



## THE IMPORTANCE OF SCIENTIFIC PERSONNEL SUPPLY AND CAPACITY IN INCREASING THE EFFECTIVENESS OF RESEARCH IN THE AGRARIAN SPHERE

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<p><b>Received:</b> 6<sup>th</sup> February 2023 <b>Accepted:</b> 6<sup>th</sup> March 2023 <b>Published:</b> 10<sup>th</sup> April 2023</p>	<p>The article describes the problems of scientific personnel and specialists in the agrarian sphere of our country.</p> <p>At the new stage of economic reforms, such changes are the main basis for the development of scientific personnel potential in increasing the effectiveness of research. It is necessary to ensure adequate improvement of scientific potential in scientific institutions, training of personnel in the field and improvement of professional skills related to their professional research. It is important to increase the share of doctors of science, to prepare specialists of excellent level in higher educational institutions, to increase the quality of scientific personnel, to use scientific potential effectively and to ensure the development of Agriculture in scientific terms.</p>

**Keywords:** agrarian sphere, scientific-supply, scientific personnel, qualified specialist, scientific worker, capacity, efficiency, improvement.

### INTRODUCTION.

In our country, the system of scientific support of the agricultural sector is implemented through various research institutes and universities. Today, great changes are taking place in the system of research and training of highly educated personnel. A number of measures are being taken to create favorable conditions for the training of scientific personnel and their research. In particular, in order to further develop the system of secondary and special education, it is necessary to improve the activities of agricultural colleges that train mid-level specialists for the agricultural sector. Also, the activities of the secondary and special education system in the agricultural sector will have to be carried out in direct connection with the higher education system.

It is necessary to develop a system of Science, Education, Information and consulting services, which provides for the use of effective forms of dissemination of knowledge integrated with the production of Agrarian science. Long-term strategic reforms are carried out to improve higher education and research, raise it to the level of advanced standards in developed countries and increase the gross domestic product per capita, raise the standard of living to a qualitatively new level, socio-economic development of the country.

Nevertheless, when it comes to the issue of training specialists and personnel in the agrarian sphere, today there are the following pressing problems and shortcomings waiting for their solution. Such: since the reforms carried out in the agrarian sphere, resource-saving technologies and advanced experience are not reflected in science programs, full provision of Educational Directions with methodological provision created on the basis of modern requirements, also, there are problems in the employment of graduates in the specialty due to the fact that as a result of spiritual and physical wear on the educational and laboratory base of the university, students do not have modern knowledge and skills; advanced Agrotechnology in the field the lack of in-depth analysis of the needs for training specialists, lack of personnel with higher education in such in the directions as innovation and introduction of information and communication technologies; the scientific potential of professors and teachers, the level of professional knowledge, the introduction of continuous improvement of practical experience, the effective use of the advanced experience of foreign research and higher education institutions in increasing their professional potential; the effectiveness of scientific activity remains low due to the lack of effective integration of Science, Education and production, systematic organization of training of



scientific and scientific-pedagogical personnel, non-focus of scientific research in the field of Agriculture on the solutions of current scientific problems in the field; the practical skills of the graduates are not at the required level due to the fact that the production and qualification practices of the students are not adapted to the season of agrotechnical activities of agricultural crops and are not organized effectively.

For the development of farmer and peasant farms, as well as agricultural services, it is necessary to introduce a system of providing scientific personnel and qualified specialists to the system of higher education in the future. The strategic objectives of improving the quality and capacity of the training system, in turn, require the integration of the educational process and directions of agricultural science in terms of achieving a single goal. In general, the integration and coordination of the scientific and pedagogical potential of higher education institutions in the agricultural sector opens up new prospects for the development of agricultural education, while giving a number of advantages. Further improvement of the postgraduate education system is one of the urgent tasks for the sustainable development of the agrarian sphere [1].

## **MATERIAL.**

It should be noted that the role of regional higher education institutions in providing the agricultural sector of the country with specialists is special, and the constant introduction of innovative ideas and developments in the educational process, as well as in the activities of local businesses is a modern requirement [2].

