

METHODOLOGY OF STUDYING OF INFLUENCE OF QUALITY OF SOIL ON PRODUCTIVITY OF THE COTTON TAKING INTO ACCOUNT BIOORGANOMINERAL SYSTEMS OF UZBEKISTAN IN THE CONDITIONS OF CLIMATE CHANGE

O.G.Sultashova – PhD in Geography, professor
Karakalpak state university named after Berdakh

B.A.Akbarova – researcher

R.G.Azizova – researcher

Hydrometeorological Research Institute (NIGMI)

N.D.Aymuratova – assistant

Karakalpak institute of agriculture and agrotechnology

Tayanch soʻzlar: iqlim oʻzgarishi, hosildorlik, bioorganomineral, tuproq unumdorligi, metodikasi.

Ключевые слова: изменение климата, продуктивность, биоорганические минералы, плодородие почв, методология.

Key words: climate change, productivity, bioorganominerals, soil fertility, methodology.

Being engaged in an estimation of favorable conditions for development technical and agricultural crops, predicting efficiency both current year, and averages of long-term plants of conditions favorable for development, a special place occupies the complex system approach of research which «the soil - a plant – atmosphere» considers all nuances of interaction.

Along with it, our researches will be directed on detection and studying of new patterns of relationships, the phenomena having great importance for the further development of applied researches, deepening and expanding view of situation in world around. These researches will be used for addressing food and ecological safety issues, rational use of land and water resources, plant protection from external stressful weather factors.

Land, climatic, agroclimatic and soil resources always occupied a leading place among national wealth of any state. Rapid development of the industry, agriculture, population growth is accompanied by water consumption and outlet increase. It leads to mineralization deterioration, change of ionic structure towards increase of a share of toxic ions, to deterioration of a gas and biogenic mode of soil, pollution with toxic chemicals, pesticides and metals.

This problem is especially actual for regions with intense water economic balance where economy development can be braked by quantitative and qualitative depletion of water and ground resources.

The irrigation is one and most ancient ways of increase of agricultural crop productivity and it is now one of the major directions of an intensification, in particular, cotton productions worldwide with insufficient and unstable natural humidifying in a chain air-water-soil.

One of the major means of improving of agriculture is the proper accounting and rational use of natural (air, water, soil) resources of Uzbekistan, first of all its soil and climatic ones. To maximize expediency of their use at the lowest cost of labor and means it is necessary, that crops and varieties, terms of sowing and planting, harvesting, agricultural cultivation, methods of cultivation of various crops, as well as types of agricultural machinery and equipment have been adapted for the local soil - climatic features of investigated region. Under these provisions it is possible to reach the most efficiency in using of favorable conditions in struggle against unfavorable environmental factors. In recent years scientific cooperation of Uzbekistan with many countries are successfully developing. Delivery of various kinds of products both industrial and agricultural, as well as the exchange of new modern technologies has led to increased interest in natural phenomena, their quantitative characteristics and provisions.

Interest in weather and climate and its impact on air, water, soil, flora and fauna, where the poorly known object is soil climate, increased significantly. Under a soil climate long-term soil climate regime of temperature and soil moisture, soil air and other elements that depend on complex natural conditions and industrial activity is implied.

Among specific features of a soil climate it is possible to note following interdependent factors:

➤ Unlike the atmosphere the soil climate is connected with environment of its formation and it is the bioorganomineral system having their own mechanisms of development. The atmosphere as a whole is more or less homogeneous over large areas of the Earth in which the physical phenomena occur in air cover of the Earth - in a mixture of gases. The physical phenomena that occur in soil directly are less homogeneous than in the atmosphere.

➤ The atmosphere is generally more or less uniform over large areas of the Earth, in which physical phenomena occur in the air envelope of the Earth - in a mixture of gases. The physical phenomena that occur in the soil directly, less homogeneous than in the atmosphere.

➤ The soil climate is caused by presence of vegetation and snow cover soil, plant roots plant residues, microorganisms, and animals, making huge impact on life of soil and its climate.

