

Livestock as a Hidden Driver for Rural Development in Uzbekistan

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Introduction

This article reviews the current structure of the livestock sector in Uzbekistan and shows recent achievements in the sector. At first, recent production statistics are analyzed which followed by the role of dehkan (semi-subsistence farmers) and consumption of livestock goods over time in the country. In the last part of the paper, major issues in livestock sector which is hindering its development are identified and relevant policy recommendations are made.

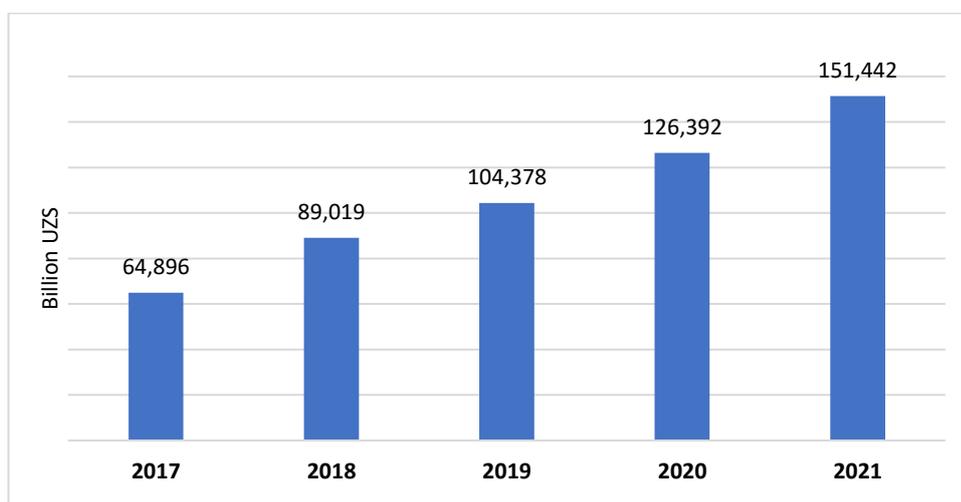
The livestock sector in Uzbekistan has a great untapped potential to develop in line with other competing sectors of the economy such as industries, IT and textile and provide employment and earning opportunities and food security for many especially in rural areas of the country. However, climate change, lack of collective action and knowledge are the main obstacles for the development of this sector.

The role of livestock in Uzbekistan

Agriculture in Uzbekistan plays a very important role in providing employment and food security. Since 30% of employment and 25% of GDP is created in agriculture making this sector most promising to pull other sectors of the economy¹ via provision of inputs and materials to the upstream sectors of the economy.

A half of agricultural gross output is generated in livestock in 2021. The total output in livestock reached to 151.4 trln UZS in 2021. Compared to 2017, gross output in livestock has increased by 2.3 times in 2021² from 64.8 trln UZS to 151.4 trln UZS in 2021.

Figure 1 Gross output in livestock during 2017-2021



Source: Stat.uz (2022)

¹ <https://ssrn.com/abstract=2924343>

² Note: The gross output in livestock is calculated at current prices therefore during comparison one should also keep in mind that there is inflation and increased prices for the commodities supplied in the sector.

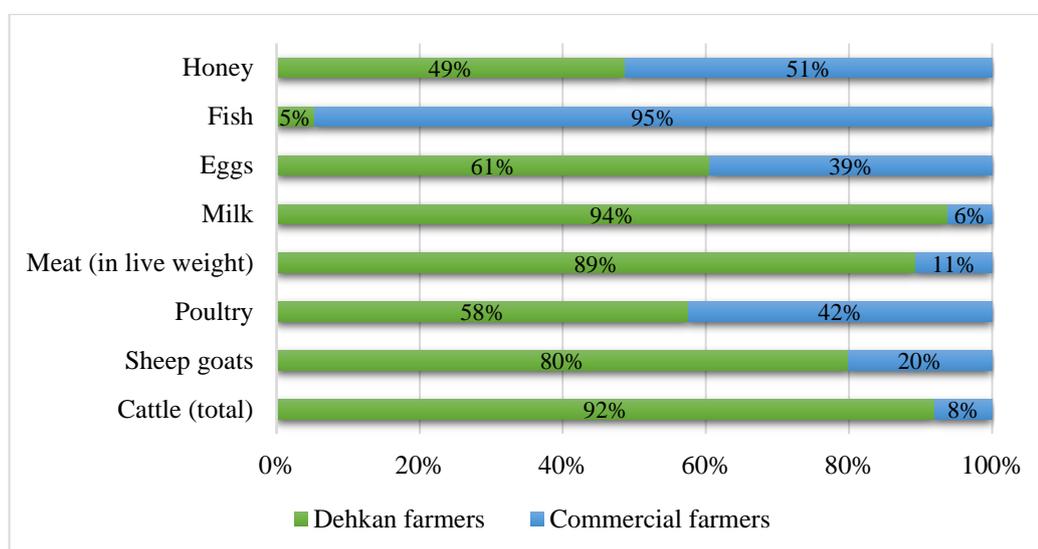
This year, almost 1.7 million people, including 458 thousand workers are officially employed in animal husbandry. In 2020, 12.6 thousand new jobs were created in the sector and the number of new job openings has increased by 48% and reached to 18.3 thousand in 2021³.

