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**Our address:** 39, Kari-Niyaziy str., Tashkent 100000 Uzbekistan , [www.sa.tiame.uz](http://www.sa.tiame.uz)

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# THE QUALITY OF LIVESTOCK PRODUCTS IS A KEY DEVELOPMENT FACTOR OF SPHERE

B.Nosirov – Associate professor, Andijan Institute of Agriculture and Agrotechnologies, Uzbekistan

## Abstract

*The quality of livestock products in Uzbekistan plays a pivotal role in the development of livestock. From dairy to meat and wool, the quality of these products not only affects the nation's economy but also the well-being of its citizens. In this article, we will explore the significance of livestock quality as a key development factor in livestock of Uzbekistan. The production process of livestock products consists of clear, significantly different, and therefore strongly interrelated stages, which requires the creation and coordination of a comprehensive system of factors for the effective development of this industry. This field is interrelated, which embodies the technical, technological, biological, organizational, economic, social, political and legal directions of scientific and technical development, serves to increase the efficiency and quality of production of livestock products at various stages of the production process. And will have a tendency to develop as a result of the influence of important factors and their rational use.*

**Keywords:** animal husbandry, cattle breeding, livestock, product quality, feed unit, diet, breeding, selection, milk, economic efficiency, cost, profitability.

**Introduction.** Livestock development plays a crucial role in the overall agricultural sector of Uzbekistan. Livestock products, such as meat, milk, and eggs, contribute significantly to both domestic consumption and export markets. The quality of these livestock products is a key development factor in Uzbekistan. Improving the quality of livestock products is essential to meet consumer demands and compete in the international market. There are several factors that can contribute to improving the quality of livestock products in Uzbekistan. First, changes in the global market conditions present opportunities for livestock producers. Global trends of growth in commodity markets and increasing demand for high-quality food products create a favorable environment for Uzbekistan's livestock sector. Additionally, the increase in the value of land resources provides an incentive for livestock producers to invest in improved breeding and feeding practices, resulting in higher-quality products. Furthermore, the expansion of the agricultural market in neighboring countries creates a demand for quality livestock products that can be met by Uzbekistan. To capitalize on these opportunities, it is crucial to introduce more efficient business schemes and adopt modern technologies in livestock production. These factors, combined with policies aimed at enhancing farmers' access to market information and promoting output diversification, can contribute to the overall improvement of livestock product quality in Uzbekistan.

The reported improvements in production quality are mostly driven by marketing information and output marketing services, as found in around two-thirds of the studies. This mostly relates to a switch to organic production, stronger connections with buyers, improved value chains, and the provision of extension and input marketing services. These efforts can lead to higher yields, reduced crop losses, and overall improvements in production quality. Promoting integrated crop-livestock farming systems is also a valuable approach to enhance productivity, spread production and market risk, and promote stable farm incomes in Uzbekistan. Furthermore, the shift from subsistence to commercialized farming and increased market access are crucial for making the livestock sector in Uzbekistan a viable enterprise. One of the key factors for the development of the livestock sector in Uzbekistan is the improvement of livestock product quality. This can be achieved through various means, such

as implementing modern technologies and practices in breeding and feeding, establishing stronger connections with buyers, improving value chains, and providing extension and input marketing services. Furthermore, addressing market imperfections and ensuring access to resources for agricultural production will also contribute to the sustainability and competitiveness of the livestock sector in Uzbekistan. Increasing the quality of livestock products is essential for improving the livelihoods of rural families, alleviating food insecurity, and promoting economic development in environmentally sensitive areas of Uzbekistan. Addressing market imperfections and ensuring access to resources for agricultural production are crucial for enhancing the quality of livestock products in Uzbekistan. The quality of livestock products is a key development factor in Uzbekistan, and it can be improved through the implementation of modern technologies and practices, establishing stronger connections with buyers, improving value chains, and providing extension and input marketing services.

**Literature review.** It is reflected in the books and reports of the President of the Republic of Uzbekistan Sh.M. Mirziyoyev on researching problems related to improving the efficiency of production of livestock products in farms. Also, this issue was used by the economists of our republic in the preparation of an article analyzing the theoretical and practical aspects of the scientific works, training manuals and textbooks of following scientists who made special contributions: O'.P.Umurzoqov, O.Murtazayev, A.X.Toshqulov, A.A.Abdug'aniyev, J.Rashidov, A.A.Toshboyev, R.X.Ergashev, S.Dehqonov, T.Qudratov, F.Jo'rayev.

