DIGITAL TECHNOLOGIES IN FRUIT APPLICATION

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ABSTRACT:

At present, the use of digital technologies in the development of agriculture, as well as in other sectors of the economy, including fruit growing, is one of the most pressing issues. In particular, with the penetration of digital technologies in horticulture, the optimization of the productivity of fruit and berry crops by gardeners will improve the management of agro-technical measures in orchards, which will benefit the economy. The introduction of digital technologies in agriculture is becoming relevant, as in other industries. Digital technologies are essential for gardeners to optimize productivity, improve manageability of horticultural operations and increase profitability.

KEYWORDS: Digital Economy; Digital Agriculture; Digital technologies; Digital Uzbekistan — 2030; IT park; 1 million programmers; Electronic mapping.

INTRODUCTION:

Nowadays, using of digital technologies in agricultural production is one of the most pressing issues, including fruit growing, such as other sectors of the economy. Especially with the deep penetration of digital technologies in horticulture, will give more opportunities to the optimization (productivity) of fruit and berry crops by gardeners, will improve the

management of agro-technical activities in the orchards and increase the economic income from the orchard.

According to experts from the Food and Agriculture Organization of The United Nations (UN), the digital technologies of precision farming will allow humanity to achieve yields that have not been achieved since the invention of tractors and pesticides against diseases and pests.

In this regard, the President and the Government of the Republic have begun to carry out large-scale work to create a legal framework for the implementation of digital technologies. In particular, in December 2018, when announcing the Address of the President of the Republic to the Oliy Majlis, "We need to develop a national concept of digital economy, which provides for the modernization of all sectors of the economy on the basis of digital technologies. On this basis, we need to implement the "Digital Uzbekistan-2030" program. " it was emphasized.

Progress of works in order to acceptance the state program "Digital Uzbekistan 2030"

The digital economy will increase gross domestic product by at least 30 percent, dramatically reducing corruption. The analysis conducted by leading international organizations also confirms this. Therefore, it is necessary to carry out digital transformation in the economy, develop national information technologies and attract investment in this area.

Our country has been working hard to adopt the state program "Digital Uzbekistan 2030" in 2020, and within the framework of this state program, a large-scale work has been launched to create a digital government, as well as digital economy management and other areas. In the Address of the President of the Republic to the Oliy Majlis in December 2018 and January 2020, it was noted that "for all of us,

the acquisition of modern knowledge, true enlightenment and high culture should become a continuous vital need."

It is necessary for us to acquire digital knowledge and modern information technologies in order to achieve development. This allows us to take the shortest path to the ascent. After all, today in the world, information technology is penetrating deep into all areas.

Although our country has risen by 8 places in 2019 according to the International Information and Communication Technologies Development Index, we still have a lot of work to do. It is true that most ministries and departments, enterprises and educational institutions are far from digital technologies.

Of course, we know very well that shaping the digital economy requires the necessary infrastructure, a lot of money and manpower. But no matter how difficult it is, if we don't start this work today, it will be too late tomorrow. Therefore, the active transition to the digital economy will be one of our top priorities for the next 5 years.

Digital technologies not only improve the quality of products and services, they reduce unnecessary costs. At the same time, it is also an effective tool in overcoming the scourge of corruption, the most serious flaw that undermines development.

In order to further develop science in our country, to bring up our youth with deep knowledge, high spirituality and culture, to accelerate the work we have begun to form a competitive economy and raise it to a new, modern level, 2020 is was named " The Year of Science, Enlightenment and Digital Economy". Extensive work is underway to prioritize the development and reform of the areas identified in the name of 2020

A system of high salaries has been introduced for teachers who have pedagogical skills and qualifications and have achieved concrete results in their work.

To prepare for the international assessment process in 2021, 348 basic schools have been identified and more than 6,000 teachers have been trained.

Starting from the current academic year, a completely new system of vocational education will be established, 340 vocational schools, 147 colleges and 143 technical schools will be established.

A national qualification system is being developed in order to adapt the qualifications of personnel to the requirements of the international labor market. This system provides training for about 9,000 professions.

There are more possibilities and all conditions for our enthusiastic young people, who would get a higher education, work on himself and become a scientist. Therefore, practical work is being done to increase the coverage of school graduates with higher education to at least 25% in 2020 and 50-60% in the future.

This year, the "El-Yurt Umidi" Foundation is sending more than 700 scientists, professors and teachers abroad for research and training.

