Daulbayeva A.N.

Narxoz University

INFLUENCE OF TEMPERATURE AIR ON FORMALDEHYDE FORMATION CONCENTRATION IN THE ATMOSPHERE OF THE CITY OF ALMATY

Abstract

In the article regularities of modern space-time distribution of formaldehyde concentrations in the air basin of Almaty for 2013-2016 are considered. The dependence of the formaldehyde concentration on air temperature in the cold and warm seasons is considered. In particular, there is a direct correlation between these two parameters. It was found that, at a positive air temperature, there is a noticeable relationship between the air temperature and the concentration of formaldehyde. At low temperatures, the relationship between the parameters is nonlinear, an increase in the formaldehyde concentration hardly occurs.

Key words: air pool, air temperature, formaldehyde, MPC.

UDC 332.3

Dzhanteliev D., Dzhulamanov T., Zhorabekova Zh., Gereev E.

Kazakh National Agrarian University

INCREASING THE EFFICIENCY OF RATIONAL USE OF AGRICULTURAL LAND

Annotation

The problem of the rational use of agricultural land is an important link in the policy of the state. Ensuring the rational use of agricultural land, conservation and improvement of soil fertility, protection of land resources in conjunction with other activities for the development of natural resources.

Key words: soil fertility, land protection, remote circuits, spacecraft.

Kazakhstan's active entry into the world economy, increasing its competitiveness largely depends on the efficient use of land resources, creating favorable conditions for the rational organization of the economic potential and vital activity of the population.

One of the directions of the Strategic Development Plan of the Republic of Kazakhstan, the implementation of the provisions of the Land Code is to ensure the rational use and protection of land resources through the formation of highly productive, environmentally oriented and adapted land use, improving land management, economic mechanisms for land management, monitoring compliance with land legislation.

At present, environmental problems related to land pollution remain acute, which causes a deterioration in the living conditions of the population, changes in the natural state of soils, and a decline in the quality of agricultural products. The technogenic impact on natural ecosystems is accompanied by irretrievable seizure and violation of natural and anthropogenic biocenoses on vast territories. Particularly devastating consequences of violations, up to the complete destruction of land, are observed in the areas of mining complexes.

The problem of the rational use of agricultural land is an important link in the policy of the state. Ensuring rational use of agricultural land, conservation and improvement of soil fertility, protection of land resources in conjunction with other activities for the development of natural resources has

Ізденістер, нәтижелер – Исследования, результаты. № 1 (77) 2018 ISSN 2304-334-02

At present, the interpretation of the concepts of the rational, complete and effective use of land is very diverse. However, the most complex and multifaceted can be considered the concept of rational use of land.

Rationality means the expediency of land use, that is, the correspondence of a land allotment with the goals and tasks of one or a lot of production.

The main directions of rational use of land resources can be defined by the following long-term goals:

- Stabilization of the natural environment by creating a system of stabilizing and specially protected areas that can support the ecological balance;

- prevention of land degradation;

- restoration of the properties and qualities of land that have lost from degradation and irrational economic activity and that correspond to certain natural conditions;

- transition to resource-saving technologies and systems of economic use of lands;

- creation and introduction of the state land cadastre, its transfer to the automated technologies.

In all these areas, the formation of research and development programs and international cooperation in the field of rational use and protection of land are the primary tasks of today in agriculture.

The territory of the Republic of Kazakhstan is 272.5 million hectares, including foreststeppe, steppe, semi-desert and desert zones. In the total area, Kazakhstan ranks 9th in the world and third place among the CIS countries. Kazakhstan is geographically located in the epicenter of the supercontinent Eurasia. The main territory of the country is occupied by agricultural land and amounts to 222.7 million hectares, including: arable land - 34.8 million hectares, and pastures - 32.2 million hectares. As can be seen from these data, agricultural land accounts for 75% of the entire territory of the Republic. But at the same time, according to geobotanical studies, only 9.7% of the total volume of agricultural land is suitable for agricultural production without additional reclamation work, to which 42% of agricultural land is populated and solonetsous land. Most of Kazakhstan is located in the arid zone and about 66% of its territory is confirmed to a different extent by the processes of desertification. According to preliminary calculations, the damage from pasture degradation, lost income from erosion of arable land, secondary settling and other causes is about 300 billion tenge [2].

Agricultural lands, and above all productive agricultural lands, make up the bulk of the country's single land fund and occupy a special place as an object of protection, since they act as the main means of production of agricultural products. This explains the reason for establishing a special security regime for them.

It is established that the main reasons for the systematic reduction of agricultural land are: unjustified transfer to other categories in connection with withdrawal for non-agricultural needs and land degradation as a result of irrational, wasteful use. In connection with this established legal regime, the special legal regime of agricultural land has a clearly defined target character: maximum conservation of agricultural lands in the sphere of agricultural production and prevention of their degradation [1].

The location of land resources by land user categories is shown in table.