**Research methodology:** In the scientific paper, analysis and synthesis, systematic approach, abstract-logical thinking, economic analysis, grouping, expert evaluation and comparison methods were used.

**Analysis and Results.** Recently, the demand of consumers for quality products is increasing day by day. Because at present, domestic markets of Uzbekistan are in great demand for high-quality products imported from abroad. Our main goal is to increase and fill the domestic market with high-quality products produced by us, and to increase the export potential of Uzbekistan.

By improving the quality of the product, its shelf life will be extended, the cost and labor costs will be reduced, the competitiveness in the world market will increase,

the economy of the enterprise will improve and the consumer's demand will be fully satisfied. That is why product quality is an object of planning and management in the economy.

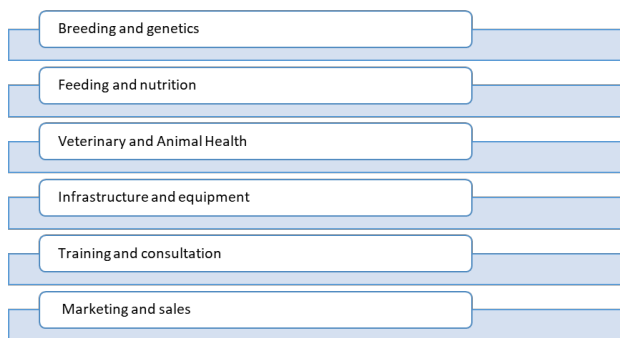
Cattle breeding is an important component of agriculture, supplying almost all dairy products and 60-70% of meat necessary for full nutrition of people.

The rations and type of feeding of agricultural animals it is necessary to take into account the systems of their feeding and the structure of production, the quality of feeds, their cost and the coefficient of beneficial effect.

In the following years, due to the insufficient low level of production of dairy and meat products in our republic, an increasingly large proportion of these foods are brought in at extreme cost.

Livestock sectors produce about 34% of gross agricultural output. More than 90% of it is supplied by small households. So, very few are on farm contributions.

There are several factors that can improve the efficiency of cattle breeding in Uzbekistan, including the following (Figure 1):



**Figure 1. Factors to improve the efficiency of livestock in Uzbekistan.**

1. **Breeding and genetics:** The introduction of breeding and genetic improvement of livestock can improve the productivity and quality of animals. This includes choosing the best breeds, breeding for milk or meat productivity, and improving animal genetics.

2. **Feeding and nutrition:** Ensuring rational, balanced and high-quality animal feeding is an important factor for improving the efficiency of cattle breeding. The use of modern feeding methods and a variety of feed makes it possible to improve the digestion and growth of animals.

3. **Veterinary and Animal Health:** Excellent animal health is a key factor in efficient cattle breeding. Providing adequate veterinary care, disease prevention, vaccinations, and general herd health monitoring helps reduce animal morbidity and increase survival rates.

4. **Infrastructure and equipment:** Modern farms and farms should be provided with good infrastructure such as physical structures, water supply, lighting and ventilation systems. In addition, the use of modern equipment for feeding, milking, dairy and meat processing contributes to improved productivity and efficiency.

5. **Training and consultation:** Conducting training programs and providing advice to pastoralists helps to spread best practices, technologies and knowledge transfer. This increases the professionalism of cattle breeders, helps them adapt to new requirements and effectively use available resources.

6. **Marketing and sales:** The development and support of markets for dairy and meat products contributes to improving the efficiency of cattle breeding. This

includes the creation of optimal sales channels, the development of retail chains and the search for new export opportunities.

These factors can contribute to improving the efficiency of livestock in Uzbekistan and help improve meat and milk production, as well as the income and well-being of cattle breeders.

Livestock is one of the important sectors of the economy, which provides the population of the country with important valuable and high-calorie food products. In addition, livestock farms deliver raw materials for the production of products such as light industry, in particular shoes, clothes and furniture, and other things necessary for everyone.

Now let's look at the level of food supply for the population in 2022. Current data shows that Uzbekistan has significant deficiencies in livestock production per capita. Including the provision of milk, beef and poultry is in a state somewhat lower than the World Health Organization's standards. This situation further strengthens the above points on the development of livestock.

