

## Increasing Efficiency Based on Application of Advanced Agrotechnologies in Agriculture

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### Abstract

*Increasing the economic efficiency of the cotton industry serves, first of all, to fulfill the requirements of the country's food strategy directions and to ensure food safety. Also, on the other hand, this goal will be achieved through the rational use of the available labor, land, water, material and financial resources of the cotton-growing enterprises, regardless of the forms of ownership, based on the improvement of economic relations between them. The article describes the development of cotton growing in Uzbekistan and the use of new technologies.*

**Keywords:** *Paxta tolasi, almashlab ekish, texnologiya, moliyaviy qo'yilmalar, investitsiya loyihasi, to'qimachilik sanoati, texnologik jarayonlar, xalqaro tajriba.*

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Great attention is being paid to increasing the volume of production of agricultural products, which is the main support of food security in our republic. In particular, comprehensive and well-thought-out work was carried out on the optimization of the composition of cultivated areas, the introduction of new and advanced technologies into production, the radical improvement of crop varieties and seed selection. Wheat cultivation is of particular importance for the development of agriculture and improvement of the living standards of the population. To solve this problem, it is necessary to properly organize and improve production.

The essence of improving production is the use of crop rotation, taking into account the characteristics of previous crops, using varieties with high yield and good quality, using mineral fertilizers according to soil fertility and taking into account the quality of fertilizers. timely and proportionate supply, treatment of insects and various diseases, timely and quality agrotechnical activities, use of high-performance machines, aggregates and their adjustment.

The purpose of production improvement is to improve labor culture in cotton cultivation, increase productivity, improve quality and reduce product cost by carrying out human labor proportionately with means of production.

Factors influencing the improvement of cotton cultivation can be divided into the following 4 major groups (natural, technical, organizational-legal and economic-social).

In the group of natural factors, we can include climatic conditions of the farm (good autumn), location of the farm, condition of the soil and level of water supply.

In the group of technical factors, we can include the level of provision of necessary equipment, technical condition of equipment, capacity of equipment, breadth of coverage of equipment, shift productivity of equipment.

To the group of organizational and legal factors - perfect knowledge of crop cultivation technology, use of new high-yielding varieties, adherence to cotton cultivation technology, ensuring proportionality of production means, use of standards, treatment against insects and diseases, fertilizer we include such factors as use, watering with juice, timely harvesting, expanding the possibility of growing cotton for seeds, creating sufficient conditions for farms to follow standards and improve it.

We can include the state of contractual relations, provision of necessary funds, timely transfer of funds, labor incentive systems to the group of economic factors.

When organizing cotton production on farms, it is necessary to pay attention to the following factors:

Due to increased attention to seed materials, it is possible to increase the gross yield by 2%.

1. Costs are reduced due to on-farm treatment of seeds.
2. Sowing seeds with the help of modern comprehensive seeders. (Currently, the seed is sown using old techniques with low productivity).
3. Bringing the seed material to be planted to 100% fertility if it meets the requirements of the state standards.

**As a result of improving agrotechnical measures in cotton cultivation, it is possible to increase the gross yield by 5%.**

1. Water-saving technologies such as rain and drip irrigation should be widely used in crop irrigation. The widespread introduction of the drip irrigation system creates an opportunity to increase the efficiency of agricultural production. At the same time, the use of special drip irrigation methods for each type of crop and the training of qualified specialists in the management of the drip irrigation system through computer programs will also become important in the future. It is known from the experiments carried out in the regions of our republic that drip irrigation allows to save up to 65% of water consumption in cotton cultivation, and to reduce the consumption of labor and material resources by half.

2. Measures for large-scale implementation of innovations in the use of mechanization, chemical means, selection and genetics, regional specialization, biotechnology in almost all areas related to the production of the cotton industry in the countries of the USA and China are permanent. will be implemented. In particular, experiments have proven that the use of Chinese technology in cotton cultivation reduces costs by 7-10 percent compared to traditional technology.

3. Harmoniously carry out chemical and biological fights against insects and diseases encountered in cotton cultivation. The implementation of these measures allows to preserve the cultivated crop and prevent its destruction.

It is possible to increase the gross yield by 2% due to increased attention to the harvesting of the cultivated crop.

The productivity, quality and cost of cotton directly depends on its early harvesting, and a comprehensive approach to resource efficiency, which resource, when and how to use it, as shown in scientifically based recommendations, will give the expected result. This, in turn, reduces all

types of resources used in agriculture (land, water, labor, technical tools, seeds, etc.), as well as expands the possibilities of increasing the volume and improving the quality of cultivated products.

Timely harvesting and the use of high-efficiency techniques during harvesting will reduce the total yield by 5 centners.

## CONCLUSION

1. The development of the cotton growing complex, which is of crucial importance for the country's economy in modern economic conditions, gives a strong impetus to the development of raw material production and industrial sectors. This is also evident in the experience of developed countries. From this point of view, encouraging the development of the cotton complex and increasing its competitiveness is important for the national economic interests of our country.
2. Based on the unique characteristics of each period, the composition of factors influencing the development of cotton growing in Uzbekistan changed, and their influence on the development of the sector was also different in each period. In the current period, the increase in economic efficiency in cotton production is related to the following factors:
  - Saving working time and increasing productivity;
  - Application of science and technology achievements;
  - Development of the human factor;
  - Improvement of management system.
3. Indicators representing the efficiency of cotton cultivation, covering the relevant macroeconomic indicators, allow to evaluate the efficiency of the use of all types of resources in the field. As a result of the implemented measures, it is necessary to express the production economic efficiency of the farm in the form of natural, value, relative and quality indicators.
4. Increasing the efficiency of cotton cultivation in farms includes the following directions:
  - It allows to increase the gross yield by 2% due to increased attention to seed materials;
  - As a result of improving agrotechnical measures in cotton cultivation, it is possible to increase the gross yield by 5-10%. For example, the widespread introduction of drip irrigation system creates an opportunity to increase the efficiency of agricultural production. In this case, material costs can be reduced up to two times. The use of US and Chinese agro-technologies in cotton farming has been proven to reduce costs by 7-10%;

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