All categories of farms produced 2.6 million tons of meat in live weight (that is around 1.7 mln. tons of slaughtered weight), which is 4.5% more compared to 2020 or 16% more than in 2017. Total imported meat amounted to 95.2 thousand tons (181.4 million USD) in 2021, including 60.4 thousand tons of poultry meat (57.5 million dollars). Most of meat is imported from Belarus -46%, followed by Russia - 5% and Ukraine - 6% in 2021. Meat imports accounts for 5.7-6% of total meat consumption in the country.

The role of dehkans in livestock development

Animal husbandry in rural areas of the country plays a significant role as a means of a store of wealth, collateral or safety net in times of need. Households engaged in animal husbandry are called as semi - subsistence family farmers or so called “dehkans” who operates on a backyard with a very limited amount of land areas usually less than 0.3 hectares and only sells the surplus of consumption on the market.

Figure 2 The role of dehkan (household) farmers and commercial farmers on Livestock supply and herd ownership



Source: Stat.uz (2022)

Even though dehkans own 3-5 heads of animals⁴, 90.7% of livestock products such as meat, milk and other dairy products are supplied by dehkans while farmers and farm organizations providing the rest of which is a small proportion in total supply.

More than 90% of live cattle, 80% of goats and sheep and 58% of poultry birds are owned by the households engaged in livestock farming. Similarly, 89% meat, 94% of milk products and 61% of eggs are supplied by them. However, the shares of household farmers are small in fish farming, which offers a window of opportunity if such fishing or integrated fish farming with animal husbandry is developed.

Consumption of livestock goods

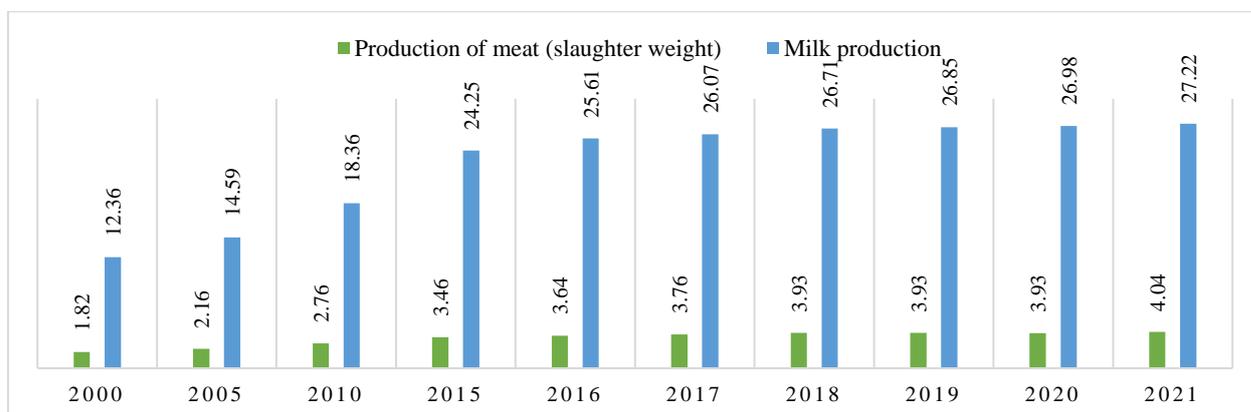
During the last two decades, per capita supply of meat and milk has more than doubled from 22 kg for meat in 2000 reached to 48 kg per year in 2021 and monthly milk production per capita has grown from 12 kg to 27 kg in 2021. Total meat supply has increased by 15% in 2021 compared to 2017 and milk supply has increased by 12% at the same time period. Nevertheless, during the last five years, there is no noticeable

