



STUDY OF WINTER WHEAT AGROCENOSIS IN THE KHORAZM OASIS

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Annotatsiya. Ushbu maqolada Xorazm vohasi qishloq xo'jaligi agrotsenozlarining ekologik holati hamda kuzgi bug'doy yetishtirishda turli agrotekhnologiyalarning ta'siri, shuningdek, tashqi muhit omillarining kuzgi bug'doy o'simligining o'sishi, rivojlanishi va hosildorligiga ta'sirining ilmiy va amaliy ahamiyati borasida ma'lumotlar berilgan.

Kalit so'zlar: agrotsenoz, ekologik omil, tuproq, kuzgi bug'doy, agrotekhnologiya.

Аннотация. В данной статье рассмотрено экологическое состояние агроагроценозов Хорезмского оазиса и влияние различных агротехнологий на возделывание озимой пшеницы, а также научная и практическая значимость влияния факторов внешней среды на рост, развитие и продуктивность озимой пшеницы. предоставлена информация о растениях озимой пшеницы.

Ключевые слова: агроценоз, экологический фактор, почва, озимая пшеница, агротехника.

Abstract. This article provides information on the ecological status of agricultural agrocenoses of the Khorezm oasis and the effect of various agrotechnologies on the cultivation of winter wheat, as well as the scientific and practical significance of the influence of external environmental factors on the growth, development and productivity of winter wheat.

Key words: agrocenosis, ecological factor, soil, winter wheat, agrotechnology.

Enter. Agrocenosis is a system associated with specific relationships between cultivated crops and environmental components and anthropogenically regulated by specific species composition of organisms. The high productivity of such systems is provided by intensive agrotechnology of feeding and alternating planting of fertile plants.

Due to climate and weather changes observed in recent years, there have been no scientific researches on the effect of agrotechnologies on the growth, development and productivity of crops, and there are scientifically based recommendations. it's not. Therefore, a comparative study of various agrotechnologies of crop care in the cotton-wheat rotation system is required.

Level of study of the problem. Currently, agrosystems are experiencing significant environmental stress, as they affect the entire range of anthropogenic and natural phenomena associated with the production of agricultural products. The research conducted in this regard was also noted in the scientific research of a number of authors (Prusakova et al., 1995; Pirogovskaya et al., 2001; Nilovskaya et al., 2001). The development of negative processes leads to a violation of the structure and stability of soils, a decrease in productivity, contamination of agricultural products with substances harmful to human health (Krasnitsky V.M., 2001; Buyankin N.I., 2006; Kashtanov A.N., 2008).



Also, as a result of long-term and comprehensive scientific research, optimal agrotechnologies of winter wheat cultivation suitable for different soil and climatic conditions of our republic have been developed and put into practice. Certain elements of the created agrotechnologies (tillage, planting, irrigation, fertilizing, etc.) are constantly being researched and improved.

At the same time, in each region of our country, issues such as planting dates of new varieties, seedling thickness, watering and feeding procedures are being studied. As a result, regional agro-technologies of growing new winter wheat varieties are being created.

Scientific research on the cultivation of winter wheat in the conditions of irrigated soils of Uzbekistan has been intensively conducted for the last 15 years (Tozhiev and Khokhmanov, 1996, 1998; Otakulov and Yusupov, 1998; Siddikov et al., 2004 ; Iminov, 2006; Khalikov, 2000, 2007; Suvanov, 2010, Djumaniyazova, 2011, etc.). As a result of these scientific studies conducted in different regions, the agrotechnology of winter wheat cultivation was created (Recommendations for winter wheat cultivation in irrigated fields, Tashkent, 2008) and is being further improved.

Scientific research works on the cultivation of quick-cooking corn, legumes, vegetables and other crops have been carried out in the areas freed from winter wheat (Ne'matov, 2004; Israilov, 2005; M. Kholikov, 2007; Khasanova and Abdugarimov, 2008 ; Babadzhanova et al., 2012) and ongoing.