N⁰	Land user category	Area th.ha	%
1	total area	272490	100
2	Agricultural land	203124	75
3	Land of settlements	17939	7
4	Lands of industry, transport,	18736	7
	communications, defense and many non-		

Table - Distribution of land resources by categories of land users

	agricultural purposes		
5	Lands of nature protection, recreation,	842	-
	recreational, historical and cultural purpose		
6	Forest lands	10167	4
7	Land of water fund	858	-
8	Reserve lands	20319	7

The main task of the state control of the Committee of Land Resources of the Republic of Kazakhstan and its scientific and production units is to ensure that all landowners and land users comply with the requirements of the land legislation of the Republic on the use and protection of land. To ensure the rational use and protection of land resources, it is necessary to develop an integral system of constant, comprehensive and dynamic study of land resources.

Such a system is based on numerous works of scientists of the Republic of Kazakhstan, countries of near and far abroad.

It includes surveys, land cadastre, land monitoring, creation of an information and computing system.

For systematic monitoring of the state of the land fund, prevention of processes, in accordance with the Land Code of the Republic of Kazakhstan, rational and environmentallysafe use of soil resources in erosion-hazardous areas requires the receipt of operational data on the state of the soil cover, taking into account the degree of degradation. Traditional methods of research of territories, based on the analytical data of field surveys, are labor intensive and insufficiently operational.

The source of operational and reliable data on the state of the soil cover is aerial photography and high-resolution space information obtained from artificial Earth satellites.

At present, the use of remote methods for studying the dynamics of the soil cover is becoming increasingly important due to the constant increase in the intensity of agricultural production and natural transformations of natural ecosystems. The availability of remote sensing data (DDZ) of various types of generalization level, different spectral ranges and time of filming, as well as the wide possibilities of thematic computer processing, which greatly increases the informative value of DDZ, allow to optimize the research process.

Space images not only allow us to judge the intensity of the processes of water and wind erosion of soils, but also provide an opportunity to quickly develop and apply a set of erosion control measures within the whole region. In addition, remote sensing materials allow monitoring the effectiveness of the developed measures. An important point in remote studies related to soil erosion monitoring is the simultaneous conduct of periodic ground-based complex observations on permanent trial plots and the linkage of these materials with data from remote remote surveys at different times. This will provide an opportunity to determine the degree of development of erosion processes and predict their development.

In connection with the growing intensity of anthropogenic changes in the environment, space survey materials become the main source of information for the operational mapping of the current state of natural and territorial complexes and individual components of the landscape.

One of the most promising areas for the use of video data is agriculture, since crops are well manifested in satellite imagery - they are well deciphered both in texture and in spectral characteristics.

The application of ERS methods in the tasks of agriculture has a good perspective and will evolve with the advent of new space vehicles, techniques, methods and algorithms, the ultimate goal. Which is the complete control of the state of agricultural production, the rational use of land resources and the solution of problematic tasks in this direction.

Reference

1. Land Resources of the Republic of Kazakhstan - Astana 2016.

2. Summary Analysis Report on the Land Status and Use of the Republic of Kazakhstan - Astana 2014.

Джантелиев Д., Джуламанов Т., Жорабекова Ж., Гереев Е.

АУЫЛШАРУАШЫЛЫҚ ЖЕРЛЕРІН ҰТЫМДЫ ПАЙДАЛАНУДЫҢ ТИІМДІЛІГІН АРТТЫРУ

Аңдатпа

Ауылшаруашылық жерлерін ұтымды пайдаланудың мәселесі мемлекет саясатының маңызды буыны болып табылады. Ауылшаруашылық мақсатындағы жерлерді ұтымды пайдалануды қамтамасыз ету, жер құнарлылығын сақтау және жоғарлату, жер ресурстарын табиғи байлықты игерудің басқа да шараларымен бір кешенде қорғау.

Кілт сөздер: топырақ құнарлығы, жерді қорғау, қашықтықтан түсіріс, ғарыштық аппарат.

Джантелиев Д., Джуламанов Т., Жорабекова Ж.Т., Гереев Е.

ПОВЫШЕНИЯ ЭФФЕКТИВНОСТИ РАЦИОНАЛЬНОГО ИСПОЛЬЗОВАНИЯ СЕЛЬСКОХОЗЯЙСТВЕННЫХ ЗЕМЕЛЬ

Аннотация

Проблема рационального использования сельскохозяйственных земель является важным звеном политики государства. Обеспечение рационального использования земель сельскохозяйственного назначения, сохранение и повышение плодородия почв, охрана земельных ресурсов в комплексе с другими мероприятиями по освоению природных богатств.

Ключевые слова: плодородие почв, охрана земель, дистанционные схемы, космический аппарат.

УДК 630.164.3

Досманбетов Д.А., Мамбетов Б.Т., Майсупова Б.Д., Келгенбаев Н.С., Дукенов Ж.С.

Казахский национальный аграрный университет, Алматинский филиал ТОО «Казахский научно-исследовательский институт лесного хозяйства и агролесомелиорации

ИССЛЕДОВАНИЕ КОРНЕВЫХ СИСТЕМ САКСАУЛА ЧЕРНОГО В РАЗНЫХ ВОЗРАСТНЫХ ГРУППАХ

Аннотация

В данной статье исследовалась корневая система саксаула чернного разных возрастных групп. По результатам исследовании будут проводится дальнейшая работа по применению поливов и внесение минеральных удобрении.

Ключевые слова: Саксаул черный, корневая система, почва, раскопки, семенник, влага.