The task of providing the regions with specialists is entrusted to regional educational institutions: improving the supply of local organizations, providing enterprises and other economic entities with specialists with local higher and secondary special education; as well as the emergence of insufficiency of scientific personnel, one of some difficulties is the solution of regional and Republican level issues.

At the same time, given the shortage of state funds for the educational process, it is necessary to give priority to measures to form mechanisms for financing the agricultural sector from extra-budgetary sources. Therefore, in today's conditions, the introduction of a multidisciplinary and multifaceted system is one of the effective ways to improve the financing of the educational process in agricultural educational institutions [3].

In this case: strengthening the material and technical base of educational institutions at the expense of the state budget, the transition to a system of state orders distributed on a competitive basis for each higher education institution in the future, with funding in

proportion to the average number of students to address social issues; strengthening the material and technical base of educational institutions and financing part of the utility costs at the expense of regional and local budgets; financing of extra-budgetary sources, mainly for the introduction of additional educational services, scientific developments, consulting services and scientific information support; the use of private funds allocated by the agricultural sector for the training of specialists in specific areas on a contractual basis; it is necessary to intensify the system of training at the expense of various sponsors, funds, organizations and educational loans [4].

Undoubtedly, scientific interest is devoted to the formation of labor resources at the level of individual regions [5,6].

A number of studies are devoted to the study of factors and reserves that increase the effectiveness of the use of labor resources [7].

It is also advisable that the amount of funding from students should not exceed 50% of the quota for the number of students. Otherwise, the number of learners from the regions may decrease sharply.

In the country, it is desirable that agricultural scientific institutions operate in the following directions: ensuring an integral integration of Education, Science and production in the field of Agriculture; establishment of beneficial scientific-production cooperation with farmers and peasant farms, agricultural clusters and cooperatives, as well as advanced foreign research institutions, introduction of new scientific developments, innovations and digital technologies; coordination of research activities of all types of research institutes and higher educational institutions in the field of Agriculture; ensure the retraining and professional development of personnel taking into account the current and future needs of agricultural sectors to qualified specialists; carrying out fundamental, practical and innovative research in the field of Agriculture, Training of highly qualified scientific and scientific personnel, improving their skills on the basis of advanced experience and modern technologies; it is necessary to promote the implementation of international quality standards, create a platform for interaction between product manufacturers and agribusiness.

It is necessary to modernize the agricultural sector of our country, invest in an innovative project. The agricultural sector organizes its activities in the regions in the following directions: to identify the need for personnel in the industry due to the long-term trends in the development of the regions and the needs of the human capital market; training and retraining of personnel engaged in agricultural activities on the basis of foreign experience; formation of orders for the



provision of appropriate scientific advice for ready-made scientific developments and organizations based on the needs of agricultural production in the region; to conduct research aimed at adaptation of scientific works prepared in the relevant scientific institutions of Agriculture to the conditions of the regions, to convey their results directly to the subjects of agricultural production; commercialization of the results of international experience and scientific activity on the basis of the main specialization of the agricultural sector of the regions; to carry out all services in the field of Agriculture and food security on the basis of proposals and recommendations of scientific institutions.

Expanding the mechanism of additional vocational training, planned, compulsory and voluntary training will also have a positive effect on capacity building of agricultural specialists. Provision of educational institutions with modern material and technical equipment, information exchange techniques, training models of agricultural machinery, improvement of field test sites also play an important role in improving the skills of specialists [8].

In our opinion, the agrarian sphere is deepening between the current trends and character sectors of the globe, including the professional and economic inequality.

## **METHODS AND SCIENTIFIC APPROACHES**

The problem of scientific personnel in increasing the effectiveness of research in the agrarian sphere of the country, effective efforts of scientific personnel and their scientific knowledge in this direction would be expedient if they were carried out by potential specialists in various fields.

