

CARTOGRAPHIC RESOURCES USED IN THE CREATION OF ELECTRONIC AGRICULTURAL MAPS OF FERGANA REGION.

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Abstract: The following are included in the sources of agricultural mapping: astronomical-geodetic data, general geographic and thematic maps, geodetic and cartographic support of cadastral work, remote sensing materials, field data and measurement results, hydrometeorological observation. results, ecological and other monitoring materials, economic-statistical data, numerical models, results of laboratory analysis, textual sources, theoretical and empirical laws, cartographic sources used in the creation of electronic agricultural maps are presented.

Keywords: . map, electronic map, cartographic source, astronomical-geodetic data, general geographic, thematic maps, cartographic support, remote sensing materials, field data.

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INTRODUCTION.

In recent years, a number of measures have been implemented in our republic to organize rational and efficient use of land, to regulate land relations, and to strengthen state control over land use. At the same time, the effective organization of state control over land use, the introduction of modern technologies in the field, and the accounting of land resources remain insufficiently organized. In particular, the fact that the boundaries of the Republic of Karakalpakstan, regions, Tashkent city, districts (cities), towns, villages (villages) are not connected to the coordinate system is causing problems in the areas of keeping land records, allocating land, and regulating land relations.

There are also 21 mln. Activities related to the effective use of hectares of pastures and hayfields, the increase of the type and number of plants, the increase of productivity, the establishment of regular rotation of livestock, and the conduct of geobotanical research in order to prevent the degradation of pastures and hayfields are completely out of control [1-4]. Gone As a result, in the last 25-30 years, 35-40% of pastures and hayfields have been degraded, the type and number of plants has decreased by 20%, and productivity has decreased by 1.5-2 times.

In addition, there are various problems in determining the internal borders of the Republic of Karakalpakstan, regions, Tashkent city, districts (cities) due to the lack of systematic organization of the work of determining the administrative

boundaries of the Republic of Karakalpakstan, the land resources survey and calculation is occurring.

Taking into account the above and in order to strengthen state control over the protection and rational use of land, to establish a systematic way of keeping accurate records of land resources, to increase the efficiency of the use of agricultural land, including irrigated, dry and pasture land, the Ministers The court decides:

1. The State Committee for Land Resources, Geodesy, Cartography and State Cadastre of the Republic of Uzbekistan, the Ministry of Agriculture, the Council of Ministers of the Republic of Karakalpakstan, regional and Tashkent city hokimities were developed:

The regulation on the procedure for determining the borders of administrative-territorial units is in accordance with Appendix 1*;

In accordance with Annex 2* of the regulation on the procedure for transfer of land resources;

The regulation on the procedure for conducting geobotanical research in pastures and hayfields should be approved in accordance with Appendix 3*.

2. The Ministry of Finance of the Republic of Uzbekistan should ensure that the work of determining the boundaries of administrative-territorial units, demarcating land resources and conducting geobotanical research in pastures and hayfields will be financed at the expense of additional funds to the annual allocated parameters of the State budget.

The Cadastre Agency under the State Tax Committee of the Republic of Uzbekistan, the Ministry of Agriculture, together with the Council of Ministers of the Republic of Karakalpakstan, regional and Tashkent city administrations:

During 2018-2023, ensure that the boundaries of administrative-territorial units are determined, land resources are classified, and geobotanical research is carried out in pastures and hayfields;

According to the results of land resource survey, to change the categories and types of land resources in the Republic of Karakalpakstan, regions and regions of Tashkent city, to eliminate violations of land laws, to use land resources for purposeful and make proposals to the Cabinet of Ministers of the Republic of Uzbekistan regarding the organization of effective use, restoration or conservation of deteriorated and degraded areas [5-10].

4. The Council of Ministers of the Republic of Karakalpakstan, regional and Tashkent city administrations:

to establish the commission coordinating the delimitation of the boundaries of administrative-territorial units and the transfer of land resources in accordance with Appendix 4* in a sample composition within a week;

To the Cabinet of Ministers of the Republic of Uzbekistan, Karakalpog, to determine or amend the boundaries of administrative-territorial units in accordance with the procedure established by law within one month after the completion of the work on defining the borders of administrative-territorial units Let them ensure that proposals are made to the Dzhokorg Council of the Republic of Estonia and to the relevant People's Deputies Regional Councils.

5. It should be noted that the Cadastre Agency under the State Tax Committee of the Republic of Uzbekistan and state inspectors of the Ministry of Agriculture for the control of land use and its protection, regardless of the organizational and legal form, by land users have the right to regularly monitor the state of land use (without interfering in financial economic activities).

