

ECONOMETRIC STUDIES FOR FORECASTING INCREASE IN YIELD OF AGRICULTURAL CROPS

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ABSTRACT:

This article discusses forecasting based on econometric research, being the basis of scientifically based planning decisions, increasing the scientific level of planning and as one of the foundations of the scientific knowledge base methodologies should serve as a tool to support the concept of medium and long-term planning, systematic analysis and optimal decision-making.

KEYWORDS: Econometrics, forecasting, mathematical modeling, agriculture, models, research

INTRODUCTION:

The five priority areas of the Development Strategy of the Republic of Uzbekistan for 2017 - 2021 show the need for modernization and intensive development of agriculture, i.e. deepening structural transformations and gradual development of agricultural production, further strengthening the country's food security, expanding the production of environmentally friendly products, significantly increasing the export potential of the agricultural sector, reducing cotton and grain crops, planting potatoes, vegetables, fodder and lubricant crops, the land has been liberated, as well as further optimization of cultivated areas due to intensive orchards and vineyards, creating favorable conditions for schreniya and development of diversified farms engaged in processing, harvesting, storage, trade, construction and provision of services, further enhancing the competitiveness of our economy in today's

market, modernization and diversification of its active branch and network.

As the President emphasized, we have every opportunity to double the gross domestic product by 2030, and the rational use of land and water resources is a priority for further agricultural reform.

In this regard, special attention will be paid to the widespread introduction of modern intensive Agro technologies, improvement of the infrastructure for deep processing and storage of products. In our country, we are working on reducing the cultivated area of cotton in areas with low yields, expanding vegetables, legumes and food crops using international best practices, creating intensive orchards and vineyards based on high-tech production.

Currently, the main focus will be on expanding export-oriented production of fruits and vegetables and food products, increasing the production of livestock products, as well as organizing small production points and providing services. One of our main tasks is to improve the existing agricultural financing system. It is known that without these efforts it is impossible to ensure stable productivity, the development of the entire agro-industrial complex and, most importantly, to increase the material interests of farmers and improve living standards in rural areas. The implementation of these activities is one of our priorities.

Scientific research in this area requires not only the ability to analyze complex socio-economic processes for the developing economy of the country, but also on the basis of modern econometric, economic and

mathematical methods and models using computer technology determines the increase in demand for these processes in the field of economics and mathematical modeling, who will make multidimensional decisions. This allows you to explore trends in the economy, the state of the studied objects and predict their development, and also allows the efficient use of limited resources in the national economy for making scientifically sound decisions. Econometric and economic-mathematical methods determine the direction of a comprehensive analysis of all sectors of agriculture, the creation of many model models of sustainable economic growth, modernization of agriculture and the optimal use of limited resources. [1, c 2]

Econometric methods expresses the posed problem not only analytically, but also helps to model business processes of sectors of the economy that can determine the influence of endogenous and exogenous factors, creates models that can manage and predict these processes in terms of quality and quantity, and provide an opportunity to provide advisory proposals or management decisions based on research for effective management of the investigated object. It is well known that the development of computer systems and special applications and the improvement of analysis methods have turned econometrics into a powerful tool for economic research. For any practical technical and economic research, econometric methods can be used as the main part of a scientific tool. Therefore, the use of econometric methods is of great importance in the analysis and forecasting of various economic and technical issues. [2, c 10]

Prediction of agricultural production in the agricultural sector is perhaps a special study that determines the outcome of the development of directions, objects and phenomena, as well as prospects for the development of the object. The forecasting

process begins with an analysis of the object. This analysis includes the study of factors for selecting an object that affect the object, its structure and methods of managing the object. To solve problems and tasks to increase agricultural productivity, an econometric forecasting model is compiled, linking the results and factors and is solved using econometric methods using information technology, and optimal solutions are analyzed and predicted for the future.

The analysis of statistical data shows that at present, thanks to the attention and practical assistance provided by the state, the share of agricultural production is growing very rapidly. Moreover, the effective development of production processes and crop yields of agricultural sectors depend on many factors, such as seed quality, annual rainfall, fertilizers and its types, fertilizer rates, agricultural activities, harvest time and other factors. Certain quantities of mineral fertilizers that are cultivated on the fields of agricultural crops in different areas have different effects on the growth of crop yields.

Therefore, there is a relationship between the amount of fertilizer for the sown area and crop yields. This allows you to conduct numerous experiments and observations to determine indicators that determine the impact on the fertility of certain types of fertilizers in specific fields.

Many economic processes and phenomena in agriculture have a correlation, usually in the form of production functions. In this case, the considered function is a mathematical model of multifactorial economic processes. Instead, this model represents aspects of the interdependence of events, and it determines what indicators can be obtained as a result of factors affecting production processes. The influence of a large number of factors on production results is studied on the basis of correlation analysis. Correlation analysis is a set

of styles of mathematical statistics that illustrates the relationship of the number of connections between the phenomena being studied. [2, c 20]

Thus, the development of agricultural production of agriculture, analysis and forecasting of productivity is carried out on the basis of correlation analysis and production functions of mathematical statistics. Prediction based on econometric studies being the basis of scientifically sound planning decisions, increasing the scientific level of planning and as one of the foundations of the methodology of the scientific knowledge base should serve as a tool to support the concept of medium-term and long-term planning, systematic analysis and making optimal decisions.

The implementation of scientific forecasts in practice determines the most effective ways of targeted development of enterprises, and also determines the negative trends of economic growth and the most optimal way to use resources, it is used to scientifically substantiate the quality of land resources, it will help increase crop yields and improve product quality.

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