➤ The Soil climate comes under influence of activity of the person as the soil is exposed to influences of technology which alters a course of the phenomena taking place in it

➤ Close connection with such soil living organisms like plants, animals and microorganisms, causes the big variability of soil climate in time.

Being engaged in an estimation of favorable conditions for optimum development technical and agricultural crops, predicting efficiency both current and long-term average of favorable conditions for the development of plants, the special place occupies the complex system approach of research which consider all nuances of interaction "soil-plant-atmosphere". In this connection, the solution of this complex interconnected process includes variety of scientific researches and tasks in following directions:

➤ Research of influence of complex factors, such as weather, agro weather conditions and a soil climate in agricultural and geographical aspect on growth, development and formation of elements of productivity of cotton and cotton fiber quality;

➤ Study of soil during the interphase periods of cotton development. Drawing up of trends of soil dynamics by years for the warm period (taking into account conditions of crop development) to identify the impact of global and regional climate warming to establish regularities of soil climate, spatial distribution, identification of specific features in various sowing cotton growing areas of Uzbekistan.

➤ Revealing of criteria of soil climate during the critical periods for the plants developing at a lack or surplus of moisture, low or high temperature in the top layers of the ground and on various depths that is sharply reflected in efficiency of culture.

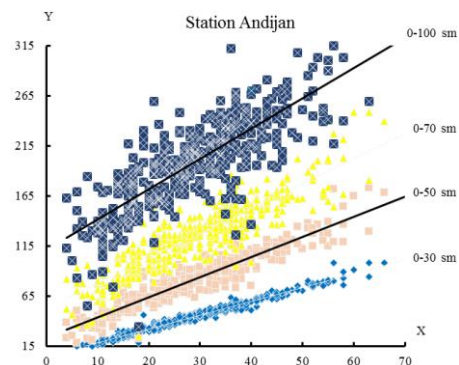
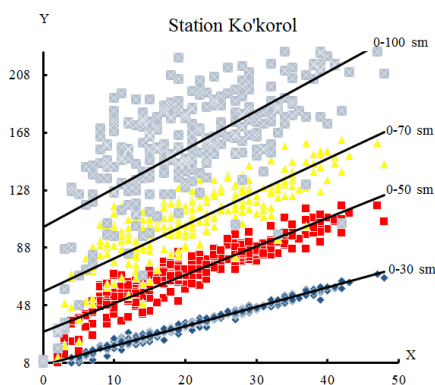
➤ The establishment of prospective final productivity where an important stage is studying soil and surface climate of soil, and also studying of influence of terms of carrying out of tillage during the winter and spring periods till the period of vegetation of cotton.

For addressing these problems it is supposed to use advanced methods of mathematical statistics, results of analyses of physical, agro-hydrological properties of soil, studying of geographical analogues, taking into account the posi-

tions developed and reflected in applied and basic researches on meteorology, climatology agricultural meteorology, soil climate, soil geography, and GIS mapping as well.

In foreign countries there are the special services, designed to monitor the status of soil fertility where according to the conclusions of experts and scientists land is regularly withdrawn from an agricultural use for improvement and fertility restoration that provides safety of ecological functions of soils.

In this connection, it is necessary to underline that studying of temperature of air, humidity of soil by depths and its influence on growth, development and formation of elements of cotton productivity and fiber quality will allow to improve system of agrometeorological maintenance cotton growing.



Picture1. Values of interrelation of productive soil humidity at surface from 0-20 cm with soil humidity at depths 0-30, 0-50, 0-70 and 0-100 cm are shown on cotton fields of Dalverzin and Savaystations

In Figure 1 can be traced the existence of patterns of productive topsoil moisture at 0-20 cm and the values of soil moisture at different depths. It means that if for the objective or subjective reasons there is no data about reserve productive humidity of soils at depth of 0-20 cm under the diagram it is possible to define predicted value of productive humidity of soil.

