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ECONOMY

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AGRICULTURAL EMPLOYMENT: FEATURES, PROBLEMS AND SOLUTIONS

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Abstract. The emergence of a modern format of employment in agricultural production due to the activation of the material and technical base, the introduction of digital technologies in management and production processes, led to the development of new approaches to the formation of effective employment of labor resources in agricultural production.

Keywords: employment, agricultural production, rural area, agricultural employment, labor market, workplace, effective employment.

Аңдатпа. Материалдық-техникалық базаны жандандыру, басқару мен өндірістік процестерге цифрлық технологияларды енгізу есебінен ауыл шаруашылығы өндірісінде жұмыспен қамтудың заманауи форматының пайда болуы ауыл шаруашылығында еңбек ресурстарын тиімді жұмыспен қамтуды қалыптастырудың жаңа тәсілдерін дамытуға әкелді.

Түйін сөздер: жұмыспен қамту, ауылшаруашылық өндірісі, ауылдық жерлер, ауылшаруашылықта жұмыспен қамту, еңбек нарығы, жұмыс орны, тиімді жұмыспен қамту.

Аннотация. Появление современного формата занятости в сельскохозяйственном производстве вследствие активизации материально-технической базы, внедрение цифровых технологий в управленческие и производственные процессы обусловило выработку новых подходов формирования эффективной занятости трудовых ресурсов в сельскохозяйственном производстве.

Ключевые слова: занятость, сельскохозяйственное производство, сельская местность, занятость в сельском хозяйстве, рынок труда, рабочее место, эффективная занятость.

Introduction

In market conditions, the demand for labor is determined by numerous factors, among which technological progress in the development of production radically changes industry employment, which is reflected by the number of jobs due to the size of

production and the level of equipment with technical means. When the economy cannot create enough jobs, the potential production of goods is irretrievably lost in any sector of the economy and social tension is created in certain territories due to the loss of household income.

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An important direction of the modern approach to solving the problems of employment of individual sectors of the economy is the creation of jobs that meet the conditions of effective employment, which until recently was considered only as a macroeconomic phenomenon. A new approach to studying effective employment is its structuring at the level of macroeconomic processes. This allows us to consider it as a development factor that provides a search for growth points of individual organizations, as well as economic systems of various levels.

The dynamic development of agricultural production in the Republic of Belarus fully supports the level of employment in rural areas and influences the formation of social and economic sustainability of rural areas. In this regard, the change in the structure and technical equipment of the agricultural sector on the basis of scientific and technological progress, with proper and thoughtful organization of production, leads to an increase in the requirements for the quality of labor resources, an increase in labor productivity of both individual labor processes and industries.

The growth of fixed capital, due to additional investments and modernization of production processes, reduces the number of employees and increases the requirements for their quality composition. New approaches and principles of creating effective employment, reflecting the sectoral and territorial aspects, require studying the specifics, clarifying problems and finding ways to solve them both in the short and long term.

Materials and methods

The study of employment at the initial stage was formed on the basis of a casual approach and an axiological representation of rural areas as a set of elements and their direct influence on each other, which implies displaying the system in terms of goals, among which employment stands out as particularly significant.

Results

Agriculture in world practice is considered as an industry with a reduction in the supply of jobs and a decreasing share of the regional product produced. According to

international FAO data, the world's food demand is not only not decreasing, but increasing. The increase in absolute indicators of the volume of agricultural production and changes in the structure of consumption is a prerequisite and the main incentive for expanding employment and increasing its efficiency in agriculture.

Complex phenomena and processes in the economy, which include employment, are studied in different scientific directions, which have both unity in the approach to the study of employment problems, and divergence in key positions. In this regard, the interpretation of ideas and principles of the formation of theoretical knowledge about the practice of employment allow us to present the conceptual foundations of understanding agricultural employment as a specific economic category that differs from other types of employment.

The initial definition of employment is the understanding that full employment is when the number of job seekers is equal to the number of available jobs. In a modern, dynamically developing economy, the ratio may not coincide, which can lead to unemployment.

The main feature that determines employment is the availability of a workplace. Its industry characteristics are determined by the specifics of individual qualitative, quantitative and cost indicators. Generalization of these characteristics by economic sectors allows us to reveal the essence of employment and its effectiveness at the level of macroeconomic processes.