The question of improving product quality and increasing its competitiveness is of great importance for the further development of the economy of our republic, including the livestock industry. In the production, supply and planning of high-quality products, it is necessary to be familiar with modern evaluation methods and standards of quality indicators.

In the field of livestock development, work is being carried out to increase the gene pool of livestock breeds and increase meat productivity, and to introduce innovative technologies to expand the fodder base through the use of genetic methods. Innovative development of animal husbandry is first of all directly related to the intensification of production, as a result of the use of improved innovative techniques and technology, as well as new forms of production and labor organization, the effective and full use of available resources ensures an increase in labor productivity.

In the intensive way of increasing the volume of products, attention is mainly focused on increasing labor productivity, that is, the farm is involved in the production of vitamin-rich fodder, science-technical achievements without changing the number of livestock. As a result, the cost of 1 unit of product decreases, as well as the volume of products increases.

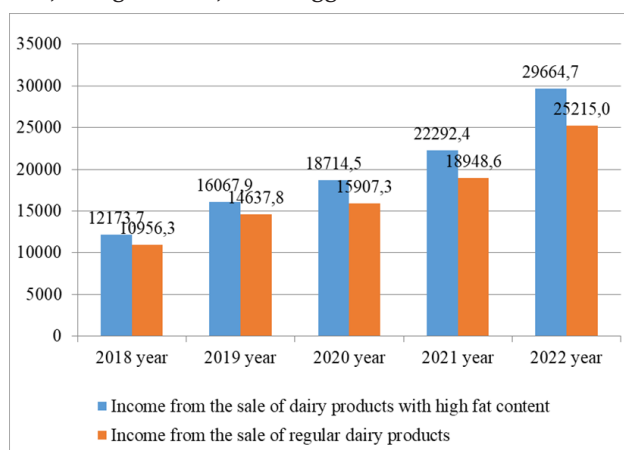
Fodder unit is a unit of measurement that determines the nutritional value of fodder fed to cattle. It is equal to 1 kg of dry oats content of the feed unit. The nutritional value of other forages is compared to this. For example, 1 kg of dry alfalfa is 0.5; barley 1.15; 1 kg of corn is equivalent to 1.4 nutrient units. In cattle, the nutritional value of one feed unit, determined by fat accumulation, is equal to 150 g of internal fat accumulation or 1414 kcal. In addition to the unit of nutrition, digestible protein, calcium, phosphorus, carotene and vitamins are also controlled when evaluating the nutritional value of forage. In practice, special tables are used that indicate the nutritional value of fodder. In the USA, Germany, UK and other countries it is evaluated based on the digestible nutrients in the feed.

The production of livestock products and the rational use of fodder depend on the quality and quantity of fodder given to cattle, the demand of animals for feed and farm conditions. Cattle are fed according to the established norm. Both underfeeding and overfeeding can have a negative effect on animals. The current feed rate

recommended for practical use is based on the general demand of animals for nutrients and is expressed by a feed unit; besides digestible protein, calcium, phosphorus, carotene, table salt norms, about 30 different biologically active substances and supplements are used, depending on the type of animal - enzymes, vitamins, carbohydrates, microelements.

Taking into account the consumption of about 0.5 feed units to produce 1 liter of high-quality milk with a fat content of 4%, the feed rate for dairy cows is calculated. The feed rate is not constant, it is reviewed and changed if necessary, depending on the conditions and the production plan.

Strong feed (concentrated) is an important reserve to increase the share of the nutrient unit in the feed. According to the Research Institute of livestock, poultry and Fisheries of Uzbekistan, compared with the same amount of grain mixture, 100 kg of fully balanced feed fed to livestock allows you to get an additional 25-30kg of milk, 3-4kg of meat, 75-90 eggs.



**Figure 2. Income change (mln UZS) in the production of dairy products with high fat content in the farm**

*Source: statistics of farm in Andijan region*

It is explained by the fact that the growth of the gross production of milk and meat in recent years is superior to the growth of total production costs in the same period as factors of economic efficiency increase in the analyzed farm. In fact, as it was mentioned above, the income from the sale of milk has increased by 2.43 times and the income from the sale of meat has increased by 2.5 times due to the production of quality products. The total production costs increased by 2.22 times in 2018-2022. As a result, rentability was ensured at 22.7% due to the production of milk products with high fat content.