In the future, it is necessary to double the number of grants and expand the scope of research areas. This year, active work is being done to make a radical turn in the development of the digital economy.

First of all, it is necessary to fully digitize the fields of construction, energy, agriculture and water management, transport, geology, cadaster, health, education, archives. It is also necessary to critically review the system of "e-government", ongoing programs and projects, and comprehensively address all organizational and institutional issues.

An IT park with modern infrastructure is being built in Tashkent. It has already begun to yield its first results. A similar "IT-park" has been established and commissioned in Andijan.

In order to train highly qualified specialists for the industry, the project "1 million programmers" has been launched together with our foreign partners.

Also, information technologies that fully meet international standards are being introduced at all levels of education.

Given the fact that last year all city and district centers were connected to high-speed Internet, in the next 2 years we must provide all villages and districts with such high-speed Internet.

To date, more than 7,000 health care, preschools and schools have been connected to high-speed Internet, while in the next 2 years, another 12,000 institutions will be connected to high-speed Internet. Taking into account these tasks, the development of the program "Digital Uzbekistan - 2030" is being completed.

Field work is carried out remotely:

In the developed countries of the world, in the agricultural production, including the Fruit industry, consistent work is being done on the introduction of digital technologies. For example, in Russia, a junior researcher at the North Caucasus Federal Research Center's Laboratory for Management of Arocenosis and Ecosystem Rehabilitation of Fruit Crops, A.S. Romanenko's research is primarily concerned with the condition of orchards, their monitoring, control operations using modern drones, and space sensing. According to him, in cooperation with the above-mentioned Scientific Center, the Dokuchaev Institute of Soil Science is working on space probing of orchards and their prospects, developed a map of thirteen indicators related to soil properties of these lands in 2005-2010 by the Institute of Soil Science. According to Romanenko A.S., this geographic data system, collected as a result of his research, imposes a manual cocktail on the creation of agroecological maps, intelligent machines. On the surface of the developed map

model, the data collected as a result of research are placed, and each of them, consisting of several layers, has its own attributes, consisting of a series of data related to geographical - ecological and soil characteristics.

The order of growth is determined by electronics:

In the process of research, biological indicators of fruit crops, growth and development conditions are observed. First of all, data on weather and soil conditions, as well as topography, which directly affect the productivity of cultivated varieties, are brought to the state in the form of electronic maps. Electronic mapping allows you to make decisions about which part of the gardens, how, and how much productivity can be achieved. Digital technologies should be used in horticulture, as this will ensure the entry of advanced scientific and technical products into the market. Such technologies allow to increase production efficiency by 50-100% by minimizing the risks in the placement of fruit crops and varieties. The most important task facing fruit-growing is to create an edited digital geographic system in the Krasnodar Territory for 2019-2030, which will minimize various risks in the effective placement of crop species and varieties, including A.S. Romanenko. This carries the risk of losing the specified yield due to changes in the external environment and growing conditions, and allows to maintain the desired level of yield. According to the author, the research involves not only the creation of electronic maps for the creation of orchards, taking into account changes in the external environment, but also work on the creation of electronic maps offering suitable areas for crop biology, taking into account the growth phases of fruit crops being carried out.

What does the research conducted by scientists on the creation of innovative digital technologies give to agricultural production?

Of course, there is an answer to this question in the emerging, young science of "Application of Digital Technologies in Fruit Growing." First - to select a place with appropriate growing conditions based on the requirements of the biological characteristics of the type and variety of fruit, as well as to monitor changes in climate and growing conditions in the selected area, to make appropriate adjustments to prevent adverse changes;

Second - the selection of varieties that are suitable for a particular place on the genotype of ontogenetic phases and other biological characteristics, knowing the natural climate, soil properties and characteristics of the place; And finally, from the tip - to choose the most optimal of them, offering an appropriate system of agro technologies, which allows to achieve yields in a specific area or region, in a specified quality and quantity.

As can be seen from the above, "The use of digital technologies in fruit growing" is the future. Since the First President of the Republic of Uzbekistan I.A. As Karimov said, "Uzbekistan is the State with the great future" is building this great future in the hands of today's youth. Therefore, it is necessary to educate young people to have a thorough knowledge in all respects, to be able to keep pace with the times. To do this, we believe that it is necessary to accelerate the work on the formation and development of a young and modern new science "Application of Digital Technologies in Fruit Growing."

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