Also, taking into account the limited land and water resources and the diversity of the soils spread in our republic, Khorezm oasis requires studying the effect of agro-technologies used in the soil-climate conditions on the growth, development and productivity of the winter wheat crop.

The main part. The goal is to determine the ecological characteristics of the agrocenoses of winter wheat and cotton in the conditions of the Khorezm oasis, and the following tasks were set to achieve this goal.

Tasks of the research:

- reveal the main trends of agrophysical and agrochemical parameters of agroecosystem soils and anthropogenic changes;
- reveal the influence of external environmental factors on the main stages of plant growth and development;
- is to assess the ecological potential and productivity of agricultural agrocenoses.

Research object and methods: data collected on the basis of agricultural agrocenoses, winter wheat and applied agrotechnological measures, as well as based on the implemented experiments. This, in turn, serves to determine the ecological characteristics of the state of winter wheat agrocenoses in oasis conditions.

Research methods. Ecological (observation, comparison, experiment and modeling), placement of options for field experience in carrying out research, soil water-physical and chemical analysis based on ecological assessment methods (Tyurin, Kachinsky, EC-Hanna meter (electrical conductivity meter), Diver (groundwater level meter), biometric indicators of plant development, biomass, leaf area (LI-COR 3100), data correlation indicators (Excel – ANNOVA) were analyzed mathematically and statistically.

Research results. Impact of currently observed climate and weather changes, land, water and other factors scarcity on the growth, development and productivity of agro-technologies, as well as on the cotton-wheat rotation system processes of salinization in soils, their salinity



level, the composition of seepage waters and their influence on the salinization process and order, as well as soil fertility, the amount of basic nutrients (N.P.K) in the soil, their growth and new information is obtained that shows the importance of agrophysical and agrochemical properties of the soil in the development of agromelioration measures.

The results of the research, in terms of scientific and practical significance, show changes in soil fertility, plant growth and development, productivity and the quality of the crop is determined, and the potential possibilities and agro-economic efficiency of agro-technologies used in different soil conditions are determined.

Recommendations are developed based on the collected data on the impact of agrotechnologies used in the main crops on the agrochemical and agrophysical properties of the soil in the conditions of the irrigated soils of the region, as well as the possibilities of predicting the processes that may occur in the future. is created.

Scientific news expected from research. Depending on the influence of anthropogenic factors (the intensity of soil fertility improvement and the level of use of intensification means) in the conditions of the Khorezm oasis, the characteristics of the ecological condition of winter wheat and cotton agrocenoses are determined. New information on the ecological status of agrocenoses at different levels of anthropogenic influence is obtained, the intensity of anthropogenic load on the agrocenose of winter wheat and cotton in the conditions of the Khorezm oasis is determined, a comprehensive method is developed for the general ecological assessment of agrocenose, which prevents the biological processes in the soil-plant system and allows to take into account the cumulative effect of environmental factors.

The theoretical and practical importance of the research is that the obtained results make a great contribution to the study of agroecosystems and its ecological potential in the Khorezm oasis. The results of the research can be used in the organization of bioecological monitoring of agroecosystems and biodiagnostics of the soil condition, in assessing the impact on the environment, in planning land use, in establishing the ecologically oriented management system of soil fertility in agroecological systems.

Summary. Thus, in order to develop the concept of a scientifically based approach to the functioning of agroecosystems, it is necessary to determine the influence of external environmental factors in the habitat of plants, that is, taking into account the environmental factors that directly affect them. Therefore, environmental monitoring and assessment of the state of ecosystems, determining the factor limiting the productivity of agrocenoses, increases the agroecological potential of the region.

Changes in any functional component of the ecosystem lead to significant changes in other components, thereby trying to maintain its stability. In this regard, it is necessary to consider structural changes in agroecosystems and at the same time evaluate changes in agrocenoses.

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