Modern approaches to the study of employment are formed on the basis of market concepts of economic development. The basis for the study of market mechanisms of employment formation is the theoretical principles of the functioning of the labor market. Labor and its owner, an economic person, is a specific resource of any sector of the economy. In this regard, agricultural employment is a special area of the national economy, which reflects the sectoral specifics of studying multifaceted economic problems, including regional ones.

The rural labor market is limited primarily by the number of jobs and their distribution across the few sectors of the economy represented in rural regions. The formation of this market is influenced by two main factors: production and the social sphere. In the conditions of the Republic of

Belarus agriculture is the basis for the development of the rural economy.

The agricultural sector is represented by large-scale production, which consists of two main branches: animal husbandry and crop production. Specialization in crop production, as a rule, is focused on the production of food grains and the cultivation of crops that provide animal feed. In animal husbandry, the main types of products are milk and meat. Poultry farming and flax farming have become separate types of production. At the same time, the processing of raw materials, including milk and meat, is concentrated at large processing plants. This has led to a decrease in the supply of jobs in local labor markets in rural areas. Auxiliary repair, maintenance and administrative services are concentrated in the largest rural settlements. Such placement of industrial and social facilities turns these rural settlements into administrative and economic centers.

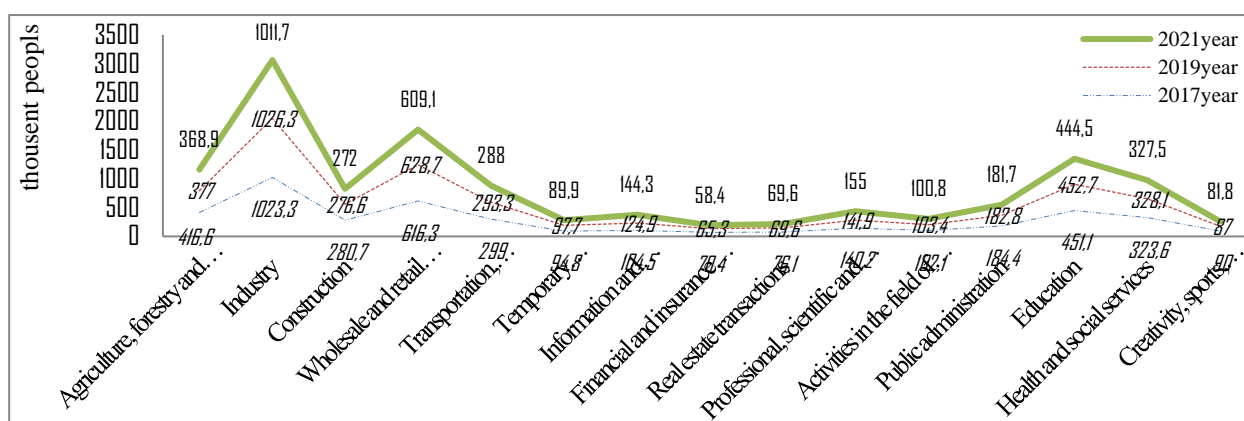
They are the point of growth of economic and social life in rural areas. The Republic of Belarus pays close attention to their development. On the basis of state programs to support the development of rural areas, their modernization is being carried out. This program made it possible to create a network of agro-towns with the appropriate infrastructure, first of all, the social environment: schools, kindergartens, polyclinics, cultural and wellness centers and comfortable housing. A number of tax benefits provided by the state for economic

entities located in rural areas are aimed at creating new jobs. These include farmsteads, craft workshops and other types of individual work.

However, the number of these jobs is insufficient for the formation of industry competition in these settlements. Therefore, a monopsonic labor market is being formed in most of these territories, which requires constant monitoring.

It should be noted that agricultural organizations that are located near cities face problems of intersectoral competition in which there is an outflow of rural workers to other industries present in the urban environment with higher incomes. These two trends in the development of economic and social spheres affect the functioning of market structures in rural areas and, accordingly, competition in the labor market.

The conducted research on employment issues showed that in 2017-2021 there were changes in the composition of the employed population of the Republic of Belarus, which was due to an increase in employment in the field of information and communication (by 38.1%); professional, scientific and technical activities (by 10.6%); health and social services (by 1.2%), in particular other industries experienced a decrease in employment in the study period, including financial and insurance activities (by 17.1%), transport activities (by 3.7%), industry (by 2.9%), agriculture and forestry, fishing (by 1.2%) (figure 1).