We consider the methods applied to the scientific staff of the state scientific institutions of the agrarian sphere of the Republic of Uzbekistan and production specialists and give a brief description of some tools. They consist of: the systematic approach suggests that any system regarded as a set of interrelated elements; a broad-coverage approach requires an account of the interdependence of the economic, organizational, social and psychological aspects of management. If one of these mandatory aspects of management missed, the problem will not solved; the Marketing approach provides the direction of the management subsystem in solving any problems; functional approach Personnel Management is regarded as a set of functions performed by personnel structures in the implementation of the process of managerial influence; dynamic approach allows to consider the process of Human Resource Management in dialectical development, in connection with the cause and effect, to carry out retrospectiv analysis for prospective analysis for 5-10 years; the process approach considers

management functions as interdependent and interdependent; the management process is the total sum of all functions, a series of continuous interrelated actions; the regulatory approach requires the establishment of management standards for all subsystems of the management system. The more reasonable standards are applied to each element of the management system, the higher the level of Management, Planning, Accounting and control; the administrative approach consists in the regulation of functions, rights and obligations in normative acts; the behavioral approach includes assisting the civil servant in the realization of his opportunities, creative abilities on the basis of the application of scientific management methods; the situational approach will focus on the definition of the suitability of different methods of managing public service personnel with a specific situation.

In our opinion, science and practice do not have the only method used in Personnel Management, the most effective method in a particular situation is the one that best suits the situation, the one that is maximally adapted to it.

Based on the study, such scientific approaches play an important role in the comprehensive analysis of Personnel Management methods inherent in the modern phase and the innovative development of the agrarian sphere.

In order to understand the essence of the professional culture of an agrarian specialist, rules are established on the basis of the following studies, which reveal the interdependence of cultures, its peculiarities: this is a special project of the general culture in the field of agricultural activity; this is a generalized characteristic of professional activity in the field of agriculture, manifested in various forms of its existence; the systematic formation of agricultural spheres in the conditions of Agrarian scientific and production education, which interacts with the environment in a certain way within the framework of the agrarian sphere, includes a number of structural and functional components that are not reduced to the characteristics of certain parts; this is a systematic reconstruction of the professional qualification of an agricultural specialist in terms of value; the main unit of analysis of the professional culture of a specialist is agro-industrial production, which is an activity in the field of Agriculture; he peculiarities of the formation and implementation of the professional culture of an agricultural specialist are determined by individual psychophysiological and age characteristics, established socio-professional experience, skill in the field of Agriculture.

Taking into account these methodological bases allow justify the structure of professional culture,



professional skill and its powers, motivational-value, knowledge, activity and personal components. In the work, the component of the agriculture in the process of forming a professional culture of a specialist is of decisive importance. Thus, the degree of strengthening the professional culture of a specialist Agriculture can be assessed in terms of special personal qualities, knowledge, skills, specific features of professional thinking in the process of solving professional problems. At the same time, the level of professional readiness of a specialist is considered as the level of development of his professional competence.

### **ANALYSIS AND RESULTS**

Another topical issue in the development of the system of research in the agricultural sector is the improvement of the mechanism for evaluating the results of scientific research.

It is important to properly assess the relevance or necessity of the field scientific topic and solutions. At the same time, it is necessary to pay special attention to the quality of research results, the amount of benefits from their implementation, the level, knowledge and intellectual potential of researchers [9].

Our analysis shows that the high proportion of non-academic staff among researchers conducting research on this or that project, in turn, leads to a decrease in the quality of research. For this reason, research in developed countries is carried out mainly by scientists with academic degrees. In the United States, the United Kingdom, Japan, Germany, Canada, Israel, and most European countries, the figure is 100 percent [10].

In general, at present, the country has a negative impact on the development of the industry due to the low number of scientific workers, researchers and employees of scientific degrees engaged in agriculture. Of course, such a situation leads to a decrease in the quality of research work in the country's agriculture and the scientific support of the industry.

In recent years, the world experience has focused on attracting more women to research. At a time when the share of women among researchers in most developed countries is 50 percent or more, in our country this figure is 30-40 percent. In addition, special attention should be paid to increasing the weight of young people in the research team. Therefore, a wide range of conditions is being created for the training of postgraduate and doctoral students in research institutes and universities under the Ministry of Agriculture and the Ministry of Water Resources.

In our opinion, the Ministry of Agriculture and the Ministry of Water Resources are implementing annual plans for the admission of researchers to the basic doctoral and doctoral programs for the training of

scientific personnel in the system of agricultural research supply and capacity building. talent selection procedures do not fully meet the requirements for training potential and talented scientific personnel.

