NOVATEUR PUBLICATIONS
INTERNATIONAL JOURNAL OF INNOVATIONS IN ENGINEERING RESEARCH AND TECHNOLOGY [IJIERT]
ISSN: 2394-3696
VOLUME 7, ISSUE 4, Apr.-2020

DIGITALIZATION OF AGRICULTURAL COMPLEX WILL ALLOW TO ENSURE FOOD SECURITY

AZIMOV RUSTAM[1],
ERGASHEV GIYOS[2],
TURGUNOV NAVRUZ[3]
Scientific researchers of the Department of Agribusiness and Investment Activity,
Tashkent State Agrarian University

ABSTRACT
The role of digitalization of agriculture in increasing the competitiveness of the domestic agro-industrial complex (AIC) is indicated. In order to obtain an objective picture of the current state of the agro-industrial complex, the supply of the Republic of Uzbekistan with basic types of food has been analyzed and problems with the production of milk, beef, fruits and vegetables of the protected ground have been identified. It is noted that currently Uzbekistan is actively implementing import substitution strategies in the sectors of the national economy, including in the agricultural sector. The main purpose of the functioning of the domestic agro-industrial complex is determined ensuring food security parameters for the population of Uzbekistan. Investigated actual questions about how to achieve foodstuff - governmental self-sufficiency, the solution of which should be carried out in conjunction with an increase in the competitiveness of the Patriotic governmental APC. Emphasis is placed on the need to transfer agricultural production to the ecological and economic foundations of management and the rational distribution of the use of all types of resources. In each region of the country, it is recommended that the soil, climatic and economic potential of the territory be assessed in order to identify food self-sufficiency priorities for basic types of food. The development of the organizational and economic mechanism for the formation of competitive advantages of the agro industrial complex makes it possible to develop agricultural production on an innovative basis and ensure food safety at the state level in the long term. The factors of increasing the competitiveness of the agro-industrial complex were identified: economic soil fertility, used agricultural land, optimization of the structure of sown areas, systematic development of feed production and livestock production, digitalization of agriculture, etc. The problems of the insufficient prevalence of digital technologies in agriculture are analyzed. Substantiates the role of digitalization and to achieve the parameters of Prodo -food security. The results of the study can be used to improve the mechanism for ensuring food security of the population of Uzbekistan.

KEYWORDS:smart agriculture, digitalization and agribusiness, food security, digital platform, agribusiness.

INTRODUCTION

Currently, domestic agricultural production is developing in the conditions of an unstable political situation in the world. Awareness by the country's top leadership of the problem of food security was the impetus for the development of the domestic agro-industrial complex (AIC). The crisis in the political and economic spheres has become a potential opportunity for the growth of agricultural production. Today, the main task in the agri-food sector is to ensure food security parameters for residents of a particular territory. At the same time, many regions of Uzbekistan during the years of transition to market relations did not focus on achieving food self-sufficiency and optimal development of crop and livestock production, but on growing the most profitable crops: cereals, sunflowers, vegetables and potatoes. The development of a monocultural economy without taking into account the scientifically substantiated alternation of cultures in time and space has led to a significant decrease in the economic fertility of the soil. Academician of the Academy of Sciences of the Republic of Uzbekistan S. Gulyamov, speaking at a conference of agricultural economists, noted that 98% of arable land has a negative humus balance. Many areas are abandoned, overgrown with light forests, and irreversible degradation processes are blowing on them. Loss of the main resource of agricultural production - land - can lead to disastrous consequences. In this regard, the transition to the ecological and economic foundations of management, which provides for the rational use of all types of resources involved in agricultural production, becomes relevant.

In each region, the soil-climatic and economic potential of the territories should be assessed and, on this basis, priorities in the agro-food sector should be identified, taking into account the achievement of food self-sufficiency parameters for basic types of food. In this regard, the development of the organizational and economic mechanism for the formation of competitive advantages of the agro industrial complex is vitally important, since it allows not only to develop agricultural production on an innovative basis, but also to ensure food safety at the state level in the long term. However, the food safety problem that has not yet been resolved in many regions of Uzbekistan has put forward new tasks, the solution of which is to clarify the content and identify factors to increase the competitiveness of the agricultural sector as one of the important conditions for the safe development and improvement of regulatory mechanisms for this process. In this regard, further studies are required, which include the development of theoretical and methodological foundations for determining factors and assessing the competitiveness of the agro industrial complex, and proposing measures aimed at maintaining a competitive environment and developing competitive advantages in this complex.