It is necessary to pay special attention to the technological factors in the development and effective organization of the livestock industry in the current and future periods when market competition is intensifying. Increasing the production of quality products in cattle breeding, increasing the productivity of animals depends to a large extent on the supply of mixed feed, which is considered the most important and decisive element of the technology of animal care. That's why, in our opinion, it is advisable to build factories with the capacity to supply livestock with sufficient and standard mixed fodder with the participation of foreign investors.

After all, due to the stable development of livestock breeding in Uzbekistan, increasing the number of livestock with a constant growth trend based on the possibility

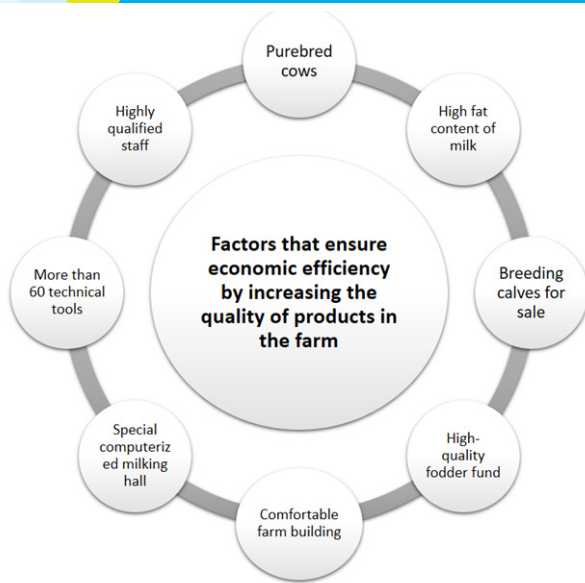
(power) of creating a quality feed base that can provide a standard level, and increasing their productivity per capita production of quality livestock products such as milk, meat, eggs at the level of medical standards and provision of other sectors of the economy with raw materials of the livestock sector at the expense of domestic resources is of significant socio-economic importance.

It is known that fodder and other types of feed make up the main weight of livestock production costs. Therefore, in the development of animal husbandry, including cattle breeding, the first priority is to strengthen the feed base of the industry, identify and plan its internal and external sources of production, form and diversify infrastructure entities related to feed supply, structural and organizational and taking into account the importance of the role of technical and technological measures, it is necessary to recognize the need for their rational use.

In order to implement the innovative development of livestock industries at the republican level, to form and support the system of training and supply of qualified personnel with higher education suitable for each direction of the sector's activity, to provide material and The step-by-step implementation of measures such as the implementation of mechanisms of moral stimulation is of significant economic and social importance.

A number of innovative mechanisms for the production of high-quality dairy products ensure an increase in efficiency. In particular, it is necessary to increase the weight of dairy cows in the farm herd by 60-70%, to sell bulls under 1 year old for breeding. Also: - it is necessary to achieve a level of fat content of milk above 3.6%. For this, it is necessary to revise the diet of cows, to maintain the microclimate of the farm at the required level; - improvement of agrotechnical breeding and selection of animals with high milk fat content in the herd of cows; - strict adherence to personal hygiene of milkers; - full compliance with all zoohygienic requirements during milking of cows; - wash, disinfect and rinse milking containers and storage containers after each milking; - cooling of freshly milked milk to +4...+5°C; - it is recommended to fully equip milk laboratories and make maximum use of them.

In order to develop the livestock industry, improve the quality of meat and dairy products, reduce costs, and increase the efficiency of the industry, first of all, special attention should be paid to the measures to fully provide it with all relevant factors and resources. At the same time, it is appropriate to recognize that there are a number of tasks that cannot be postponed and are waiting for their solution now and in the near future. Among them, first of all, it is necessary to place the network and diversify its activities in accordance with the regional natural and climatic conditions, to build large dairy and dairy complexes, to expand the possibility of their innovative development, including modern, including foreign advanced scientific and technical achievements, introduction of waste-free nanotechnologies, expansion of the range of finished livestock consumer products on the basis of increasing processing capacity, finding sources and channels for their export, development of roadmaps for step-by-step solutions to problems such as their effective use can be included.



**Figure 3. Factors that ensure economic efficiency by improving the quality of products on the farm.**

The production process of livestock products consists of clear, significantly different, and therefore strongly interrelated stages, which requires the creation and coordination of a comprehensive system of factors for the effective development of this industry. This field is interrelated, which embodies the technical, technological, biological, organizational, economic, social, political and legal directions of scientific and technical development, serves to increase the efficiency and quality of production of livestock products at various stages of the production process. And will have a tendency to develop as a result of the influence of important factors and their rational use.

