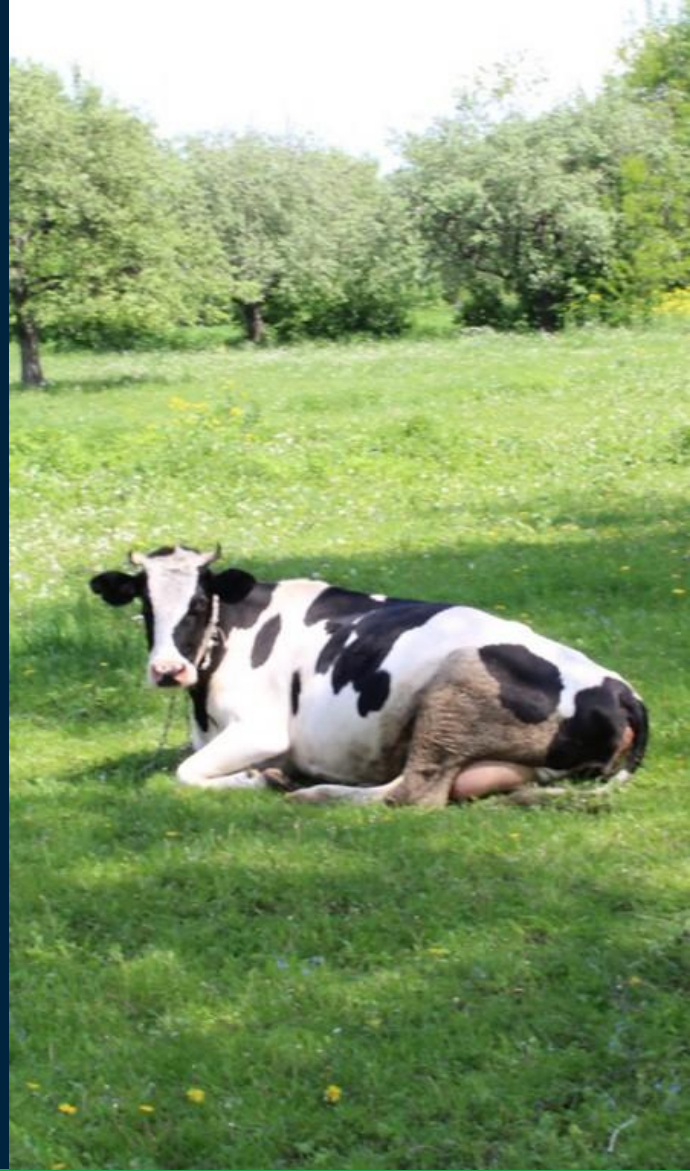




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Eurointegration 1.0: Sector overview

Current state and trends of cattle rearing, cattle meat and milk sectors in Ukraine

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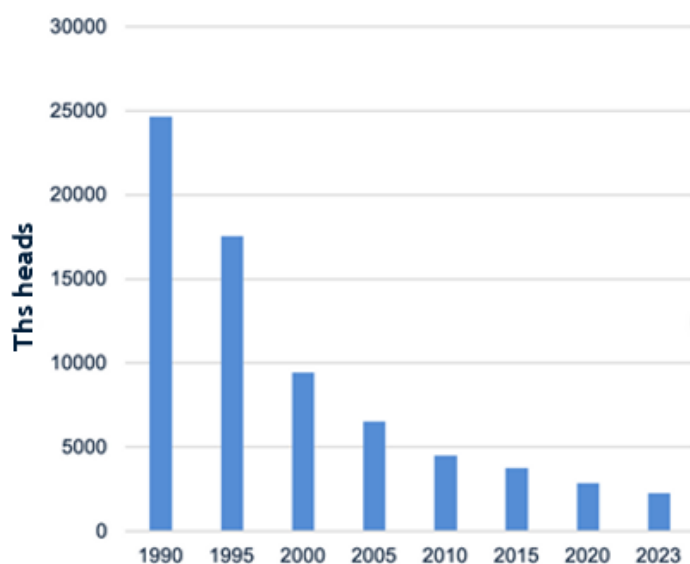
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1. Cattle population

Ukrainian agriculture has been developing since the independence gained in 1991. Collective farms were officially liquidated in 2000, and the property was divided among farm workers. The land was leased to newly created private agricultural companies, and the cattle kept either at the household or sold. As there was no support for cattle rearing, the latter began to decline. In 1990-2023 cattle population decreased almost ten times (Figure 1) [15, 9].

