UDC 66.001

APPLICATION OF DIGITAL TECHNOLOGIES IN THE AGRO-INDUSTRY INDUSTRY

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Abstract. This article examines the possibilities of increasing the efficiency of agricultural production through the use of digital technologies in the agro-industrial sector. The ways in which agricultural producers can use digital technologies and effectively manage them are described scientifically and practically.

Keywords: agro-industrial complex, digital technologies, mobile technology, artificial intelligence, smart agriculture, food security.

Digital technologies, including the Internet, mobile technologies and devices, data analytics, artificial intelligence, digital services and applications, are changing agriculture and the food system. Examples abound at different stages of the agri-food production chain: automation of agricultural machinery allows precise adjustment of inputs and reduces the need for manual labor; remote satellite data and on-site sensors increase the accuracy and reduce the cost of monitoring crop growth and land or water quality and tracking technologies and digital services logistics allow optimize hats supplies agro-food products, also will provide reliable information to consumers.

Digital technologies can also help governments improve the efficiency and effectiveness of existing policies and programs and develop better ones. For example, free, high-quality satellite imagery is significantly reducing the costs of monitoring many agricultural activities. This could allow governments to move toward more targeted policies that pay (or penalize) farmers based on observed environmental outcomes. Beyond monitoring compliance with environmental policies, digital technologies can automate administrative processes in agriculture and expand public services, such as advisory or consulting services.

Nakonets, sifrovie technologies can support trade in agricultural and food products products, connecting suppliers from private sectors with new rinkami and providing governments with new ways to monitor and enforce standards, and ensuring faster and more efficient border procedures required for perishable products.

These technological advances can help create more resilient, productive and sustainable agricultural and food systems that better meet the needs of needs consumers. These vigodi arise how directly - for check adoption of technologies by sector participants (including service providers) and indirectly through the adoption of technologies by governments to implement more effective policies.

In recent years, the introduction of sifro technologies into precision farming has led to adjustments in the way farmers process crops and manage their fields. need to bit expert, what will see, how technology changed concept "smart" agriculture, making it more profitable, efficient, safe and simple. Among other technologies, farmers chose five that they consider the best:

Software security GIS And rural farm GPS
Satellite images

Drone And other aerial photographs

Agricultural software security And online data

Merging data sets.

As a result, modern farms are receiving significant benefits from the ever-evolving digital agriculture. These benefits include reduced consumption of water, nutrients and fertilizers, reduced negative impact on the surrounding ecosystem, reduced chemical runoff into local groundwater and rivers, increased efficiency, reduced hay, and much more. Thus, the business becomes profitable, smart and sustainable.

Since fields are location dependent, GIS software becomes an incredibly useful tool in terms of precision agriculture. Using the software GIS, farmers can display current and future changes in precipitation, temperature, yield, healthy plants. This also allows used applications on basis GPS in combination with intellectual machines for optimizations applications fertilizers and pesticides; considering that farmers no need to cultivate the whole field, and by identifying specific areas, they can achieve savings in money, effort and time. Another big advantage of GIS-based farming is the use of satellites and drones to collect aerial data on vegetation, soil conditions, weather and terrain. Such data greatly improves the accuracy of decision making.

Forecasting crop yields and monitoring fields in near real time with the ability to detect various threats using satellite data has never been easier.

With the help of drones, farmers have the opportunity to determine the biomass of their crops with high accuracy, height plants, availability weeds and water saturation on certain areas poly. They provide more quality and precise data with more high resolution by comparison with satellites. When they operate locally, they provide hay information even faster than scouts. Drones are also considered unrivaled helpers in the fight against insects; invasion is prevented by applying insecticide to danger zone with the help of drones, while is decreasing probability direct impacts, leading to chemical poisoning. Despite although drones are easy to use and can collect large amounts of data in a short time, their constant use still poses problems, since they are not cheap. Drones are practically useless where mapping or monitoring of large areas is required, and it is better to supplement the technology with satellite monitoring among already mapped areas where specific areas need to be rechecked.

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Необходим ли сертификат и справка для автора? (да/нет)	нет	нет	
Название стати	Применение сифрових технологий в агропромишленном комплексе		
Раздел (секция) публикатсии	Экономика		
Количество странитс	5 странитси		

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