PROBLEM STATE

An analysis of the content of the category "competitiveness" confirmed that there is a fairly wide range of its definitions. Much attention is paid to the concept of competitiveness in the works of foreign scientists. For example, P. Halad, and G. Hamel [2] in their IP Following competitiveness associated with the opportunities of taw anticipate the situation in the mar ke in the future, based on the experience, skills and intellectual leadership.

Foreign scientists also studied the concept of competitiveness. Bartosova, V., Drobyazko, S., Melnyk, O., Fillipov, V. [8] understands competitiveness as the ability of an object to withstand competition in comparison with similar objects in this market.

Researchers Tilman D., Blazer C., Hill J., Befort B. Of L. [10] analyze the content of the concept of competitiveness and consider it from different perspectives: 1) economic - as the basis for the functioning of subjects; 2) market - as a struggle in the market; 3) philosophical - as a leading factor in the development of society; 4) social - as compliance with certain requirements of the social development of the enterprise; 5) psychological - as confirmation of relevant expectations.

Studying the results of research by foreign scientists regarding the content of competition and competitiveness made it possible to identify the most important essential points:

1) Competitiveness - a concept that is characteristic of any economic objects and systems operating in a market economy;

2) The relationship between competitiveness and product quality, as well as the efficiency of its production;

3) Competitiveness is a dynamic category, and varies depending on the situation on the market, the external environment and the ability of the subject to achieve and maintain competitive advantages in the long term.

The competitiveness of domestic agribusiness should be understood as the ability of the sectors and their constituents (agriculture, processing and food industries, food trade) to produce and market the basic types (included in the food basket) of competitive, high quality, biologically valuable and eco-genetically safe food in volumes that provide food independence parameters.

However, the works of A. Durmanov [12, 15, 16] confirm that in modern conditions in the Republic of Uzbekistan there is no organizational and economic mechanism for the further development of the domestic food supply system in order to form an effective structure that helps solve food problems.

In modern conditions, the competitiveness factors of the agricultural sector are:

- Economic soil fertility;
- Coefficient of use of photosynthetic ally active radiation (PAR);
- used areas of irrigated and rain fed arable land, hayfields and pastures;
- Zonal zoning of crops and animals;
- Optimization of the structure of sown areas;
- Systematic development of feed production and livestock production with livestock full forage base;
- The use of local or well adapted to local conditions plant varieties and animal breeds;
- Digitalization of agriculture;
- Technological modernization of the enterprises of the processing and food industries, etc.

Currently, Uzbekistan does not have food security parameters for some basic types of food. So, for example, there is a problem with the availability of beef, milk, fruits, vegetables and greenhouses. The emphasis on small-scale production in dairy and beef cattle breeding raises serious concerns related to the impossibility in the near future to achieve food safety parameters for milk, dairy products, and beef. The existing problems in some sectors of the agro industrial complex are reflected in the share of the Republic of Uzbekistan in world agricultural production and significantly reduce the export potential of food produced in domestic agribusiness.

RESEARCH METHODS AND RESULTS

Food imbalance, negatively affecting the health of the population, is caused by the persistence of many problems in agriculture in the Republic of Uzbekistan.

The first problem is the disproportionate development of crop production and animal husbandry. Soil and climatic conditions determine the structure of production and its specialization. The importance of the production of milk and meat, especially beef, is explained by the fact that animal products predominate in the optimal human diet (60% for proteins and 68% for fats). Thus, the development of livestock industries in the near and more distant future should be recognized as a priority.

The second problem is associated with an increase in the degree of social and economic differentiation in the rural economy at the regional level. Significantly the role in the socio - economic situation of the region to play an agrarian floor ITIC republican and local authorities. The results of agrarian reform in the last two decades have been used to a greater extent by the richer than the poor regions, that is, those where a lot of meat, milk, grain, vegetables, sunflower, and potatoes were produced.

The third problem is that the possibilities of the democratic system and market relations are used in different ways by different regions [9].

According to this document, two development scenarios are possible: local growth and global breakthrough. The first is related to maintaining existing positions in world markets in those niches that are already occupied. Naturally, it does not imply a significant increase in the export potential of the domestic agro-industrial complex, research, and will not solve the problem of food security in the previously identified deficient areas. The second scenario (global breakthrough) is associated with the influx of state investment in the industry, the implementation of digital agriculture, the solution of the food problem, and Uzbekistan entering new food markets.