Fig 1. Dynamics of cattle population in Ukraine



Source: data from State statistics service of Ukraine

Economic factors (in the past)

The transition from planned to market economy after the collapse of the USSR led to the collapse of collective and state farms, financial difficulties and insufficient state support, which led to a decrease in the number of cattle [17, 21].

Demographic and social factors (in the past and today)

The migration of young people to cities and abroad, aging of rural population, has reduced the agricultural labor force at the households, making it more difficult to continue rearing cattle [25, 29].

Structural changes in the agricultural sector (in the past and today)

Larger agricultural producers have focused on cereals, smaller farmers switched to raising pigs and poultry. Cattle rearing, which demands greater investments and more complex supply chains, has not been favored which contributed to the decline [19, 23].

Infrastructure and technological challenges (in the past and today)

Many farms even today use outdated equipment and technologies, which reduces production efficiency and increases the cost of keeping cattle, making it difficult for them to compete [22, 30].

Socio-political factors (since 2014)

The military aggression of the Russian Federation against Ukraine and the occupation of part of the territories led to the loss of a large number of agricultural lands and cattle, which significantly affected their total number in the country [24, 27].

Case study “Planned Soviet inheritance”

According to Mr. Mykola (born in 1955), the head of the household, from 1991 to 1998 he worked as the head of the collective farm

Farming in the USSR was characterized by the constant communication and implementation of plans from above, which came down from the central authorities without taking into account local peculiarities. For example, each collective farm was given a plan for the number of cattle, which was determined in terms of the number of heads per 100 hectares of agricultural land (this figure varied for different climatic regions). Such plans encouraged the involvement of a large number of labor in livestock production and the use of large areas of farmland for fodder crops, hayfields and pastures, often to the detriment of other agricultural sectors. In order to increase efficiency and meet the established norms, collective farm heads often resorted to unofficially increasing their herds by 15-20%, hiding this from their superiors and creating the illusion of over-fulfilling the plan.

2. Categories of cattle producers

In Ukraine, cattle production is carried out by two main categories of producers: agricultural enterprises and rural households. Understanding the differences between these two groups is key to analyzing the current state and prospects of the livestock sector.

Agricultural enterprises

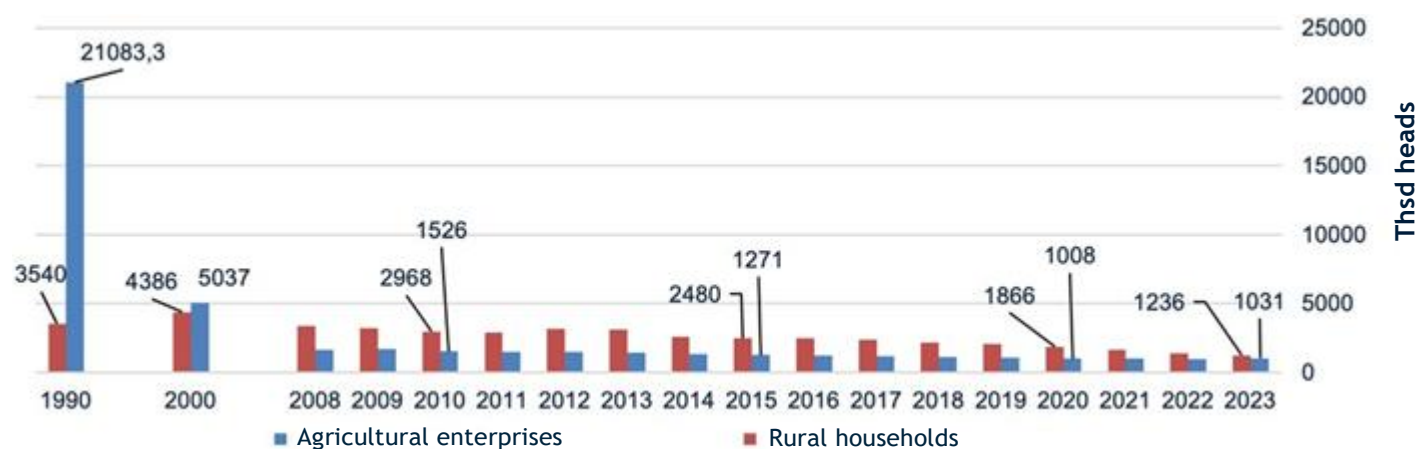
Agricultural enterprises include agricultural enterprises, farms, and agroholdings engaged in cattle rearing, production of meat and milk. According to the State Statistics Service of Ukraine, in 1990 the number of cattle at the enterprises amounted to 21083.3 thousand heads, but by 2023 this figure decreased to 1031.2 thousand heads, which indicates a reduction of 95.1% (Figure 2) [9, 11].