³ Veterinary committee

⁴ <https://www.adb.org/sites/default/files/linked-documents/52110-001-ssa.pdf>

changes in per capita meat and milk supply which can be explained by the fact that the increase in the productivity of these products is outweighed by the growth of population.

Figure 3 Per capita meat and milk production per month in Uzbekistan during 2000-2021⁵.



Source: Stat.uz (2022)

The consumption norms for meat and other livestock products are determined by the Cabinet of the Ministers in Uzbekistan based on the recommendation of World Health Organization. According to the resolution of the Cabinet of Ministers' № 36 dated on 22.01.2018, the consumption norms in Uzbekistan for livestock commodities are determined (Table 1).

As of January 1, 2021, the level of provision of the population with livestock products on the basis of consumption standards is 105.5% in beef, 105% in milk, 112.8% in eggs and 71% in fish and honey by 45%. This indicates a room for further development for fish farming and honey production as there is already high demand on internal market.

Nevertheless, this does not mean a success for the sector as there is a growing demand from the side of processing dairy products which offers a great economic opportunity to create jobs and economic development. Since Uzbekistan has imported processed dairy products for more than 50 mln USD in 2021. Livestock goods are fast perishable goods in nature and requires careful handling. However, there are limited facilities in the regions to store and transport dairy products, especially in case of dehqan farmers.

Figure 4 Major livestock commodity production per capita in Uzbekistan per year.

	Consumption norms	2017	2018	2019	2020	2021* ⁶
Meat	46.1 (kg)	44,7	46,9	46,7	46,9	48,4
Milk	310.4 (liter)	313,9	320,5	322,0	324,4	328,7
Eggs	208 (piece)	205,6	228,4	233,2	230,8	234,5
Fish	7.1 (kg)	2,5	2,8	3,4	4,2	5,0
Honey	1.5 (kg)	0,4	0,4	0,4	0,4	0,6

Source: Stat.uz (2022)

Major problems in livestock sector

Highly dependent on the imports of animal feed and limited areas for fodder cultivation. During 1990s the number of areas distributed for animal fodder was around 1 mln hectare, during the past two decades,

⁵ These figures do not include imported meat and milk products

⁶ Initial statistical information

livestock sector has grown by 2 times but the land areas allocated for animal fodder have declined by three times. During the same time, population has increased by additional 15 million people.

Animal feed supply and import dependency. For livestock production only around 40% of animal feed is produced in the country while the rest is supplied by imports. In 2021, Uzbekistan imported feed for \$163 million, including \$3.8 million from Kazakhstan and \$26 million from Russia. Ukraine - \$ 3.5 million, Argentina - \$ 58 million, Latvia - \$ 25 million, Lithuania - \$ 22 million.

Pasture land degradation level in Uzbekistan. The total area of pastures in Uzbekistan is 23 million ha, or half of the total territory. During the past 15-20 years, there has been an extensive degradation of pasture land (especially in deserts), due to the unbalanced use of pasture in cattle breeding, lack of maintenance of pastures and other human activities. The dominant causes of land degradation are through processes of wind and water erosion. Strong wind, activity of ploughing of mountain slope lands, inappropriate irrigation and cattle grazing practices have resulted in the vast erosion of all soil types in Uzbekistan. Furthermore, there is no records for farmer engaged in animal husbandry, feeding, planting and cultivating fodder crops, and fodder storage, ration feeding, artificial insemination and breeding in Uzbekistan.

Low productivity of household farmers. Household dehkan farmers account for majority of livestock production, however, annual milk production per cow by dehkan farmers are 1.5% less compared to commercial large-scale farmers. Slaughtered animals weight almost 30% less than the animals kept by commercial farmers. The numbers of eggs produced by dehkans per poultry bird is also two times lower compared to poultry production by commercial farmers.