In order to increase the efficiency of research in the agricultural sector, it is necessary to improve the system of scientific staffing: to bring the ratio of the number of researchers conducting research in agriculture to the indicators of developed countries; to increase the share of doctors and candidates of science in the research staff to 80-90% in the future; to increase the share of young people in the structure of doctors and candidates of science to 70% in the future; increase the number of researchers in doctoral and postgraduate studies by 5-8 times; organization of support and financial incentive funds for young people wishing to conduct research in doctoral and postgraduate studies, the creation of favorable spiritual and educational conditions for them; Given that the majority of doctoral and postgraduate students are married and have no other sources of income, it is necessary to increase the amount of scholarships and create conditions for them to go abroad for research [11].

In conclusion, it should be noted that the country plays an important role in increasing the share of doctors and candidates of science, improving the quality of research, in general, increasing the efficiency of agricultural production and ensuring the development of the industry on a scientific basis [12].

In accordance with the Regulations on Postgraduate Education in our country, in order to further improve the system of postgraduate education scientific and scientific-pedagogical training, to attract talented young people to scientific activities, to create conditions for the realization of their creative and intellectual potential the work being done is noteworthy.

In particular, from January 1, 2018, an updated system of postgraduate education was introduced in higher education and research institutions of the country.

This system is the implementation of postgraduate education in the form of basic doctoral, doctoral or independent research in a higher education institution or research institution.

Postgraduate education is a type of continuing education aimed at meeting the needs of society in highly qualified scientific and scientific-pedagogical personnel.

These include: basic doctorate; doctorate; independent research.

Under the auspices of a leading higher education institution or research institution, it trains highly qualified scientific and scientific-pedagogical personnel in important fields of science and technology, as well as develops fundamental research in priority areas of





science and technology and implements state scientific and technical programs.

Applicants wishing to obtain the degree of Doctor of Philosophy (PhD) in order to ensure quality training of highly qualified scientific and scientific-pedagogical staff, as well as to provide them with scientific and educational assistance in conducting dissertation research. and interested candidates are attached to scientific advisers.

Dissertation research for the degree of Doctor of Science (DSc) can be carried out without the appointment of a scientific adviser.

It is noteworthy that the Academy of Sciences of the Republic of Uzbekistan, which provides postgraduate education, provides financial support to researchers admitted to basic doctoral and doctoral positions in higher education and research institutions in order to further improve the financial support of young scientists under this system. ministries, departments and agencies within the limits of the budget allocated annually for these purposes.

In particular, from January 1, 2018, scholarships equal to the base salary of a junior researcher for basic doctoral studies at higher education institutions and research institutions; for doctoral studies, stipends equal to the basic salary of a leading researcher with a PhD degree are paid.

In our opinion, our country will create a solid material and spiritual basis for attracting young talented scientists to the field of agricultural science and improving the system of scientific support of the agricultural sector in accordance with world standards [12].

The Coordinating Council on ensuring the integral integration of Education, Science and production in the agrarian sphere should work, as well as:

- ensuring cooperation and training of all types of State research institutes and higher educational institutions conducting scientific research in the field of Agriculture;

- effective organization of retraining and professional development of agricultural specialists;

- ensure systematic improvement of State educational standards, curricula and programs in higher and secondary specialized and vocational education institutions on the basis of demand and advanced foreign experience in the field of Agriculture;

- approval of the annual Work Plan of scientific institutions in the field of Agriculture and indicators for assessing the effectiveness of their activities;

- establishing the practice of establishing agreements between scientific institutions and agricultural clusters in the field with the aim of commercializing the results of scientific research in the

field of Agriculture, introduction of scientific achievements into production, finding solutions to production problems through science.

## **CONCLUSIONS AND SCIENTIFIC PROPOSAL**

The main problems in the provision of scientific personnel to increase the efficiency of agricultural research are:

Existence of existing problems and shortcomings in the provision of scientific institutions with scientific personnel; unpreparedness of scientists to increase the effectiveness of scientific activities and strengthen their scientific potential; inability to involve students in scientific activities; lack of effective mechanisms for cooperation between science and industry; low sales of scientific developments of research institutes as scientific products; lack of mechanisms to stimulate innovative development and innovation processes at the regional level; limited access to statistics; lack of a mechanism to support innovative active business entities; insufficient involvement of the private sector in innovative activities due to their low interest; the existence of cases of scientists, professors and teachers moving to another industry due to low salaries.