These enterprises are characterized by mechanization and the use of industrial technologies, such as automated milking systems, genetic selection, and efficient feed. Their organizational structure includes division into specialized units responsible for different aspects of production. Most of the produce of cattle rearing enterprises aim at the domestic market [26].

Rural households

Rural households are actual rural households that keep at least one head of cattle (in the past decade, indeed, most commonly only one or two heads). In 1990, there were 3,540.1 thousand heads of cattle at the households, and by 2023 this figure decreased to 1,236.4 thousand heads, a 65.1% decrease [9]. These farms use traditional rearing methods with minimal mechanization. Production is organized at the family level, and the products are used mainly for self-consumption or sold at local markets and/or to the neighbors. Historically, rural households' farming activities including cattle rearing has played a very significant role in ensuring national food security and local landscapes [6].

Fig. 2. Dynamics of cattle population by categories of producers



Source: own elaboration based on data from State statistics service of Ukraine

Case study “Adaptation and survival”

According to Ms. Halyna (born in 1953)
head of a household

Before the collapse of the USSR, we kept one, and very rarely two heads of cattle, usually if the family was planning to build a new house (the cost of building a house was equivalent of 20 200 kg bulls at that time). 90% of cattle feed was provided by the collective farm, which was often achieved through barter transactions, or, rarely, through salaries. After the collapse of the USSR and until 2010, salaries in collective farms stopped being paid, so they had to increase the number of cows to three to maintain the family budget; milk was sold at the market. We got 50% of the cattle's feed from the farm (also through theft, barter or salary), and the other 50% we grew on our own plots of land, which required more effort and resources.

