American Journal Of Agriculture And Horticulture Innovations
(ISSN – 2771-2559)
VOLUME 02 ISSUE 08 Pages: 01-05
SJIF IMPACT FACTOR (2021: 5. 705) (2022: 5. 705)
OCLC – 1290679216 METADATA IF – 5.625
Publisher: Oscar Publishing Services

Research Article

IMPROVING THE USE OF "LAND INFORMATION SYSTEM" PORTAL INFORMATION IN THE TRANSFER OF IRRIGATED LANDS

Journal Website: https://theusajournals.com/index.php/ajahi

Submission Date: August 03, 2022, Accepted Date: August 10, 2022,
Published Date: August 19, 2022
Crossref doi: https://doi.org/10.37547/ajahi/Volume02Issue08-01

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ABSTRACT

The article hihglights effectiveness of the introduction of innovative technologies to the land resources inventory. In particular, presented the results of the study on the example of substantiating the results of the inventory of agricultural land in the Andijan region by using the portal "Yer axborot tizimi".

KEYWORDS

Land inventory, field survey, portal, agriculture, irrigated land.

INTRODUCTION

Production of additional copies (reproduction) of land inventory materials for legal entities and individuals is carried out at their expense in agreement with the customer.

The inventory of land within the boundaries of the administrative district is carried out from time to time due to the significant accumulation of changes in land and land use boundaries, location, condition and character.

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Pursuant to the decision of the President of the Republic of Uzbekistan No.5006 of February 24, 2021, targeted projects are being implemented on the basis of public-private partnership conditions for digitalization of agricultural land, effective use and control of crop conditions, introduction of modern information and communication technologies in agricultural land monitoring. In order to implement it, it is proposed to create a framework for agricultural land users of Andijan region on the "Land Information System" portal (pictures 1, 2) [1].

Figure 1. Access to the " Land Information System" portal

RESEARCH METHODOLOGY

Preparatory work for land transfer (inventory) includes collection, study and systematization of the following land cadastral documents:

Geoportal - is a web portal that displays and provides access to geographic information through web services. Land information system portal created by R.A. Turaev. The land information data on the borders of administrative territorial units in our republic, the borders of regions, districts, massifs, neighborhoods, as well as the borders of agricultural producers and the borders of land parcels, land area contours are digitized, changes are made in time and is being improved. Through this portal, it performs the tasks of updating online the complete information about the precise activity of land users and the limits of newly established land uses, placing the monitoring results on the plan of agricultural crop placement and its actual planting on the "Land Information System" portal.

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Figure 2. Directions that can be used from the "Land Information System" portal

A new "R-GIS" (Real Geoinformation System) program was created using the "Land Information System" portal.

In particular, "R-GIS" provides a number of advantages for the users of the program. In particular, the fact that this platform is provided with photos taken on the basis of the SENTINEL-2 spacecraft and unmanned aerial vehicles further expands the possibilities.

ANALYSIS AND RESULTS

In particular, land users monitor the vegetation process of crops in their agricultural fields through the "R-GIS" platform. It can be seen that agriculture can take the necessary measures in the weak points identified in the cultivated areas.

The main advantages of this program are:

1) The data obtained from drones about agricultural land and crops has a resolution of 10 cm pixels, which allows to provide high-resolution updated information;
2) Enables rapid analysis of data obtained on the basis of satellite images of agricultural lands and drones;
3) Accelerates the process of creating digital maps in the section of agricultural land users;
4) Through a mobile application, it is possible to view information about land users and their cultivated areas online;
5) Users will be able to receive recommendations to eliminate problems identified in the fields.

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Figure 3. The process of using an unmanned aerial vehicle during surveillance at a research facility

The main goals and objectives of the program:

1. Online updating of complete information about land users and the limits of new externalized land uses and data analysis for rational use of land;
2. The illegal and other uses of agricultural irrigated land areas are constantly entered in "R-GIS" and proposals and recommendations are developed;
3. Pictures taken from drones are constantly included in the program;
4. Hydrographic objects such as ditches, ditches, pumps and roads are fully digitized and entered into the program on the "R-GIS" online platform;
5. In the "R-GIS" program, a land database classifier will be developed by entering the normative value data of all agricultural producers of the Republic.

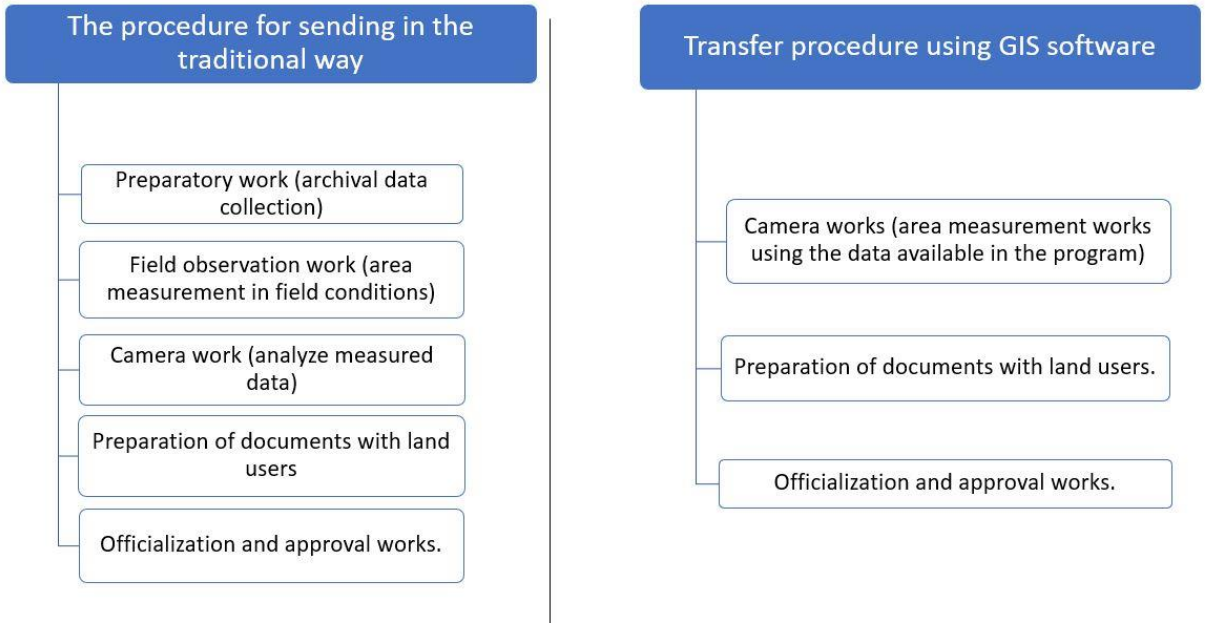

Figure 4. A comparison of the proposed program and the conventional method in the transfer of irrigated land

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CONCLUSION

Land inventory is a set of land preparation activities aimed at clarifying information about land plots, which are carried out to obtain information about their quantity and quality. Land surveying (inventory) consists of determining the location of land management objects, their boundaries, determining whether they are used or not, whether they are used for effective use or for other purposes, and cases of land plots being used for non-targeted purposes, and other features related to land resources.

With the help of the "Land Information System" portal, Andijan region provides the results of the inventory of agricultural lands, the high accuracy of agricultural land transfer works.

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