American Journal Of Agriculture And Horticulture Innovations

VOLUME Vol.05 Issue05 2025
PAGE NO. 9-12
DOI 10.37547/ajahi/Volume05Issue05-03

On the Environmental Problems Arising in The Development of The Cotton Industry

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Received: 16 March 2025; **Accepted:** 12 April 2025; **Published:** 14 May 2025

Abstract: As a result of the agroeconomic refoms many positive resuls were achieved, economic stabilite was established in the Republic, great achievemens were achieved in satisfying the demand of the population of the Republic fo food producs and industrial raw materials with the producs grow in our country. According to the resuls of many studiyes, cotton occupiyes a leading position in agricultural production. The purpose of this article is to develop the derictions of digitization of the system of placyement of variyetiyes in the cross- section of the regions in the field of cotton, in the conditions of development of market relation.

Keywords: Agriculture, production resources, technologies, agrocluster, farm, cooperatives, food, atmosphere, farming, natural wealth, economic problem, environmental problems.

Introduction: In the context of the development of market relations, the prospects for ensuring the sustainable development of the agrarian sector economy are directly related, first of all, to the effective use of existing resources, the introduction of resource-saving equipment and agrotechnologies.

Widespread use of the achievements of agricultural science and technology, advanced practices in the sector is an important basis for the promising development of agricultural production at a time when resource scarcity is becoming increasingly evident, their quality is deteriorating, and the threat of negative consequences of environmental problems for humans and the environment is increasing.

Due to environmental problems emerging in agriculture, such as the increase in the content of chemical compounds harmful to human health in food products, drinking water, and the deterioration of the melioration state of soils, new technologies, agrotechnical methods, and economic mechanisms that ensure environmental safety require constant implementation in practice.

Main part

Global climate change occurring on our planet, increasing population, development of measures to adapt agricultural production to the negative consequences of climate change, introduction of effective economic mechanisms, and expansion of scientific research on improving food supply are emerging.

According to experts, taking into account that the world population will reach 9.6 billion by 2050, the issue of economical use of available agricultural resources for food production will become extremely urgent. In this regard, the issue of effective use of resources in the agricultural sector of our republic, especially in cotton cultivation, and the promotion of the introduction of resource-saving technologies into practice is the issue of the state's attention.In particular, the decision of the President of the Republic of Uzbekistan dated December 27, 2018 No. PQ-4087 "On urgent measures to create favorable conditions for the widespread introduction of drip irrigation system in the cultivation of raw cotton", it is aimed at economic stimulation of the introduction of water-saving technologies in cotton cultivation, and serious delays are being allowed in the implementation of scientifically based agrotechnical measures in the cultivation of cotton raw materials and the introduce tion of water - saving technologies of irrigation, the introduction of drip irrigation technology, farms that use these technologies, as well as drip irrigation systems and these it is pointed out that there are

no effective mechanisms of state support for local producers supplying systems components.

Agricultural reforms, the transfer of land to private clusters and cooperatives made it possible to increase productivity in cotton growing by an average of 10% per year.

As a result of the introduction of the cluster system in the cotton industry and the complete cancellation of the state order, the cotton raw materials grown today

are being processed in the entire republic.

In addition to the above, extensive use of agricultural science and technology development achievements, advanced practices in the cotton industry is causing the increasing shortage of resources, the deterioration of the quality of land and water resources, and environmental pollution due to environmental

problems. Therefore, in today's era, when the danger of environmental problems for people is increasing, there is an increasing need to use alternative, ecologically safe methods of developing the cotton industry. In relation to the development of the cotton industry in clusters based on scientific achievements, the occurrence of environmental pollution, the increase of harmful chemical compounds for living creatures in the food, atmosphere, and drinking water produced in the agricultural sector, the de terioration of the mechanical, agrochemical and land reclamation conditions. is also causing.

Therefore, modern agricultural science, the process of organizing production in the field of cotton production should be carried out together with the implementation of the urgent task of maintaining ecological balance. This, in turn, requires the regular introduction into practice of innovative technologies, ecological agrotechnics, and socio-economic mechanisms that encourage the implementation of environmental activities.

Life proves that natural resources, natural resources gifted to us by nature, are not stable and inexhaustible, always renewable resources, as we think, but very rare, in most cases, they cannot be replaced or restored. That is why the issue of using natural resources economically, avoiding wastage and pollution, and most importantly, using technologies that replace used resources (for example, returning humus and nutrients to the soil after harvest) is not only an environmental issue, but also an economic issue.

Creating solutions to environmental problems in agriculture, preventing the deterioration of the environmental situation, requires conducting targeted scientific research, as well as encouraging the introduction of the results of this research into production. The complexity of the issue is that in most cases, environmental measures are either economically inefficient for the entrepreneur or require additional costs (taking into account that the entrepreneur's goal is to make more profit).

As a topical solution to the problem, attention is currently being paid to the development of organic cotton farming in our republic. Ecological production (in agriculture, the terms "ecological", "organic", "eco" have essentially the same meaning).