The main conclusions in the supply of scientific personnel in improving the efficiency of agricultural research.

The effective use of the level of knowledge and practical skills of research staff and their orientation to the scientific process is considered to be effective: the integration of researchers and practitioners in the context of a common problem; conducting complex research in the field; accelerating the joint implementation of scientific developments; It is important to look at the complexity, content and quality of scientific papers.

In conclusion, the results of fundamental, applied and innovative research projects in the field of agricultural science through the mutual integration of higher education and scientific institutions in the production of farms, the involvement of talented masters and bachelors in agricultural science, highly qualified doctors and serves to increase the weight and quality of training of candidates.

A scientific proposal has been developed on the scientific potential of scientific personnel to increase the efficiency of research in the agricultural sector.

There is a huge scientific potential in the regions of our country. However, they and spread throughout across various ministries, departments, institutes and other scientific institutions, the vast majority of scientists who work in them are low-skilled, lack of scientific staff and candidates of science, effective use of scientific potential, as well as expanding the scope of



research in regions that slow down the implementation of research results.

This, in turn, will naturally lead to a decrease in the role of scientific security in the development of Agriculture. Therefore, it is necessary to establish agricultural scientific supply centers in the regions and develop a mechanism for investing in them from the regional budget and other local sources aimed at the accumulation of scientific potential, the solution of regional agricultural and rural problems, the implementation of research and scientific work.

## REFERENCES

1. Babadjanov A.M. (2011) Increasing labor productivity and improving the personnel training system are important factors in increasing the competitiveness of agriculture. // "International Agricultural" - Moscow, No. 5. - Pp. 16-17.
2. Babajanov A.M. (2012) Development of production of high-tech products and the use of scientific ideas in the agricultural sector of Uzbekistan. Zh: "Innovative development of the Russian economy" - Omsk: OmSTU Publishing House. – Pp. 26-29.
3. Babadjanov A.M. (2011) Effective use of scientific cum technologically achievements and financing innovative projects in the agricultural sphere. Ж:"Agricultural Sciences", -USA.: VoI. 2, No.1, - Pp. 28-33.
4. Buraeva, E.V. (2013) the system of providing agriculture with human resources: the main directions of improvement / E. V. Buraeva, O. Y. Grishaeva // National interests: priorities and security. - No.27. - Pp. 53-61.
5. Doholyan, C.B. (2012) Resource potential of the agricultural sector of the region / C.B. Doholyan, Yu.D. Umavov //Economics and entrepreneurship. -No. 1 (24). -Pp. 37-44.
6. Sukhareva, V.N. (2012) Problems of personnel support of agriculture. / V.N.Sukhareva, O.V.Pavlenko // Proceedings of the Orenburg State Agrarian University. - No. 6 (38). - Pp. 181-185.
7. Buraeva E.V. (2014) Application of the cluster approach in the study of labor productivity in the agricultural sector of the regional economy / Buraeva E.V. // Economic analysis: theory and practice. No.31 (382). -Pp. 32-37.
8. Kobzev V. V., Radaev A. E. (2013) Tools for managing high-tech production of industrial enterprises based on simulation modeling // Scientific and Technical Bulletin of the St. Petersburg State University. Economic sciences. – No. 6-2(185). – Pp. 138-144.
9. Kupriyanovsky V. P., Dobrynin A. P., Sinyagov S. A., Namiot D. E. (2017) Holistic model of transformation in the digital economy - how to become digital leaders // International Journal of Open Information Technologies. Vol. 5, No 1. - Pp. 26-33.
10. Kandrokova M. M. (2008) an innovative approach to the formation of the personnel potential of the agro-industrial complex of the region // Space of economics. No. 3-3. -Pp. 285-287.
11. Vlasova T.A. (2016) Conditions for the formation and assessment of the state of the personnel potential of the agricultural sector of the economy // Regional economy: theory and practice. No.12 (435). -Pp. 109-123.
12. Maramokhina E.V. (2015) the main problems of personnel support of agriculture // A-economic: economic and agriculture. №2 (6).