

PECULIARITIES OF LOCATION AND SECTORAL SPECIALIZATION OF LIVESTOCK ENTERPRISES IN UKRAINE IN THE PRE-WAR AND WAR PERIODS

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Livestock production is one of the leading sectors of agricultural production in Ukraine and in most countries of the world. Animals complete the food chain in agriculture, which allows it to be the final link in agrarian reproduction and allows for a closed, waste-free and environmentally perfect cycle. This situation makes the industry seemingly more profitable due to the much more expensive end products than crop production. However, since crop production has a much shorter period of time to final product and, therefore, much faster profit margins, its industries have taken a leading position in the structure of domestic agriculture.

The focus on quick profits has led to a significant shift in the territorial specialization of agricultural enterprises and a sectoral reorientation to crop production. The war had a devastating effect on the functioning of the livestock sector. Livestock production was destroyed on 20 % of the temporarily occupied territory, in the liberated and frontline areas. Due to the lack of feed, shelling, fires, inability to care for livestock, and destroyed property complexes, the industry was lost, as well as its products. At best, entrepreneurs gave away animals, milk, and eggs to the public. Private households were also destroyed, and they continue to be under direct fire from the occupiers even now. The damage caused by the enemy army and the occupation to the livestock sector is estimated by experts of the Ministry of Agrarian Policy and Food of Ukraine at UAH 2 billion.

Traditionally, livestock farming in Ukraine is represented by cattle, pig, sheep and poultry farming. The industry is of great importance for ensuring

balanced food rations for the population and food security of the country; supply of raw materials for the food and light industry; formation of natural balance in agricultural landscapes as a source of organic fertilizers to preserve and increase natural soil fertility, hence high crop productivity; export of products and foreign exchange earnings to the budget; employment and welfare of the population.

With the introduction of industrial technologies, criticism of livestock farming for inhumane treatment and slaughter is gaining ground. To this should be added the negative impact of livestock, especially cattle breeding, on the global climate and its assessment by leading scientists as one of the factors of global warming. However, attempts to produce synthetic meat have proved to be very expensive and have not been implemented on a large scale. In developed countries, high consumption rates persist. For example, in the United States, they are at the level of 120 kg per person per year. Therefore, due to the factors of significant market demand, the livestock industry is functioning and developing.

In Ukraine, according to statistics, as a result of inconsistent reforms, market openness and weak state support for small and medium-sized producers, as well as dumping prices, they have experienced and are experiencing a steady decline in almost all production and economic indicators over the past 30 years. As noted by experts [1, 2], the state of livestock production does not correspond to its potential capabilities and is characterized by a steady downward trend in the number of almost all types of farm animals. This is accompanied by the destruction of domestic breeds, increased dependence on imported genetic resources, and an inefficient breeding system in general.

Compared to 1990, the number of cattle in Ukraine has decreased by 89 % and is 11 % of its level, cows are 15 %; sheep and goats are 14 %. The reduction of pigs to 35% is considered more positive. As of January 01, 2023, according to the State Statistics Service, in absolute terms, this amounted to 2549.8 thousand heads of cattle, including 1355.2 cows; 965.2 sheep and goats; 5028.4 pigs [3]. However, this number is not enough to meet market needs. Demand is constrained by high prices, especially for beef and veal. On the other hand, the share of chicken in the consumption structure has significantly increased amid this decline.

During this period, 16 domestic breeds and breed groups disappeared, which is more than 14 % of the world's total. In the overall

structure of breeding breed populations, only 20% are at no risk of a significant reduction in the number of animals. This is also due to the large-scale import of genetic material. In the case of other types of hazards, such as war and border blockades, this poses a threat to food and national security in general. It can lead to the disappearance of strategically important industries and employment.

Domestic breeding enterprises have practically lost their influence on industrial meat and egg poultry production; pig breeding; and sport horse breeding. The reason for this is the reduction of state support for breeding; research institutions that provide it on the part of large commodity producers; and the absence or insufficient number of their own scientific developments. For various reasons, the accounting of animals and their productivity and the system of information collection in general; the testing system and the methodology for assessing animal productivity have proved to be imperfect and inconsistent with modern requirements.

It can be argued that livestock farming has moved to households. Thus, they account for 80% of the number of sheep and goats; 75 % of cows; 50 % of pigs and 40% of poultry.

The sectoral specialization and location of the industry have changed significantly. Currently, the sectoral specialization in meat production is determined by poultry farming (49 % of the production structure is poultry meat; pork – 33 %; beef – 17 %; other types – 1 %) [3]. Livestock farming had a fairly clear zonal specialization in accordance with the natural and climatic conditions of the country's three agricultural zones.