6. The Deputy Prime Minister of the Republic of Uzbekistan Z.T. Mirzayev and Chairman of the State Committee for Land Resources, Geodesy, Cartography and State Cadastre of the Republic of Uzbekistan A.H. Let Abdullayev be responsible.

MAIN PART.

Cartographic data is mainly used to create thematic maps. Plans made as a result of geodetic surveys taken in field conditions and thematic maps of various purposes and scales form the basis of cartographic information. It includes land use drawings and plans of forest lands, and serves to create maps depending on the scope of the scale.

Topographic maps form the geographical basis of mapping any area. It describes the hydrography of the place, soils, relief, settlements, transport routes and other objects.

Since 1960, agricultural maps have been created in Uzbekistan as thematic maps by sectors. Among them, in 1961, the "Uzgiprozem" cartography factory created the "Agricultural Map of Uzbekistan" on a scale of 1:1,000,000. In 1963-1965, this organization created maps of agriculture, cotton, cattle breeding, pastures of our republic.

"Album of the agricultural complex of Uzbekistan" created in 1984 is a cartographic work that fully covers and provides information on the agricultural and agro-industrial complex of our republic [11-14].

The main cartographic sources mentioned above (topographic, thematic and agricultural maps) have not lost their relevance until now. They are the basis for creating various thematic maps and agricultural maps. In addition, these maps serve as a comparative source for the analysis of agricultural sectors, resources, agro-climatic conditions, and conducting evaluation studies.

Electronic maps in Uzbekistan - since 2008, the state committee "Yergeodezkadastr" started to create electronic digital maps of agriculture on the

scale of 1:10,000 in the section of irrigated land areas of the Republic of Uzbekistan using ArcGIS software. Prior to that, in 2006-2007, these maps were created and updated by the Central Aerogeodesy and the state unitary enterprise "Geoinformkadastr" with the help of Panarama, Oazis software. These maps are the main source for the creation of electronic maps of agriculture for determining the territorial distribution of agricultural crops, the boundaries of farm lands, district and district massif lands.

Remote sensing data - the development of today's techniques and technologies has not bypassed this area. In our republic, mapping works using Earth remote sensing data have not been researched in a wide or complex scope. Some of the research works in this field can be seen in the research works conducted by several scientific or government organizations in their fields.

In general, space imagery is rarely used to determine map content. Depending on the level of accuracy of the research, the types and characteristics of space photographs are taken into account [15-19]. For example, spatial characteristics of space images, coverage area, color range, etc.

Depending on the scale, purpose, and content of the thematic map, additional space photographs are used. These space photos allow to obtain reliable information about the object and events depicted on the map being created.

The territorial composition of agricultural crops is well represented in space photographs, and their spectral characteristics are effectively deciphered. Currently, the research of agro-industrial complexes using the methods of YeMZ is used in many countries (USA, Canada, EU countries, India, Japan, etc.).

Among the best-known examples of agricultural monitoring systems available today are the MODIS and MARS (Monitoring Agriculture with Remote Sensing) projects implemented by the European Commission's Joint Research Center for Agricultural Land Monitoring. The technical means (space satellites) and related software used by this center allow to determine the cultivated areas, the condition of plants and the productivity of agricultural crops. By using YeMZ, it determines the productivity of crops and, as a result, predicts the supply of agricultural products to the markets. All these processes make it possible to develop measures to stabilize the level of profitability of agricultural producers using a flexible system of prices, incomes and export-import relations, and to adjust the tax policy.

