materials and premade constructions (for example, countryside houses). At the same time, organization-legal forms can vary, the greatest attention is devoted to cooperation.

Thus, industrialization of agriculture, introduction of progressive technology, skillful combination of economic, technical, chemical, biological, and natural factors, improvement in organization of output, improvement of social conditions among employees – all these factors provide for efficient implementation of labour resources.

The undertaken analysis of labour market in countryside has revealed basic problems and objectives that must be solved in pursue of increasing efficiency of agricultural production and facilitation of labour within it. First of all, it is necessary to establish employment not just for its own sake, but to increase efficiency, complete realization of a person's right for labour, creation of worthy conditions for live in village.

To define perspectives of developing labour market in a region it is necessary to make its economic evaluation according to predicted labour efficiency. Factors and indicators of efficiency in using labour resources, defined by earlier researches, form methodological foundation for calculating demand of agricultural enterprises for workforce. Correlation analysis has shown that growth in number of employees and yearly employment decrease hourly labour efficiency. However, growth in number of employees also has a positive effect upon general labour productivity. A detailed analysis has shown that along with decrease in personnel, volume of output is reduced faster.

Thus we think that the basic objective for executives at agricultural enterprises for the neares future is stabilization of production. It is necessary to stop its further degradation with all available factors (economic, organizational, technical, and social tools). Decrease in number of personnel in agriculture should be slowed, and this factor of production must be implemented more efficiently to increase output of product into consumer market.

As it was revealed earlier, there are reserves of increasing efficiency in usage of agricultural labour. At the same time, the basic factor that influences efficiency of labour and mostly depends on actions of working collective and each separate worker, is yearly involvement. It was established that yearly involvement of workers is basically related to provision of an enterprise with workforce and depends on working hours facilitation, organization of output, labour, and management.

The method, applicable for economic prediction of labour usage efficiency, is multi-factoral modeling at the foundation of correlation analysis. The advantage of this method is that it provides possibility to influence value of certain factor in order to receive the desired result.

The basic element of forecast is level of hourly labour effectiveness. Multi-factoral modeling is applied at the foundation of dynamic rows. Length of dynamic row is 14 years. The advantage of dynamic models is that the allow us to study influence of factors upon result over certain periods of time.

Thus, perspectives of efficient facilitation of labour resources in agricultural production are related to:

– stabilization of demand for labour from producers of goods;

– decrease in yearly involvement of workers down to normative level in order to reduce losses of work time and increase workers' leisure time;

– improvement in employees' qualification and their professional level;

– decrease in staff flow;

– increase in material interest of employees.

Effect of all mentioned factors eventually leads to increase in efficiency of agricultural labour and growth in its productivity. In short-term period growth in efficiency of using labour resources is predicted due to increase in product output and decrease in early involvement of workers.

In long-term period, when growth in output takes place, increase in labour productivity is planned due to fund provision and personnel cuts. Only technical re-equipment of agricultural enterprises is able to increase output level, transit towards production of new, competitive products. Scientific-technical progress defines reduction in staff numbers directly at agricultural enterprises, but at the same time it creates new modern processing enterprises and types of product, development of social sector, provides for broadening of production, creates new needs, and thus leads to additional demand for labour.

In the predicted period supply of labour will exceed demand for it. Unemployment will also take place. During the years to come employment policy must be directed towards intensification of social-professional protection for employees of all categories at labour market, maximum broadening of employment possibilities for socially-vulnurable groups and layers of village population in their employable age, especially women and youth. It should be considered that policy at labour market must base upon flexible combination of market mechanisms that provide alteration in structure of employment and additional state measures of selective support for employable village population who have lost their job but wishes to work efficiently and looks for for new types of activity. Considering the fact that during nearest years imbalance of agrarian labour sector will remain, and number of the unemployed population might grow, it is necessary to develop regional programme of employment assistance for village population that will consider specific interests of the sector.

Particularly, the programme should imply measures on:

– preservation and stabilization of employment, especially for qualified staff, in case of owner change, privatization, enterprise bankrupcy, change in its specialization;

– increase in competitiveness of employees, creation of psychological setting for retraining, receiving additional profession or specialty;

– intra-sectoral transit of labour between districts at regional and inter-regional level, assistance in resetllement of workers;

– stimulation of flexible employment and self-employment forms (work at home, part-time jobs, non-standard working regimes, etc.);

– maximum facilitation of funds by state employment fund of Russian Federation in compensating employer's costs in creation and maintenance of additional work positions at the foundation of agricultural enterprises (loans, favourable credits); economic stimulation of agricultural enterprises that create additional working positions for youth, other socially-vulnurable groups of employable population;

– broadening practice of hiring young graduates (agricultural universities, collages, etc.) that have not yet found employment, via contracts with employment service with condition of redirecting sallary from employment fund;

– creation of new work positions in the village in the sector of small and moderate business, directed towards market, due to development of local industry (first of all, production of construction materials), small workshops of processing agricultural raw materials, village trades, etc.

Thus, reserve of increasing general labour productivity in different agricultural formations are not same. It is explained by the fact that general labour productivity depends on facilitation of all production factors, their correlation. All factors of production stand in totality, interact with each other. This interaction is expressed in various quantitative characteristics and represents total labour productivity. Here applies law of replacing one production factor with the other considering the new possibilities as well as law of decreasing return, when utmost ability of any production factor begins to reduce. All these aspects must be considered in revealing growth reserve for total labour productivity.

Thus, introduction of scientific-technical progress results, carried out at separate enterprises, united by processes of cooperating and combining production within the whole national economic complex, has a positive effect upon efficiency of using labour resources and results of an enterprise activity. When implementing certain measures on technical re-equipment of production, each enterprise is directly interested in decreasing product value. It is necessary to implement the most viable option within development of economic system that will provide minimal capital investment and the most efficient facilitation of labour resources.

References

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