Studying of soil temperature regime, its influence on growth, development and formation of elements of cotton productivity (open and mature bolls) will allow to develop a method of an estimation and the forecast of a condition and productivity of plants, expand and improve quality of agricultural meteorology maintenance not only cotton-growing but also other priority agricultural crops of Uzbekistan in the conditions of climate change.

References

1. Abdullaev A.K., Sultashova O.G. Of the island the thermal mode and long-term values of temperature of soil on various depths on territory of Uzbekistan. – Tashkent: RHI, 2008. –P. 164.
2. Muminov F.A., Abdullaev A.K. Agrometeorological an estimation moisture security moisture maintenance cotton crops. – Hydrometeorological publishing house. 1974. –P. 86.
3. Ulanova E.S., Rymar A.L. About communication of stocks of a productive moisture in various layers of earth under winter wheat during the autumn period. 1963, release 131. –P. 53-63.
4. Ulanova E.S., Sirotenko O. D. Methods of the statistical analysis in agricultural meteorology. - Hydrometeorological publishing house 1968. –P. 198.
5. Urbah V. Ju. Biometric methods. - Moscow: Publishing house "Science", 1964. –P. 415.

REZYUME. Maqolada agrosanoat majmui uchun agrometeorologik xizmatlarni kengaytirish va sifatini oshirish imkonini beruvchi ob-havo sharoitiga, tuproq namligiga (turli chuqurlikdagi mahsuldor tuproq namligi) qarab hosildorlik holatini, ekinlarning hosildorligini baholash usuli o'rganiladi va ishlab chiqiladi.

РЕЗЮМЕ. В статье исследуется и разрабатывается метод оценки состояния продуктивности, урожайности сельскохозяйственных культур от погодных условий, влажности почвы (продуктивной влажности почвы на различных глубинах), позволяющий расширить и улучшить качество агрометеорологического обслуживания агропромышленного комплекса.

SUMMARY. The article explores and develops a method for assessing the state of productivity, crop yields depending on weather conditions, soil moisture (productive soil moisture at various depths), which allows expanding and improving the quality of agrometeorological services for the agro-industrial complex.

УДК 611.91+616-053.5

KICHIK MAKTAB YOSHIDAGI BOLALAR YUQORI YUZ KO'RSATKICHINING MORFOMETRIK TAHLILI

G.J.Ulug'bekova – *tibbiyot fanlari nomzodi, dotsent*

Sh.A.Adhamov – *talaba*

Sh.A.Mamasoliyeva – *assistent*

Sh.Y.Bustanov – *assistent*

Andijon davlat tibbiyot instituti

Tayanch so'zlar: kraniometrik tekshiruv, yuz yuqori qismining balandligi, yuqori yuz ko'rsatkichi, yonoq diametri, morfometrik tahlillar.

Ключевые слова: краниметрическое исследование, высота верхней части лица, верхний лицевой указатель, диаметр щеки, морфометрические анализы.

Key words: craniometric examination, height of the upper part of the face, upper face index, cheek diameter, morphometric analyses.

Kirish. Antropometrik tadqiqotlar – jismoniy rivojlanish yosh standartlari ko'rsatkichlarni tahlil qilishning muhim elementidir. Aniqlangan og'ishlar xavf omillari yoki ma'lum kasalliklarning belgilari bo'lishi mumkin. Rejalashtirilgan antropometriya usuli bilan bolaning jismoniy rivojlanishini nazorat qilish qat'iy belgilangan vaqt oralig'ida tizimli ravishda amalga oshirilishi kerak. Antro-

pometrik tadqiqot o'tkazishda qoidalarga asoslanadigan yagona o'lchov metodologiyasiga rioya qilinishi kerak.

Jahon sog'liqni saqlash tashkiloti (JSST) bolaning jismoniy rivojlanishini bolaning sog'lig'i holatining umumiy ko'rsatkichi va yosh bolalarning jismoniy rivojlanishi ko'rsatkichlarini alohida mintaqqa, mamlakat jamiyatning ijtimoiy-iqtisodiy rivojlanishini baholash