A separate mention should be made of the location and sectoral specialization of livestock production near large cities and urban agglomerations. While the zonal specialization and location of livestock industries in terms of agricultural zones is determined by factors of natural and climatic conditions and the availability of feed, near cities it is a factor of the daily demand of large masses of the population for fresh animal products – milk and meat, first of all. Therefore, large industrialized enterprises of meat and dairy farming and processing of its products, often of minimal primary processing, are located here to provide consumers with fresh products [4].

It should be noted that one of the most notable trends in the location of livestock production in Ukraine is the gradual erosion of its zonality or zonal specialization. For example, 30 years ago, the industry's specialization

was clearly defined. In every collective and state farm, livestock production was represented at the farm level. There were large specialized complexes and poultry farms, as well as breeding farms; breeds adapted to local conditions were selected. Enterprises with related specializations formed certain groups – production and territorial types – for which agrotechnological and other recommendations were developed [5, 6].

As a result of privatization and denationalization and further reforms aimed at weakening state control and freedom of entrepreneurship due to the higher profitability of crop production, the newly formed enterprises overwhelmingly began to specialize in crop production, while livestock and fodder production were curtailed. Its location has become more consumer-oriented, with modern innovative enterprises located near large cities. Poultry farming has retained its specialization, with a focus on the fodder base - grain production in the Forest-Steppe and Steppe regions, but also in the form of large industrial poultry farms and with a focus not only on the domestic but also on the foreign market in the sale of finished products.

This situation was exacerbated by the relatively low productivity of domestic production compared to Western production, the openness of the market to imports, poor exports due to the inability to store fresh produce, and the lack of modern freezing technologies. Another reason is the need for large investments in the modernization of the livestock sector at the level of small and medium-sized enterprises and households and the lack of such investments. Another reason is the lack of innovation among employees and entrepreneurs, and their lack of initiative. After all, the state has developed significant measures, including financial support, to modernize the industry. However, due to the rather complicated mechanisms for providing them, they could not always be implemented by small enterprises or private households.

The reasons for the constant decline of the industry are low purchase prices for milk and meat, especially in households. They are orders of magnitude lower than in the European Union. This policy, without government support, makes cattle production unprofitable and their maintenance unprofitable or even impossible. This is especially true for private households. In addition, the loss of natural growth in the rural population and the unwillingness of young people to live in the countryside due to insufficient socio-cultural standards have a very negative impact on all livestock sectors. Given that private households concentrate

the vast majority of animals in modern conditions, this leads to a steady decline in its performance.

The situation in the industry has further deteriorated due to the losses in the war. Many scientists, managers, and practitioners see the future of livestock farming as being located in large industrialized and automated full-cycle enterprises. They have been shown to be quite efficient, producing products that meet quality standards, and are financially and economically sustainable. However, it has also been proven that keeping even 4 cows with an average productivity of 4.0-4.5 thousand kg of milk per year provides social protection for a rural family [6]. It should be noted that the industry was almost lost due to the war in the Steppe agricultural zone. Therefore, the security factor comes to the fore in the location of agricultural livestock enterprises in modern conditions.

In line with the border of invasion from the east, north, and south, livestock enterprises are reorienting from climatically favorable areas to relatively safe central and western regions. This reason deepens the trend of gradual change of zonal specialization to regional specialization and its shift, mainly not in the north-south direction, but in the east-west direction. Also, the deformation of the structure of agricultural land in the direction of a sharp reduction of natural pastures and hayfields; the fodder base; the decline of breeding and breeding have led to the practical disappearance of such traditional and efficient industries as horse breeding, sheep breeding, and beef cattle breeding relative to the previous scale. In our opinion, there is a potential for its revival in the western regions.

Livestock farming is important in the structure of agricultural production, employment of rural residents, rational nutrition of the population and food security of the country. It is represented by cattle breeding, pig breeding, sheep breeding, horse breeding, fur farming, beekeeping, and pond fish farming and has a clear zonal and sectoral determination. The location relative to natural agricultural zones is not as crucial for livestock production as it is for crop production, except for beef cattle, sheep and horse breeding, which are guided by the presence of natural hayfields and pastures in the structure of agricultural land. Gradually, zonal specialization is losing its clear boundaries, including due to a radical change in the organization of livestock production. Previously, these were almost all agricultural enterprises, but now they are separate specialized innovation complexes.

Currently, the war has led to significant losses in the industry and has further aggravated the situation, creating threats to the food security of the population. The most significant factor in the location of livestock enterprises was the factor of security from the war. Enterprises and industries located in the central and western, relatively safe regions were in a better situation. Livestock production in the occupied and de-occupied territories has been completely destroyed. Its revival should be carried out in the current conditions in these relatively safe regions. This indicates a certain deepening of the regional specialization of the industry and a change in its vectors from north-south to east-west. In improving the sectoral structure and increasing the efficiency of livestock production, the leading role is played by increasing productivity through the revival of domestic breeding and breeding, involving the experience of scientists, the achievements of the Livestock Institutes of the National Academy of Sciences of Ukraine, breeding farms and their support, including in the form of public-private partnerships.

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