Compiled by the author according to the data (2022) belstat.gov.by

Figure 1 – Composition and dynamics of the employed population of the Republic of Belarus by type of economic activity, thousand people

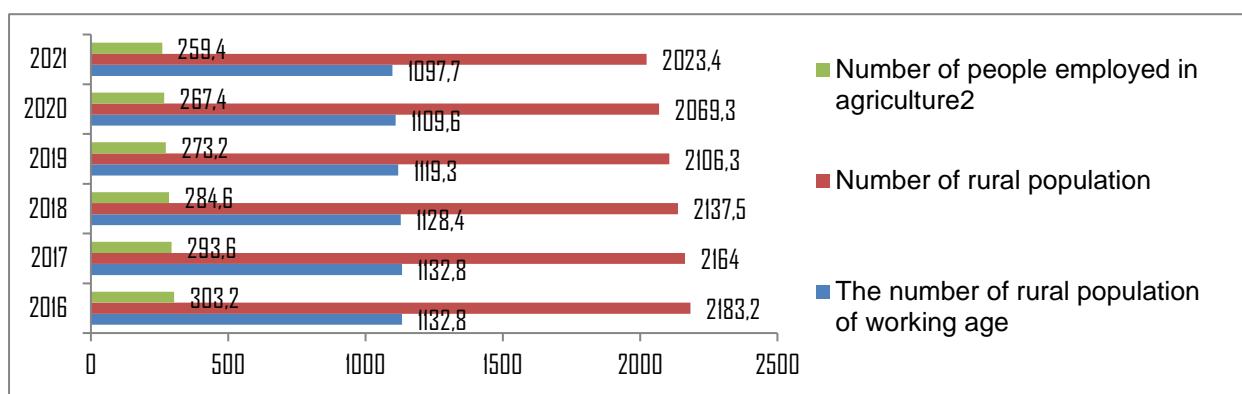
This dynamic highlights the fact that a number of adopted state programs in the field of employment have positive results (*Decree of the President of the Republic of Belarus (2021)*).

Consideration of the relative dynamics indicators for this period shows that the rate of decline in the number of people employed in agriculture is higher than the rate of decline in the rural population. Thus, the average rate of decline in the rural population is about 1%, while during the study period, the decline in employment in agriculture was 3.8%.

The decrease in the number of people employed in agriculture can be explained by the introduction of new technologies, changes in the material and technical

conditions of production and an increase in the efficiency of labor use. Rural development is the most important direction of agrarian policy related to ensuring food security and the formation of export potential, which in turn can be provided with opportunities to expand the production potential of agricultural organizations and create new jobs.

The peculiarity of agricultural production is that the source of labor for its functioning is mainly rural residents. The dynamics of the rural population and the number of people employed in agriculture reflect the changes taking place in the labor market in rural areas. Figure 2 shows the dynamics of these indicators for the period 2016-2021.



Compiled by the author according to the data (2022) belstat.gov.by

Figure 2 - Dynamics of the rural population and employed in agriculture, thousand people

As follows from this graph, there is a decrease in the number of rural population and those working in agriculture. Accordingly, according to the years, the level of employment of the rural population in agriculture is 12,9%, 12%, 13,3%, 13,5%, 13,8%, 14%. The share of people employed in agriculture from the number of able - bodied population is 26,8%, 26%, 25,3%, 24,4%, 24,1%, 23,9%.

The existing scale of agricultural production sufficiently solves the issue of food supply in developed countries, but the global problem of food supply has not been solved.

The following remain urgent problems of employment of the rural population: insufficiently mechanized labor; underdevelopment of non-agricultural activities in rural areas; low-income employment of farmsteads; instability of incomes employed in rural areas; inflexibility

of the labor market; economically inefficient employment in agricultural production, etc.

Some authors consider rural labor markets according to two models: external and internal. The external market is characterized as an open system where free labor of certain professions and specialties (machine operators, livestock breeders, agricultural production specialists, etc.) moves between employers (organizations), its inflow and outflow from this market is carried out on the basis of competition, while its movement can be directed towards urban markets.

