UDC 332.432:330 STATE OF INNOVATION INFRASTRUCTURE IN THE AGRICULTURAL SECTOR OF UKRAINE

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In modern conditions of economic development, it is necessary to qualitatively and effectively introduce information technologies into various spheres of the national economic activity of Ukraine.

Analytical and statistical information proves that Ukraine can be considered an agrarian developed country. 11 % of all arable land in Europe falls on Ukraine. Our country is able to provide food for about 140 million people, and if changes are made to the management system of the agricultural sector, Ukraine can take a leading position in the European Union. However, there are many problems along the way that need to be investigated and solved. Today, the agricultural market of our planet is constantly growing, and the world food basket is gradually being reformatted in favor of high-calorie foods, including meat and milk, the production of which requires more and more feed grains. Under such conditions, Ukraine has a huge potential in the development of agriculture and gaining competitive advantages in the international division of labor [1, 2].

Thus, the production of agricultural products for 2015-2021. increased by 34 %, exports in value terms – by 54 %, the share of the country's GDP sector increased from 7.5 % in 2015 to 11.6 % in 2021. The largest growth for 2015-2022 was observed in the production of soybeans, twice – sunflower seeds, 1.75 times – cereals and legumes.

Cultivation of other crop products, including labour-intensive vegetables, fruits and berries, grew less significantly. In animal husbandry, meat production has increased – exclusively due to poultry farming, while the production of milk and eggs has slightly decreased (Table 1). It should also be noted that the share of exports in primary agricultural production increased from 25 % in 2015 to 33 % in 2021. In the US, for comparison, the share of exports of primary products is about 5 % of the grown [3, 4].

However, the management system of domestic agriculture needs major changes. Agricultural producers are increasingly using computers to be able to obtain the necessary information that contributes to the effective adoption of managerial decisions aimed at increasing productivity in agriculture. Information technology can be seen as an effective tool for working with information. They are a set of ways, methods and techniques of using computer technology in the context of collecting, searching, processing, transmitting and using information. The introduction of information technology in agriculture is one of the ways to intensify. Digital agriculture will create systems that will be highly productive, predictable and able to adapt to changes, including those provoked by a changing climate. This, in turn, contributes to increased food security, profitability and sustainability [5, 6].

Products	unit	2015 year	2021 year	change, %
Cereals and legumes	million tons	37,8	66,1	+75
Sunflower seeds		6,7	13,6	+103
Soya beans		1,5	4,3	+187
Sugar beet		13,7	14,0	+2
Vegetables		7,7	9,4	+22
Fruit and berry		1,6	2,0	+25
Meat		1,9	2,3	+21
Milk		10,9	10,4	-5
Eggs	bill pieces	16,2	15,1	-7

Table 1. Volume of production of types of agricultural products in Ukraine

In Ukraine, despite the unstable and low pace of development of information technologies, some of them are already used in agriculture, crop production and animal husbandry. Using the best practices of European companies, leading domestic enterprises such as Dream Agroholding, Kernel Group Holding, Ukrlandfarming PJSC, Astarta-Kyiv actively use innovative technologies to make effective management decisions in the production and sale of agricultural products.

Exploring the market of innovative technologies used in the modern agricultural sector of Ukraine, it is possible to highlight their specific features. In crop production, these are such areas as breeding, genetic engineering and GMOs, micro-irrigation, organic farming, IT technologies, nanotechnologies. In animal husbandry, the following areas were identified: biotechnology, selection and breeding work, feeding systems, technical and technological support, resource-saving technologies [7]. On dairy farms, the milking robot not only accurately and individually checks the milk volume, but can monitor animal health parameters: if the individually expected milk quantity for an individual cow falls below 25 %, the animal is checked for health. During milking, the conductivity of the milk can also be measured. Altered values are a possible sign of udder disease. The automatic analysis of milk ingredients also provides health information and enables early treatment.

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ВНЕДРЕНИЕ ЦИФРОВЫХ ТЕХНОЛОГИЙ В ТЕХНИЧЕСКИЙ СЕРВИС

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Искусственный интеллект сегодня обрабатывает гораздо больший объем информации, чем мозг среднестатистического человека, и выполнение многих функции уже сегодня немыслимо без ис-