3.Regionalization

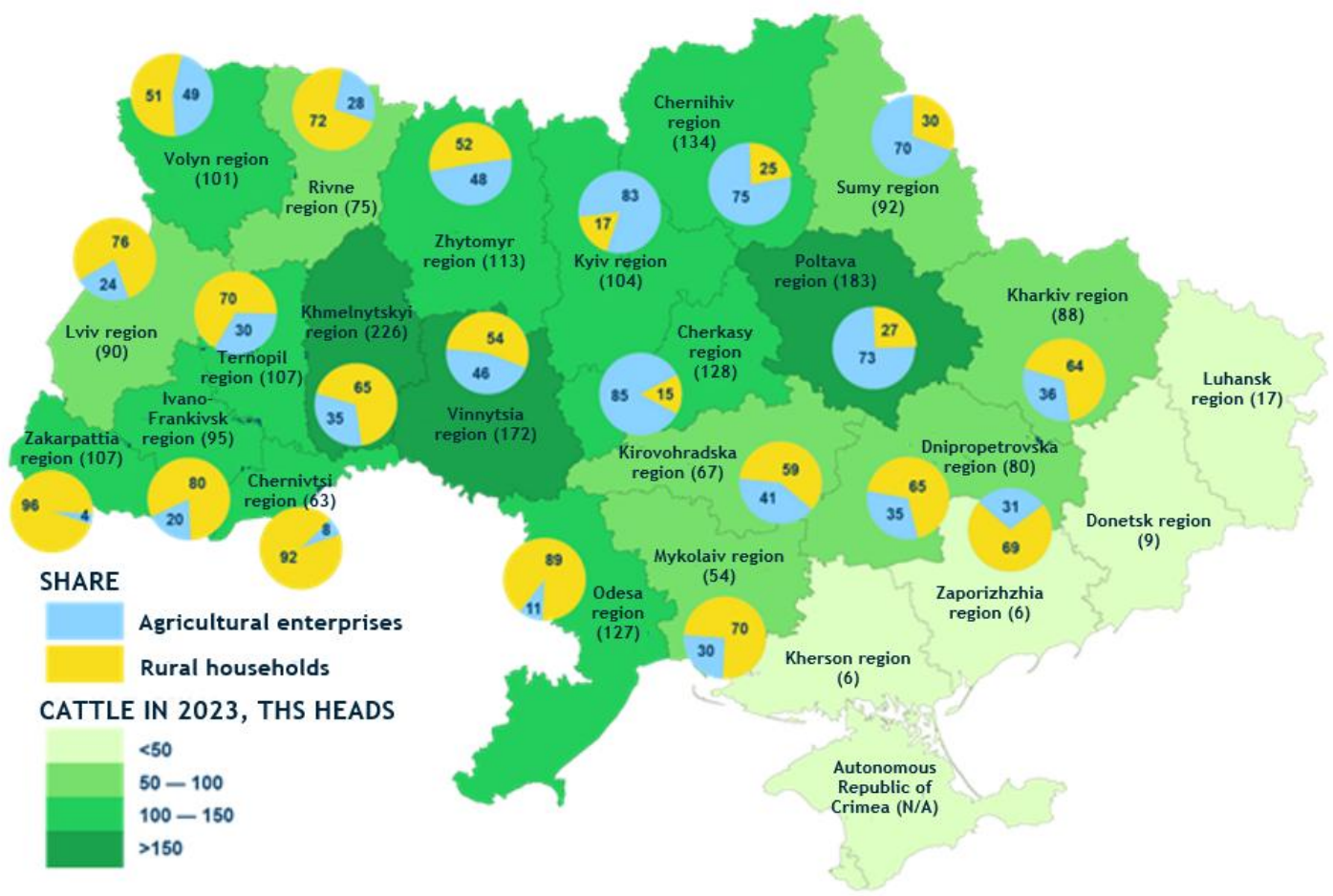
The majority of cattle producers in Ukraine are concentrated in the central and western regions. The regions with the largest number of cattle include Khmelnytskyi, Poltava, Vinnytsia, and Chernihiv regions (Figure 3) [12]. This indicates the presence of livestock infrastructure.

Agricultural enterprises are predominant in Kyiv (83% of the total number of cattle in the region), Cherkasy (85%), and Poltava (73%) regions.

These regions are characterized by mechanization and the use of more modern technologies, which allows them to maintain high production volumes. The share of agricultural enterprises has a significant impact on the economy of these regions, providing jobs and stable incomes [12].

Rural households dominate in Zakarpattia (96% of the total number of cattle in the region), Odesa (89%), and Ivano-Frankivsk (80%) [11].

Fig. 3. Geographical distributions of cattle by regions of Ukraine and categories of producers, 2023



Source: own elaboration based on data from State statistics service of Ukraine

Case study “Adaptation and survival” continued

According to Ms. Halyna (born in 1953)
head of a household

After 2010, everything changed dramatically. Many young people left the village in search of high-paid jobs in the city, or found jobs in the city while continuing to live in the village, stopped keeping cattle and reduced their gardens to 2-5 acres.

“Most of the young able-bodied people of our village started working at the large enterprise Kromberg & Schubert Ukraine, and the work there is in shifts, which made it impossible to care for cattle”