With perfect competition in market conditions, the price of labor, which should suit both the employer and the seller, is formed on the market (McConnell, 1993).

The internal labor market is represented by workers employed in large agricultural and other organizations, where there is a constant exchange and there is its

own "internal" labor price, demand, supply, competition within a separate enterprise.

The source of labor for agricultural production is, as a rule, rural settlements and agro-towns, in which the population is traditionally engaged in rural labor in the absence of other activities in most of them. This situation suggests that a monopsonic labor market has developed in rural areas, where one agro-enterprise dictates both the terms of hiring employees and their payment.

Rural unemployment also has a special character. Due to the undeveloped spheres of labor application, it is longer.

Rural labor markets, in comparison with urban ones, are also characterized by a smaller number of jobs per unit of territory; less intensive movement of labor resources due to limited availability of jobs and underdeveloped social infrastructure, lower labor costs; limited labor mobility.

In rural areas, agricultural and non-agricultural employment should be distinguished. Some authors argue that non-agricultural employment of the rural population cannot perform the main function in the system of rural settlement, agricultural employment should dominate. According to another point of view, employment in agriculture should decrease as a result of labor productivity growth, and all the released labor force should "move" to alternative fields of activity.

The peculiarity of demand in the rural labor market is also associated with the seasonality of agricultural production, the length of the working day and the workplace. Thus, during busy working periods in agriculture, the working day may increase to 10 hours, while in private agricultural organizations this regulation may not be valid.

The peculiarities of the formation of rural employment indicate that the market mechanism is not able to create conditions for effective employment and the solution of many problems can only be associated with the intervention of the state.

Measures to regulate rural employment should include not only the creation of a socio-educational environment aimed at increasing investment in human resources, but also methods of regulating wages in agriculture, primarily on the basis of direct investments aimed at creating high-paying jobs, which are conditions for effective employment.

Agriculture produces various types of products. Their production differs in functional and technological capabilities in the use of labor resources associated with the seasonality of labor use, which leads to a variation in the time spent on production and the number of means of production used. This has an impact on the functioning of the labor market in agriculture. Agricultural enterprises are located on large areas that belong to rural territories and many of them, being away from large cities, have a problem of forming a labor supply, with a deterioration in demographic potential in a limited area.

The low horizontal and vertical mobility of the rural labor force is due to the specifics of the housing market, which is lower in cost than urban, unequal socio-infrastructure living conditions in different rural settlements in different rural areas, less supply compared to urban labor market. These factors, as well as the density of labor and jobs per unit of territory, create an inertial type of labor resources tied to work located near home. In these conditions, the information of labor market subjects about the demand for labor, about its price in various territorial market segments, is not essential, which indicates the importance of monitoring agricultural employment and its regulation by the state to ensure social principles of protection of the population and ensuring the right to work.

The limited territorial availability of jobs and the low level of labor in agriculture determines the following characteristics of this market: low elasticity of demand for labor, with high elasticity of prices for agricultural products; low profitability of the industry; monopsony in local rural labor markets; weak influence on the formation of labor prices of collective bargaining regulation; lower compared to with the city, the quality of labor resources; seasonal labor needs; limited areas of labor application; long duration of unemployment compared to the city and its development into stagnation in depressed rural areas. The change in the labor supply in rural areas is less related to migration processes and is formed mainly due to the potential of territories and the implementation of the state program to provide specialists with the first workplace after graduation.

In this regard, of paramount importance in understanding the employment process is the assessment of the labor resources of the regions and the

factors forming them in specific socio-economic conditions (Morova, 2015, Plikov, 2007).

The market demand for labor is determined by the technical development of production, and therefore industry employment is determined by the number of jobs, which are determined by the size of production in the studied sector of the economy and the level of its equipment with technical means. As an economic category, employment is characterized through significant signs that are of a sustainable nature. In the scientific literature, such signs include the presence of a workplace, the length of the working day, wages, and regulatory clearance.

The specificity of agricultural production is manifested in the fact that the workplace, as an element of production, can be characterized by size (animal loads per worker, processing area), travel distances and seasonality, which separates the production process and the workflow in time.

Taking into account these features allows us to define a workplace in agriculture, taking into account the specifics of production. A workplace in agriculture is an element of the production of agricultural products with human participation and the use of specific means and objects of labor (which include land, animals and plants, i.e. biological assets), with a certain technological operation.