Ecological agriculture is primarily understood as a production method that does not have negative consequences for the environment. This involves paying attention to preserving biological diversity in the region, achieving harmony with nature, and using methods that allow maintaining the biological activity of microorganisms in the soil in crop fields. Within the framework of ecological agriculture, pesticides and herbicides are not used, and the use of mineral fertilizers is sharply reduced. The biological state of the soil is maintained through a crop rotation system.

Since cotton fiber produced within the framework of organic cotton farming is classified as a technical product, it does not have such a strong environmental significance as grain, horticulture, viticulture or vegetable growing, it is extremely relevant in terms of food value due to the widespread consumption of cottonseed oil. On the other hand, the low pollution damage caused by organic cotton farming to the environment further increases the importance of developing organic production, which requires support.

Thus, in the fight against environmental problems, it is primarily intended to establish and adhere to pollution limits that can be observed by introducing methods, technical means and technologies that pollute the environment less, or to establish and adhere to them, the minimum harmful levels for living nature and humanity.

We believe that the implementation of measures related to the prevention of environmental problems arising from the development of the cotton sector should be carried out within the following three groups:

- the first group - a set of restrictive (penal) measures within the limits of environmental pollution indicators applicable to the cotton sector and entities related to the cotton sector;

- the second group - a set of economic incentive measures to create environmental methods, mechanisms, and tools in accordance with the level of

their widespread use;

- the third group - a set of measures promoting and advocating the importance of environmental measures for the environment and society, and calling for the implementation of environmental measures. The third group includes the activities of secondary specialized and higher educational institutions that train specialists in the field of ecology and science.

One of the important measures aimed at reducing the level of environmental pollution should be optimization measures related to optimizing the amount (weight) of cotton acreage in the composition of arable land in cotton-growing regions. This is due to the fact that the soil ecology of arable land has deteriorated due to cotton monoculture. Based on the optimization of the weight of cotton acreage, it is possible to increase the amount of humus in the arable layer of soil, increase soil fertility, and reduce the amount of toxic chemicals used to protect plants by eliminating foci of cotton diseases and insects in the soil.

Due to the large amount of water required for cotton irrigation, the inadequacy of irrigation networks and outdated irrigation methods, and most importantly, the difficulty of introducing water payments, water consumption in cotton farming remains very high. Although excess water consumption is considered an economically inefficient resource consumption, its potential as a source of environmental problems is often overlooked.

Excessive water resources consumed in cotton farming are a source of environmental pollution, increasing the level of groundwater and causing secondary salinization of the soil. Excess water consumption is a cause of leaching of the fertile topsoil, i.e., water erosion.

Excessive water consumption in irrigation not only leads to the leaching of nutrients dissolved in the soil, which leads to a wasteful consumption of resources, but also pollutes water bodies with toxic chemical compounds due to the release of most of the mineral fertilizers into the groundwater. The increase in the level of mineralization of water in water bodies leads to a decrease in the quality of water used for irrigation, and chemical compounds are carried to the fields with mineralized water.

Thus, the use of land and water resources, mineral fertilizers, and various toxic chemicals in the cotton production process creates conditions for environmental pollution, and therefore is considered a source of environmental problems. Assessing cotton production as a source of environmental pollution and understanding the nature of environmental sources allows us to take appropriate measures to reduce the scale of pollution.

RESULTS AND DISCUSSIONS

It can be widely used in developing measures to develop the cotton sector and initiate work to prevent environmental problems arising in this process; in studying the theoretical aspects of environmental problems related to the development of the cotton sector; in implementing measures to develop environmental awareness among agricultural managers and specialists and among the rural population; and in improving the legal and organizational foundations of the processes of eliminating environmental problems in the development of the cotton sector.

A theoretical conclusion can be drawn from this: when environmental pollution can become a problem, if human rights are violated as a result of the pollution of the residential area during the production of products. The restoration of this property right indicates that the problem of pollution has been eliminated (although the source of the environmental problem has not been eliminated). However, under such circumstances, property rights are constantly in conflict. Because the right of companies producing cotton raw materials or toxic chemicals that have a negative impact on human health to make a profit by producing products necessary for society, and the rights of other members of society to drink clean water, breathe clean air and live a healthy life are reciprocal. a conflict arises.

The issue of reducing the level of pollution and keeping the level of pollution at a less harmful limit is discussed, taking the continuation of the process of environmental pollution as a problem that cannot be completely eliminated simultaneously with the development of the cotton industry.

Based on the above scientific and practical conclusions, the following proposals are put forward:

- local organic fertilizers should be used more to increase the productivity of cultivated areas in the cluster;
- cotton growing clusters should not cause environmental damage to the population living near the cultivated fields;
- environmental education in our country should start from every family, and also it is appropriate to teach the issue of ecology as a science in the educational programs of schools and higher educational institutions;
- in the process of growing products in clusters specialized in cotton production, chemical means should be used according to scientifically based

standards;

- it is required to establish regular provision of information, data, recommendations on environmental education through other mass media, Internet networks;

- the issue of ecology and environmental protection should be taught more widely as a separate subject in all areas of higher education and colleges in the field of agriculture.

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The results of scientific and practical research of the author