4. Production of cattle meat and milk

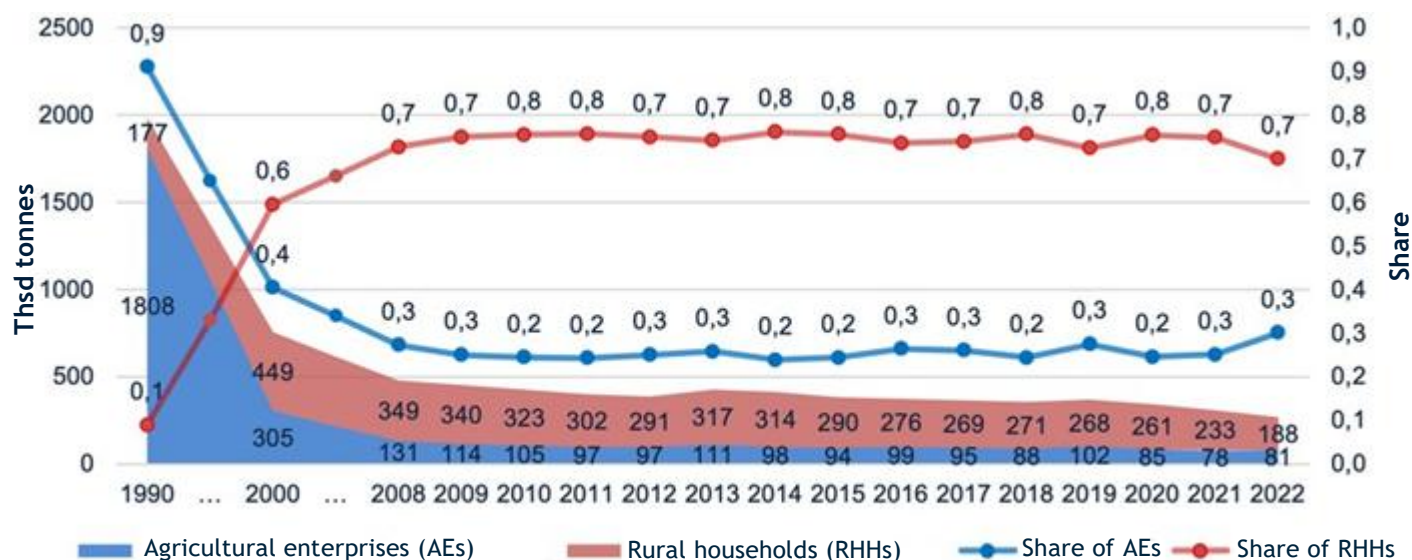
In 1990, agricultural enterprises produced 1808 thousand tonnes of cattle meat, while rural households produced 177 thousand tonnes of cattle meat (Figure 4). By 2010, when collective farms were privatized, the situation reversed: the share of agricultural enterprises in total production decreased from around 90% to 30%, while the share of rural households increased from around 10% to 70% [7, 11, 12]. Starting from 2010 the decline slowed down. In 2010-2022 agricultural enterprises produced from 105 to 88 thsd tonnes of cattle meat, and rural households from 323 to 188 thsd tonnes. Thus, the shares of producers and households in cattle meat production stabilized at around 30% and 70%, respectively.

In 1990, total milk production amounted to 24,508 thousand tonnes, of which 18,634 thousand tonnes

produced by agricultural enterprises and 5,874 thousand tonnes (24%) by rural households (Figure 5). By 2022, production volumes decreased to 7,768 thousand tonnes, with agricultural enterprises producing 2,644 thousand tonnes (34%) and rural households producing 5,124 thousand tonnes (66%). In 2010-2022 the shares of agricultural enterprises in total milk production increased from 20% to 34% and of rural households decreased from 80% to 66%. from 76% in 1990 to 34% in 2022, while the share of rural households increased from 24% to 66% [7].

The impact of COVID-19 pandemic has significantly exacerbated the already existing negative trends in the Ukrainian dairy industry. The pandemic has led to higher prices for dairy products and a significant reduction in production. In 2021, Ukraine finally became a net importer of dairy products.

Fig. 4. Dynamics and structure of cattle meat production by categories of producers