At the heart of the material and technical part of employment, the key category is the economic and technological category - "workplace". On the one hand, the "workplace" is a means of production and the main element of the functional and technological system, on the other hand, it is an element of combining materialized and living labor. His involvement in the labor process refers to the characteristics of employment. If there are not enough jobs in the economy, unemployment arises. When unoccupied or new jobs appear, there is a demand for live labor, and accordingly all market mechanisms in the labor market are activated. The creation of new jobs is a reaction to the demands of consumers in the market of goods and services. Therefore, it is important to establish how the created jobs are used in each economic segment, including in agriculture. Their use can determine the extensive and intensive type of reproduction. Each of these types is

characterized by factors that determine the efficiency of labor use – this is a change in the time of employment of labor resources in labor processes, the level of technical capabilities and intensity of their use, output per unit of labor costs. In the working environment, the processes of its organization, based on communication functions, are important. This allows you to debug the technological process and optimize it, determine the level of use of all resources, including the competencies and qualifications of the workforce.

It should be noted that despite the importance of the workplace category, there is no methodology for its assessment, economic classifications reflecting the specifics of application and level of use have not been developed, there are no practical models of the relationship of factors in the economic system of employment and the use of labor. When solving these problems, it is necessary to apply an integrated approach to the assessment of labor resources in a functional and technological working environment. This will make it possible to establish the effectiveness of their use with a different combination of labor and capital, as well as to predict the level of employment based on production needs focused on market demand for agricultural products in conjunction with production factors. The organization of labor and the technical level of equipment of the workplace, together with other factors of the working environment, determine the intensity and efficiency of the use of labor. In modern agricultural production, the role of digital technologies is increasing, the efficiency of information transmission is increasing, which affects the mobility of resources. This determines the possibility and necessity for solving the movement of all production resources, including labor, based on logistics methods.

Efficiency, as an economic category, is the relative level of use of any resource and its result. At the same time, it is important to establish the dynamism of the process of using jobs, which will require additional comparisons of the achieved level and will allow us to give an objective picture of the changes taking place. This approach involves comparing the time spent per unit of work performed, as well as remuneration per unit of time, taking into account the quantity and quality of tasks performed, profit and value added received per hour, day or

technological cycle (for example, harvesting). The complexity of the task and any work operation is the main indicator of the intensity of labor when using working time. To activate the workplace, an organizational apparatus is needed to ensure working conditions, its protection, payment and stimulation.

All these factors create conditions for effective employment. Effective employment at the micro level should be considered as a process of combining factors of production that ensure the full use of resources in order to achieve economic growth of economic entities, providing them with the maximum possible economic and social result in these economic conditions.

Effective employment provides for the creation of high-paying jobs. The profitability of the workplace is the main condition for the growth of effective employment and depends on the following parameters:

- production technology and the required qualifications for its maintenance;
- the level of complexity of the technological operations or tasks performed;
- load standards per workplace unit;
- the choice of remuneration and incentives.
- organization of labor and its productivity.

The modern organization of the use of working time and its payment involves not only improving the use of norms, standards, tasks, but also the complex impact of product and process innovations on the technological process. New organizational and economic mechanisms of the digital economy are associated with changing jobs based on the achievements of information and communication technologies. These innovations also apply to agriculture. Digital agriculture is understood as the introduction of digital technologies that provide data transfer from the field and farm to the office, the management of individual units, the creation of a unified accounting and analytical structure for the organization of electronic document management and the integration of the organization's finances, sales, supply into the global space. The creation of digital workplaces is the unification of equipment, vehicles, transfer devices and other elements of technology into a single information space, which allows part of the employee's functionality to be assigned to the equipment when achieving

the result, to use remote control, to strengthen control over the workflow. Currently, the tools of digitalization are various digital products that can be used both in a complex and as part of digital platforms, respectively, the qualitative content of human participation, its functionality in the workflow is changing. On the basis of digitalization, jobs are being transformed and the ways of performing work are changing while maintaining their content (subprograms) for 2016-2020(2021).

At the same time, there may be changes concerning employment:

- increase in labor productivity while maintaining a workplace
- replacement of working time with machine time and the elimination or reduction of the number of jobs.

