ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 12| Issue: 2| February2026|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2026: 8.753|| ISI Value: 1.188

THE IMPORTANCE OF SCIENTIFIC WORKS IN SOLVING AGRICULTURAL SECTOR PROBLEMS IN KARAKALPAKSTAN DURING THE YEARS OF INDEPENDENCE

Toreniyazova Gaukhar
Assistant Teacher of the Karakalpakstan Institute of Agriculture and Agrotechnologies

Article DOI: https://doi.org/10.36713/epra26163
DOI No: 10.36713/epra26163

SUMMARY
This article shows the importance of scientific research conducted to identify the problems that arose in the process of transforming the agricultural sector of the Republic of Karakalpakstan during the years of independence, based on scientific research and determining the right development directions.
KEY WORDS: *Crops, Growth, Development, Yield, Resource, Agricultural Technology, Science, Research, Production.*

INTRODUCTION

It is known that the initial steps taken during the years of independence of the Republic of Uzbekistan began with the emergence of significant challenges in all spheres, particularly in state governance and the development of agriculture, which is considered the foundation of the economy. First and foremost, due to the necessity of the country's transition to a market economy and the need for self-sufficiency in agricultural sectors, the economic indicators of each sector were brought to the forefront, as the previous system operations no longer met the new requirements. Since the years when state governance became directed by the President, firstly, the primary focus in developing the agricultural sector has been on economic ensuring each branch. With the transfer of the agricultural sector to private ownership, particularly into the hands of specific industries, it became necessary to implement extensive measures to effectively utilize the agricultural technologies of foreign countries that have achieved significant success in this field and to introduce improved agricultural technologies from relevant sectors.

It became evident that scientific research plays a crucial role in identifying emerging challenges, making appropriate decisions to address them, and implementing economically viable innovations. To develop the requirements set for the sector, the President has issued Decrees and Resolutions to establish specialized scientific research centers and institutes engaged in scientific work, to oversee this sector, and to discover and implement economically beneficial scientific innovations in each area. As the main result of such work, the Decree of the President of the Republic of Uzbekistan dated June 11, 1991 No. PF-218 "On the establishment of the Academy of Agricultural Sciences of Uzbekistan" [1] was adopted, and according to this decree, starting from July 1, 1991, the "Academy of Agricultural Sciences of Uzbekistan" was established based on the Central Asian branch of the All-Union Academy of Agricultural Sciences and the research institutions in the field of agriculture located in our region [2].

As a result of this important step, all existing research institutes in Karakalpakstan were transferred to the Uzbekistan Academy of Agricultural Sciences, and new ones were established in the necessary fields. It was determined that the main goal of this sector, which began in these years, is to have major innovations in implementing new agricultural technologies to improve the situation, to identify and address the causes of emerging problems by developing scientific foundations taking into account the ongoing changes in agriculture.

MAIN PART

From the first years of our republic's independence, its achievements in identifying emerging problems in agricultural development, adopting scientifically based solutions for them, and pursuing a development path that meets modern requirements quickly became apparent. Scientists and staff of research institutions who have effectively utilized the opportunities created for the operation of such facilities have identified the need to accelerate scientific and technological branch in rapidly advancing the republic's agricultural industry, to increase the efficiency of agricultural crops and livestock through the effective use of land, water, and available material, technical, and labor resources, which form the foundation of agriculture, to saturate the market with food products directly consumed by humans without processing, and ensuring the economic indicators of the sector by exporting to foreign markets.

By developing the production of agricultural crops, the richest resource of our region, and by establishing industry in rural areas, it is primarily necessary to improve the living conditions of rural residents, enhance their working conditions, and ensure their employment, in recent years, numerous scientific research projects have been conducted to address environmental problems and water scarcity, and their solutions are being effectively implemented in production.

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 12| Issue: 2| February2026|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2026: 8.753|| ISI Value: 1.188

The main task of the first years of independence was the processing of products grown in the region, the development of new varieties of agricultural crops that fully meet these requirements, suitable for the region's agro-climate. In order to update cotton varieties and accelerate work in the field of seed production, approved by the Resolution of the Council of Ministers of the Republic of Karakalpakstan No. 341/11 dated December 15, 1998, a major task was assigned to breeding scientists [3]. The work being carried out at the Karakalpakstan Agricultural Research Institute, which specializes in the cultivation of many agricultural crop varieties, is highly effective in achieving these goals. Cotton varieties Sh-5018, 4-160, Sh-3010, Sh-3104 and Sh-4104, Sh-4136, and Do'stlik, developed by the institute's scientists based on emerging production problems, have been widely cultivated for many years, not only due to their yield but also as leading varieties in terms of fiber yield. [4].

In addition, 15 varieties of alfalfa "Karakalpak," variety of wheat "Dustlik," "Yulduz," and 28 varieties of sunflower have been studied, and such varieties as "Master," "Rodnik," "Rassvet," and "Bogucharec," suitable for the agro-climatic conditions of the region, have been sown in many fields and are being cultivated as the main crop for increasing the economic indicators of farms.