The forward-looking scenarios of domestic agriculture One of the directions of the strategy of import substitution, and solve the problem of food security is the digitalization sat skogo economy. According Committee statistics Uzbekistan [10] in 2017, the amount of investment in information and communication technology (ICT) amounted to 3.6 billion US dollars., Or 0.5% of the total volume of fixed capital investment. This is one of the lowest indicators in the sectors of the national economy, which indicates a weak digitalization of the domestic agroindustrial complex and the competitive advantage of foreign commodity producers. At the same time, the introduction of digital technologies will significantly increase labor productivity in agriculture, which will lead to higher yields and higher profitability of production [11]. Until recently, the factors hindering the digital agriculture, is the inability to author Biological Process owls, high probability of natural hazards (droughts, dry winds, floods, etc...).

The use of information technology (IT) in agriculture was limited to the use of computers and software (software) mainly for managing finances and tracking commercial transactions. Not so long ago, farmers began to use digital technologies to monitor the growth of crops, the development of livestock, etc. (Table 1.).

Table 1. SWOT analysis on the example of digitalization of domestic agribusiness

Strengths	Weak sides
1. Significant areas of agricultural land, including arable land; 2. Research potential in the field of digitalization of agriculture; 3. High precision digital technology	1. The inability to automate biological processes; 2. High probability of natural risks; 3. Weak awareness of agricultural producers about the use of digital technology in agriculture; 4. Lack of specialists in the field of digital agriculture; 5. Lack of funds from agricultural producers for the widespread introduction of digital technology
Capabilities	**Threats**
1. Improving the competitiveness of agricult - agricultural production through the introduction of digital o technologies; 2. Solving the food problem security; 3. Confident output of Uzbekistan on the world prod about -food market	1. Scientific and technological backwardness of Agriculture of the Republic of Uzbekistan on the Com pared with world leaders; 2. Possible loss of the main Supplementary Accessories agricultural production-arable-due to a negative balance of humus; 3. The low level of government and investment aimed at the introduction of digital technologies in the agricultural sector

Currently, smart devices have been created that transmit and process the current parameters of each object and its environment (equipment and sensors that measure the parameters of soil, plants, microclimate, animal characteristics, etc.), computer vision technologies are actively being introduced in protected ground. However, the level of introduction of digital technologies in Uzbek agriculture continues to be low, which is due to the lack of research in this area, the high cost of the necessary equipment, and the low awareness of agricultural producers about the possibilities of digitalization of agriculture.

Meanwhile, the countries of Western Europe and the USA are actively introducing digital technologies in agricultural production. Significant government investment is allocated to farmers transitioning to digital agriculture. It is known that Uzbekistan is today the largest supplier of food. However, the country is noticeably inferior to the largest economies in the efficiency of domestic agriculture.

The weak prevalence of digital technologies in the agricultural sector is due to a number of problems:

1) A significant share of small commodity production due to the predominance of personal subsidiary plots (LPH) and small farms. The emphasis on small commodity production leads to an increase in the cost per unit of agricultural products produced, and the inability to master IT due to their high cost. Many rural economic enterprises and farmer's farms operate at a loss on outdated technology, and availability of financial resources it is enough only for the purchase of working capital, such as seeds, fertilizers, pesticides, and others.;

2) Large agricultural enterprises and associations do not master digital technologies, and available funds are used to cover interest and the main debt on borrowed obligations;

3) One of the niches for the introduction of digital technology is protected ground. However, greenhouse complexes in many regions of the country are poorly developed, do not have the appropriate equipment due to its high cost;

4) Huge areas of unused farmland, including arable land, reduce the efficiency of agricultural production and impede the introduction of digitalization in agriculture. The unused area of arable land is the basis for the further growth of agricultural production. Their scientifically substantiated restoration in the structure of cost-effective crop rotation will increase the competitiveness of domestic agribusiness;

5) Disparities between sectors of the agricultural sector, when agriculture is a donor for both the sectors supplying resources and the sectors that process agricultural products. The low level of state support does

not allow many agricultural producers to conduct expanded reproduction and actively implement digitalization of agriculture.

CONCLUSION

Significant problems in some sectors of agribusiness on the share of the Republic of Uzbekistan in the world production and significantly reduce the export potential of the food produced in the domestic agriculture. One of the directions of the implementation of the strategy of import substitution and the solution of the problem of food security is the digitalization of agriculture.

The digitalization of agriculture, aimed at achieving and maintaining the competitive advantages of domestic agriculture, will ensure efficient management of the complex and solve the problem of food security at the state level. For the widespread adoption of digital technologies, it is necessary to increase the level of state support for the agro industrial complex, in particular, agriculture, and create an appropriate legislative base for this.

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