Climate change impacts on livestock development. Climate change impact on livestock production in Uzbekistan is not well studied which is expected to cause a negative effect due to heat stress and reduced productivity of animals. According to the climate profile of Uzbekistan, due to the global warming, temperatures are rising to a higher level (additional 4.5 C) in Central Asia than it is in other countries. Less water and rainfall are expected which will increase stress on the production of animal fodder and foster degradation of pasturelands if not managed at communal level.

Prospects for the development of the livestock sector in 2022-2026

According to the strategy of development of Uzbekistan 2022-2026, the land areas distributed for fodder cultivation will be gradually increased and within the given period it will reach to 722 thousand hectares which will increase from 340 thousand hectares today.

Within the framework of the project "Financing the sustainable development of the livestock sector" with the participation of the French Development Agency, an ongoing project with a loan of 100 million euros that will be used to import 6,000 head of cattle and 12,000 head of small cattle.

With the participation of the International Development Agency "Development of the livestock sector in the Republic of Uzbekistan under the Phase 2 project will attract \$ 50 million in loans and import 10,000 head of cattle and 20,000 head of small cattle. The project cost is 7.5 trillion. 1,880 livestock projects will be implemented due to the import of 115,000 head of cattle and 105,000 head of sheep and goats.

These measures will increase the supply of meat and dairy products as well as the numbers of livestock animals in the future. Furthermore, with the decree of the President of the Republic of Uzbekistan, No. PQ-120 dated 08.02.2022 the following targets for livestock sector is determined for within the period of 2022-2026:

- Set up a system of cooperation between livestock farms and peasant farms.
- Reduce the number of local cattle breeds with low productivity by increasing the breeds of cattle kept for meat and milk in households and organizing artificial insemination on a larger scale gradually;
- The volume of milk production will be increased from 11.5 million tons to 22 million tons, and from 328 to 560 kilograms per capita by 2026;

- Beef production (in live weight) will reach to 2,864,000 tons, sheep and goat meat to 650,000 tons.
- Increase the productivity of the main nutritious feed crops for livestock (alfalfa - from 10 tons to 20 tons and corn for silage - from 32 tons to 70 tons);
- The share of purebred high-yielding cattle in the total cattle herd will be increased from 9 percent to 33 percent;
- The share of improved domestic cattle in the general cattle herd will be increased from 54 percent to 90 percent;
- Degraded areas of pasture land in our republic will be reduced from 70 percent to 50 percent;

The future of the livestock in Uzbekistan

Small scale dehqan farmers accounts for majority of livestock animals and livestock production in the country. However, dehqan farmers have limited land areas for fodder cultivation and pastureland for an animal grazing which is not effectively managed at community level. Furthermore, limited knowledge in livestock farming, limited access to the markets, high costs for the animal feed along with the threat of climate making this sector to be unprofitable business today.

Even though consumption of livestock goods per capita is increasing and has been doubled during the last two decades in Uzbekistan and consumption norms is already met for most of the livestock products in Uzbekistan except for the fish and honey, in the future the demand for livestock goods will likely outweigh the supply. Therefore, there is also a growing demand for processed livestock goods and meat.

Recommendations

In order to increase productivity and profitability of livestock sector the following suggestions are provided based on the experience of foreign countries:

- Introduce nontraditional annual forage crops like sorghum, triticale, barley and oats; and perennial leguminous forage crops like alfalfa and aspartame in combination with maize as forages
- Identify forage species in summer and winter pastures; determine carrying capacity; introduce concept of rotational grazing and reseeding and restoration of pasturelands
- Train farmers and local NGO representatives on feeding, housing and health care management of small ruminants (sheep and goats); forage cultivation and preservations techniques.
- New methods of fodder production such as aquaponics and hydroponics should be developed and promoted nationwide
- Artificial insemination should be accelerated by the committee of veterinary with high quality of breeds which has a high meat and milk conversion rate per unit of feed provided and these breeds are resistant to various diseases and climate changes impacts.
- Involve dehqans at cooperative units – to increase market access for dehqans, reduce risks and increase economic returns cooperatives in agriculture serves a great way to increase farm level income and agro industrial complex.
- Develop comprehensive state supported agricultural insurance market to cover the loss of farmers during the times of drought and diseases and other types of disasters faced by the farmers

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