Due to the need to further develop the scientific innovations of the changes and innovations taking place in agriculture in the first years of independence, the government established requirements for the implementation of new directions, opened a new institute for conducting scientific research and its branches.

Based on the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated March 4, 2002 No. 77 "On Measures for Organizing Scientific Research Activities" adopted in order to implement the Decree of the President of the Republic of Uzbekistan dated February 20, 2002 No. PF-3029 "On Improving the Organization of Scientific Work," based on the resolution of the meeting of the Council for Coordination of Scientific and Technical Development under the Cabinet of Ministers of the Republic of Uzbekistan dated August 6, 2002, the Center for Science and Innovative Technologies was established, mainly, since 2003, research work was removed from the state structure, exempted from special orders, and research activities were organized based on pre-arranged scientific projects that encompassed existing problems in agriculture. The emergence of such opportunities has created opportunities for the more productive operation of each scientific and production institution and a team of private scientists.

The Karakalpakstan branch of the Republican Center for Science and Innovative Technologies has been established, and its affiliated branches include the Karakalpakstan Agricultural Research Institute, the Republican Rice Production Center, the Central Asian Agricultural Organization and Economics Research Institute, the Uzbekistan Fruit and vegetable Crops and Potato Growing Research Institute, and the Karakalpakstan branch of the Central Asian Plant Protection Research Institute, and are conducting extensive research based on the introduction of new agricultural technologies to identify and address the scientific basis for problems arising in the agricultural sector.

Scientists from research institutes established in the region have effectively conducted selective work to implement crop rotation in fields where agricultural crops are being planted, taking into account the reduction in the amount of incoming water, introducing new water-saving technologies, and selecting crops based on the existing requirements for their types and varieties, which are considered problems related to changes in environmental factors in recent years [6].

The study of the scientific basis for the problems of destroying all melon crops after the emergence of melon flies in the republic in recent years due to the sharp decline in water levels in our republic during 1999-2003, as well as the development of measures to combat them by scientists is among the most important scientific discoveries [7].

The scientific basis for measures to combat the harmful biotic factors of agricultural crops arising from changes in ecological factors, which do not have a negative impact on the environment, has been developed and is being implemented today with great results in production, which confirms that the main factors in raising the economic condition of the agricultural sector are not in the form of contributing to its development, but directly [8].

CONCLUSION

It is evident that at the beginning of the years of independence in the Republic of Karakalpakstan, favorable opportunities were created for scientific research in the development of the agricultural sector, and a wide path was opened for solving emerging problems based on scientific research, which is considered an important basis for the agricultural sector in accordance with the requirements of the new era, for identifying problems through scientific research and implementing measures to mitigate their potential impacts. It has become clear that, not only by addressing this issue, but also by continuing scientific research, we have achieved economic development in all sectors of agriculture through the introduction of advanced foreign agricultural technologies, in addition to the opportunities available to us. In carrying out such work, the implementation of scientific projects based on internal capabilities is organized, and the creation of opportunities for scientists to work together with foreign scientists is the basis of the results achieved today.

REFERENCES

1. *Karimov I.A. Decree No. PF-218 of June 11, 1991, "On the Establishment of the Uzbekistan Academy of Agricultural Sciences" // Bulletin of the Supreme Council of the Republic of Uzbekistan, 1991, No. 7, Art. 138.*
2. *Shamshetov S.N., Mambetnazarov B.S. et al. Scientifically based system of agricultural development in the Republic of Karakalpakstan. - Nukus: Bilim, 2003. - 228 p.*
3. *Karakalpakstan State Archive Fund: M 500, inventory 1, ed. No 984, 2000.*
4. *Ibragimov M.Yu., Bekbergenov K., Jollibekov B.B., Kurbaniazov M. Methods of Growing Orchards and*

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 12| Issue: 2| February2026|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2026: 8.753|| ISI Value: 1.188

vegetables in the Conditions of Karakalpakstan. - Nukus: Karakalpakstan, 2009. -96 p.

5. *Collection of Legislation of the Republic of Uzbekistan, 2002, No. 5-6, Art. 40; No. 11-12, Article 93; 2004, No. 3, Art. 31; 2005, No. 3-4, Art. 24.*
6. *Ibragimov M.Yu. Vegetable Crops. - Nukus: "Bilim," 2012. - 66 p.*
7. *Ismailov U.E. Scientific Basis for Increasing Soil Fertility. Nukus: Bilim, 2004. - 186 p.*
8. *Sulaimonov B.A., Hamidov Kh.Kh., Islomov S.Ya., Atabaev M.M., Zuyev V.I. History and Current State of Higher Agrarian Education in Uzbekistan. - Tashkent, 2016. - 179 p.*