Consideration of the reproduction of the workplace and the labor process in the working environment allows us to state that the human resources of agricultural organizations are an important element determining the functioning of the workplace in the production process, and capital and land are its material basis.

The main criteria for effective employment is its compliance with the technical, functional and territorial organization of production, which ensures the maximum possible increase in labor productivity and balance with the social needs of households and firms.

The specificity of agricultural production is manifested in the fact that the workplace, as an element of production, can be characterized by size (animal loads per worker, processing area), travel distances and seasonality, which separates the production process and the workflow in time. Taking into account these features allows us to define a workplace in agriculture, taking into account the specifics of production.

A workplace in agriculture is an element of the production of agricultural products with human participation and the use of specific means and objects of labor, which include land and biological assets (animals and plants), with a certain technological operation. Effective employment will depend on its technological equipment and skilled use of labor.

Discussion and conclusions

In the conditions of market relations, employment is the result of the market mechanism in the labor market, which reacts to both the supply and demand of labor resources, while the sectoral specification of their manifestation determines the competitiveness of market structures and their type, and the territorial approach allows you to set the boundaries of competitive and monopsonic labor markets.

The specifics of employment in agriculture are determined by the characteristics of the workplace included in the working process of agricultural production; the qualifications of the personnel serving it; the peculiarities of agricultural production such as natural and climatic conditions (soil quality, temperature, precipitation), seasonal nature of work, duration of the production process, the discrepancy of work processes and obtaining

results from them, the use of biological assets and soils as means of production.

The system-targeted approach to understanding effective employment focuses the study on achieving national interests, firms and households, which makes it possible to identify the main indicators for assessing effective employment at different levels of the national economic system, including quantitative, qualitative and integral indicators for assessing the working environment, workplace, and labor resources.

The main directions of improving agricultural employment are the balance of labor supply and demand; ensuring employment and involvement in agricultural production of the able-bodied population in the area of activity of an agricultural enterprise; expanding the fields of activity in rural areas; increasing income and prestige of agricultural labor.

REFERENCES

1. Agriculture of the Republic of Belarus (2022). <<https://www.belstat.gov.by/upload/iblock/e12/dtcvj9pyu5zw1gjiq8devys56lc5o7tx.pdf>> Accessed 20.11.2022.
2. Card D., Berder S., Bloom N., Reenen J. V. Stefan W. (2018). Management Practices, Workforce Selection and Productivity. *Journal of Labor Economics*, 36(S1), 371- 409.
3. Decree of the President of the Republic of Belarus (2021). No. 292 On the approval of the Program of Socio Economic Development of the Republic of Belarus for 2021-2025. <<https://pravo.by/document/?guid=3871&p0=P32100292/>> Accessed 09.09.2021.
4. McConnell, K. R. (1993). *Economic principles, problems and politics: translated from English: in 2 volumes / K. R. McConnell, S. L. Bru; edited by A. A. Porokhovskiy*. Vol. 2. p. 157.
5. Morova A.P. (2015). Social component of sustainable development/ A.P. Morova // *Sociology: Scientific and theoretical journal / Belarusian State University*. No. 4., 13-20.
6. Plikov B.P. (2007). *The labor market in rural areas and its regulation (Issues of theory and practice)*. 2nd ed., transl.and additional-M.: AgriPress, 267p.
7. Summary final report on the implementation of state programs (subprograms) for 2016-2020, including an assessment of the effectiveness of their implementation (2021). <<https://economy.gov.by/uploads/files/gos-progr-2016-2020/itogovvj-otch-2016-2020.pdf>> Accessed 15.11.2022.
8. The main indicators for the Republic of Belarus (2022). <<https://www.belstat.gov.by/ofitsialnaya-statistika/publications/katalog/trud-i-zanyatost-v-respublike-belarus/index.ph>> Accessed 15.11.2022.

АУЫЛ ШАРУАШЫЛЫҒЫНДАҒЫ ЖҰМЫСПЕН ҚАМТУ: ЕРЕКШЕЛІКТЕРІ, МӘСЕЛЕЛЕРІ ЖӘНЕ ШЕШУ ЖОЛДАРЫ

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СЕЛЬСКОХОЗЯЙСТВЕННАЯ ЗАНЯТОСТЬ: ОСОБЕННОСТИ, ПРОБЛЕМЫ И НАПРАВЛЕНИЯ РЕШЕНИЯ

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