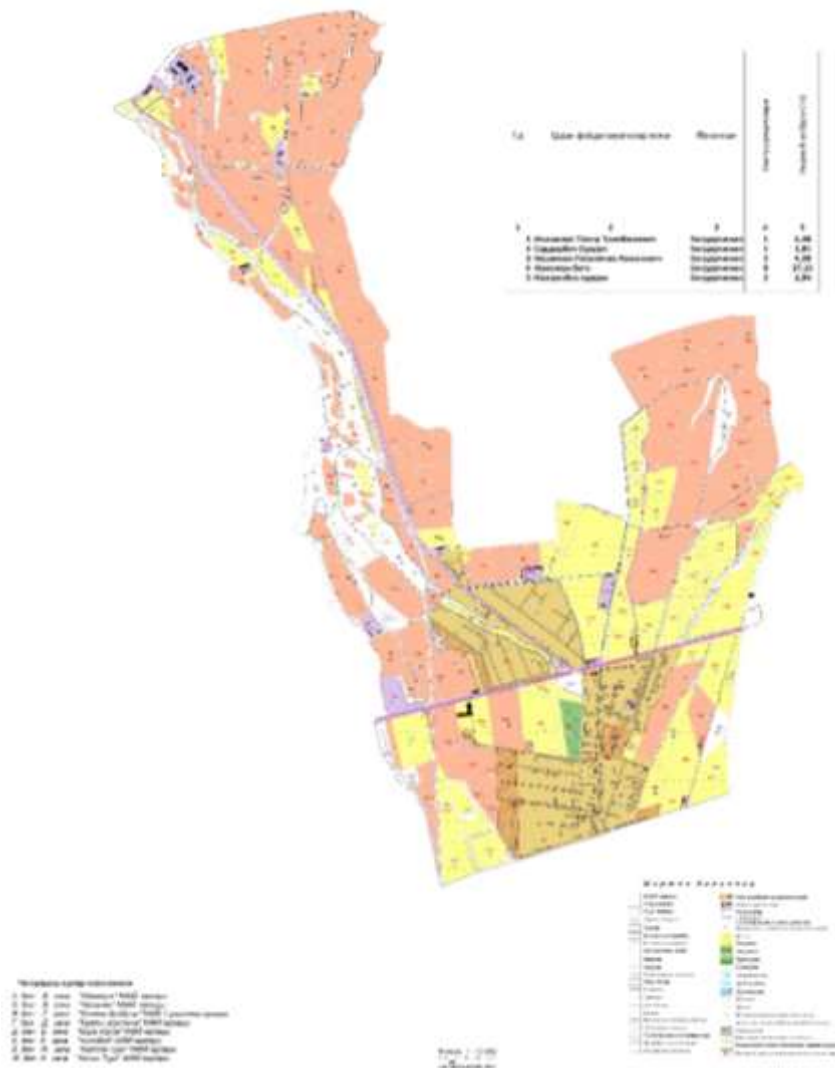
According to the results of the research, agricultural mapping using YeMZ should ensure the creation of maps of four different administrative regions: region, district, individual farm, by individual crops [20-23].

The use of remote sensing methods in agriculture provides fast and accurate performance of:

- classification of agricultural crops;

- assessment of the state of crops (assessment of the development and ripening of crops);
- determination of areas of erosion, swamping, salinization and desertification;
- determination of disease of agricultural crops;
- prediction of crop productivity (quality and quantity);
- accounting and inventorying of cultivated areas;
- monitoring biomass of pastures;
- monitoring the quality and timely implementation of various agricultural activities.

The above-mentioned characteristics of agricultural research through remote sensing methods, different means of obtaining space images from satellites and the level of their processing in different countries are remote sensing to ensure the sustainable development of agricultural areas. forms the appropriate tasks and methods of using their data.



1-picture.

Statistical information. Currently, one of the main sources of creating agricultural maps is statistical data. Such information is formed by the State Statistics Committee of the Republic of Uzbekistan based on the decision of the Cabinet of Ministers of the Republic of Uzbekistan No. 690 dated September 2, 2017. This committee prepares statistical data covering 26 types of fields related to the socio-economic development of our republic. Statistical information on agriculture is being formed as part of the branches. Statistical information on agriculture is systematized and formed in the order of district, region and republic. Information on agriculture mainly covers 8 areas: main indicators of agriculture; growth rates of agricultural production; structure of agricultural production; agricultural products by regions; growth rates of agricultural production in regions; the volume of agricultural, forestry and fisheries products (services) in the region; photos of the growth of agriculture, forestry and fishery products (services) in the cross-section of regions; About agricultural and livestock products produced by the Republic of Uzbekistan in all economic categories [24-28].

In addition, there are sites of the statistics department of each region, which contain 18 types of industry and analytical data. In the area called "Agricultural indicators" statistical and analytical data on regional agriculture for the last 3 years are presented. In it, you can get acquainted with the information on rural, forestry and fishing areas of the region and the administrative areas included in it (district, city, town). Another aspect of this site is that in the "Press-releases" section, statistical information on agriculture is also available.

In general, through the analysis of statistical data related to agriculture, the agricultural production potential of the republic, regions and districts, in particular, the branches and territorial composition of agriculture, the specialization of production potential, agriculture the characteristics of formation and development of regions are determined. On the basis of this information, electronic maps, interactive maps and web maps are created that serve to describe the network and territorial structure of agriculture and the interrelationship of agricultural objects [1-3].

CONCLUSION.

As a result of the analysis of cartographic sources that serve to reveal the characteristics of agriculture, an agrogeodatabase was developed based on geoinformation systems and technologies. This agro-geodatabase can be used for effective management of agricultural activities in the studied area, monitoring and evaluation of socio-economic indicators.

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