In general, in the case of farms, it is necessary to focus on solving the following important tasks related to the development of the livestock sector at the national level: the main basis for the sustainable development of livestock networks, including the cattle industry, is the creation of a feed base and its direct dependence on the structural enrichment of rations. Therefore, first of all, to increase the level of their satiety and digestion by placing feed crops in agricultural farms within the framework of a scientifically based crop rotation system in order to form internal feed resources, increasing their productivity, feeding cattle on scientific-based rations, improving the quality of feed and enriching them with nutrients, building industrialized new enterprises producing, it is necessary to pay attention to such as providing qualified technical personnel.

In the near future (2-3 years) in Uzbekistan and its regions, deepening and accelerating structural-organizational reforms covering the strategy of innovative development of the livestock sector, including the cattle industry, its stages, conceptual foundations and directions, financing of this process it is necessary to develop road maps aimed at identifying sources and institutions, including finding and attracting foreign investors who invest directly in this sector, introducing a system of additional benefits for them and improving the methods and mechanisms.

In order to effectively develop the livestock sector based on quality products, the main focus is on measures for the rational use of all important factors that embody and interconnect natural-climatic, bio-ecological,

technical-technological, organizational-economic, socio-legal directions focus is necessary.

Due to the increase in the number of heads of large-horned cattle, the proportion of breeding, high-yielding cattle brought from foreign countries increases from year to year, and this event is laying the groundwork for the development of the cattle industry due to an intensive factor, i.e. increased productivity, a stable increase in the production of quality meat and dairy products.

On the basis of private entrepreneurship in regions with large rural centers and developed livestock, attention should be paid to conducting auctions specializing in the sale of mixed feed, coarse cartilage and other types of feed, pedigree goods, to the organization and development of branches specializing in zooveterinary and breeding work, aviary and other types of services.

Due to the relatively low income of livestock farms in our country, it is advisable to organize the application of mechanisms to stimulate the state financing of researches in the areas of breeding, fodder farming, production of necessary techniques and technologies for the livestock network, as well as the rapid implementation into production.

Because of the potential of natural and economic resources for the development of livestock sectors in the Republic and the production of quality environmentally friendly livestock products, it is necessary to look at the export of livestock products as one of the most influential mechanisms in the future for state support and promotion.

Due to the potential of natural and economic resources for the development of livestock industries and the production of high-quality ecologically clean livestock products in Uzbekistan, it is necessary to consider state support and encouragement of the export of livestock products as one of the effective mechanisms in the future.

**Conclusion and Recommendations.** When the livestock products meet high standards, they become more competitive in local and international markets. The revenue generated from the sale of premium livestock products can be reinvested into the agricultural sector, fostering further growth and innovation.

Livestock products are an essential source of nutrition for the Uzbek population. The quality of these products directly impacts the health and well-being of consumers. High-quality dairy and meat products provide essential nutrients, contributing to the overall nutritional security of the population. By ensuring the quality of livestock products, Uzbekistan can safeguard the health of its citizens and reduce the prevalence of malnutrition and related health issues.

The quality of livestock products is closely linked to sustainable agricultural practices. By promoting high standards in animal husbandry and promoting sustainable farming techniques, Uzbekistan can mitigate environmental degradation and preserve its natural resources. Additionally, the adoption of environmentally friendly practices can enhance the reputation of Uzbekistan's livestock products in the global market, attracting environmentally conscious consumers and business partners.

Investing in the quality of livestock products drives innovation in the agricultural sector. Through advancements in breeding techniques, animal healthcare, and food processing technologies, Uzbekistan can elevate the quality of its livestock products to meet international standards. Embracing technological advancements not



only enhances the quality of products but also creates opportunities for skill development and knowledge transfer within the agricultural workforce.

In conclusion, the quality of livestock products in Uzbekistan is undeniably a key factor in the nation's development. By prioritizing the production of high-quality dairy, meat, and wool products, Uzbekistan can stimulate economic growth in sphere, ensure nutritional security, promote environmental sustainability, and drive technological innovation. As the country continues to focus on enhancing the quality of its livestock products, the benefits will resonate across various facets of Uzbek society, propelling the nation towards sustainable development and prosperity.

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