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MODERN AGRICULTURAL TECHNOLOGIES

This paper examines the issue of features of the development of agricultural relations and their impact on the national economy. A cross-sectional and comparative analysis of the influence of various factors on the growth of efficiency in economic management by means of implementation of technologies.

Modern farms and agricultural enterprises operate very differently than several decades ago, primarily due to advances in technology, including sensors, devices, machines and information technology. Today's agriculture regularly uses sophisticated technologies such as robots, temperature and humidity sensors, aerial photographs and GPS technology. These advanced devices, precision agriculture and robotic systems allow enterprises to be more profitable, efficient, safe and environmentally friendly.

Farmers no longer need to distribute water, fertilizers and pesticides evenly throughout field. Instead, they can use the minimum amount needed and target very specific areas or even treat individual plants differently. Advantages include:

• Higher yield

• Reduced use of water, fertilizers and pesticides, which in turn reduces prices for food.

• Reduced impact on natural ecosystems

• Less chemical runoff into rivers and groundwater

•Increased worker safety

In addition, robotic technologies provide more reliable monitoring and managing natural resources such as air and water quality. It also gives producers have greater control over production, processing, distribution and storage plants and animals, which leads to:

• Higher efficiency and lower prices

• Safer growing conditions and safer products

• Reduced impact on the environment and ecology

The agricultural industry has changed radically over the past 50 years. Achievements in technological fields have increased the scale, speed and productivity of agricultural equipment, resulting in more land being processed more efficiently. Seeds, Irrigation and fertilizers have also improved significantly, helping farmers increase their yields. Agriculture is now at the dawn of another data-driven revolution. and communication. Artificial intelligence, analytics, connected sensors and other new technologies can further increase yields, improve water use efficiency and other resources, and ensure sustainability and sustainability in agricultural production crops and livestock [1-5].

Agriculture must embrace digital transformation enabled by connection to the network. However, agriculture remains less digitized compared to with many

other industries in the world. Past advances have been largely mechanical in the form of more powerful and efficient machines and genetics in the form of more productive seeds and fertilizers Much more is now needed to deliver the next leap in performance. more sophisticated digital tools. Some of them already exist to help farmers use resources more efficiently and sustainably, while more advanced ones are in development.

However, modern IoT technologies operating in 3G and 4G cellular networks in many cases are sufficient to provide simpler use cases such as advanced monitoring of crops and livestock. However, in the past the cost of the equipment was high, so the economic rationale for introducing the Internet things in agriculture did not materialize. Today, the cost of devices and equipment quickly is declining and several vendors are offering solutions at a price point that we believe will will pay off in the first year of investment.

However, these simpler tools are not enough to unlock the full potential the value of connecting to agriculture. To achieve this, the industry must fully use digital applications and analytics, which will require low latency, high throughput, high resiliency and support for a large number of devices offered by the latest cutting-edge connectivity technologies.

Thus, the industry faces a twofold challenge: it is necessary to develop an infrastructure enabling the use of connectivity in agriculture, and where connectivity already exists, it is necessary to create strong business cases for decision-making. good.

The Internet of Things provides access to information about:

- how productive the machines are,
- How productive are people?
- what are the current storage and transportation conditions?

Analysis of this information and the ability to quickly take management decisions solutions multiply business productivity.

It is clear that digital technology is the future, and those businesses that will master these technologies earlier, receiving

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ХИМИЯ. БИОТЕХНОЛОГИЯ