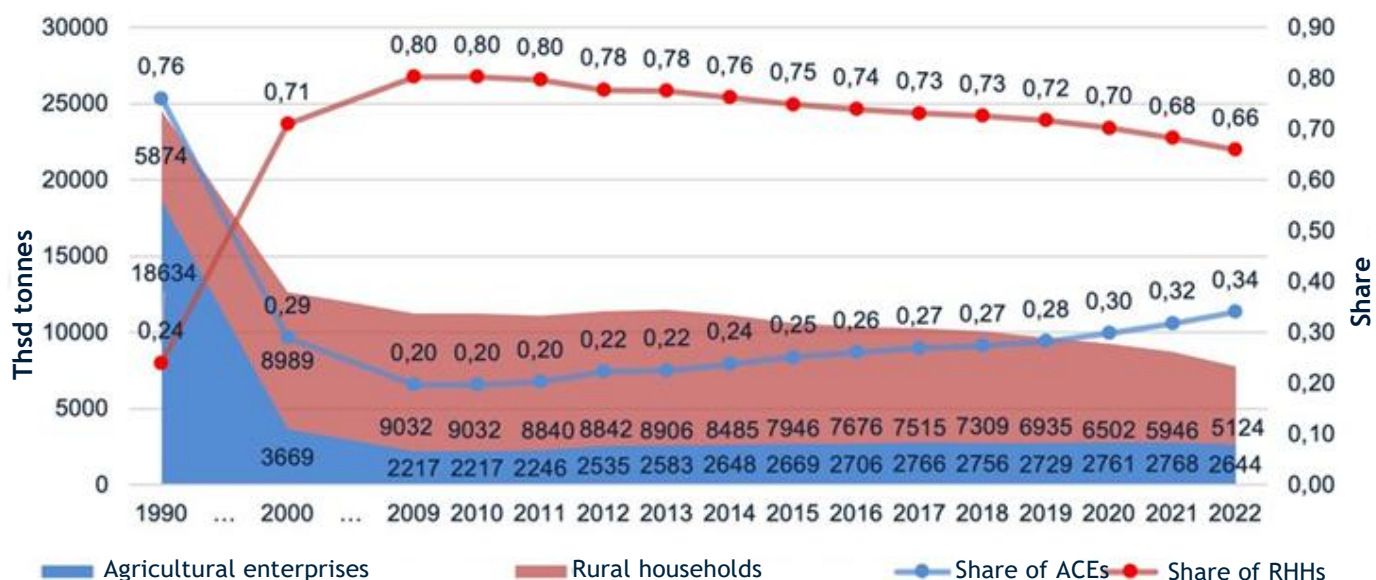
Source: own elaboration based on data from State statistics service of Ukraine

Case study “Challenges for reorganized enterprises”

According to Mr. Viktor (born in 1953), owner of a household farm, from 1996 to 2000 he worked as a director of an LLC (reorganized collective farm)

During the Soviet era and in the first years of Ukraine's independence, collective farms were financed by the state in the form of advances. After the reorganization, this form of support ceased to exist. As a result of the reform of the transition of collective farms into commercial enterprises, our farm was left completely without working capital. However, it was necessary to pay salaries, pay for electricity and cover current expenses. The only available source of financing was short-term bank loans secured by cattle. In 1996, only three of the 20 agricultural enterprises in the district that took out such loans were able to repay them on time; the rest were forced to cut their herds.

Fig. 5. Dynamics and structure of milk production by categories of producers



Source: own elaboration based on data from State statistics service of Ukraine

Case study “Intensification”

Enterprise “Sygnet, Andrushky village, Zhytomyr region

Sygnet has focused on increasing cow productivity without increasing the number of cows by applying modern technologies and effective management methods. Thanks to this strategy, the company has achieved significant and high-quality results. In 2012, having inherited a dairy farm with 1,594 cows and an average milk yield of 3.3 thousand liters per cow per year, the company reached 10.9 thousand liters per cow per year in 2023 with a dairy herd of 585 cows. At the same time, 6.4 million liters of milk were produced in 2023 compared to 5.1 million liters in 2021, which indicates a significant increase in production efficiency

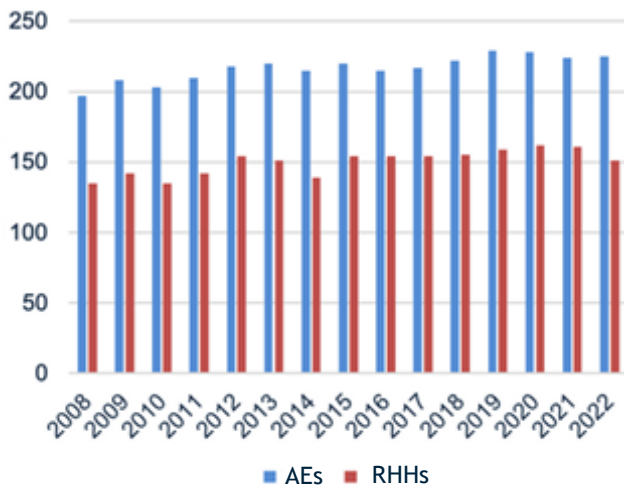
5. Productivity (rural households vs. agricultural enterprises)

Average slaughter weight

During 2008-2022, there was a steady increase in the average slaughter weight of animals in agricultural enterprises and rural households. In 2008, the average cattle weight in agricultural enterprises was 197 kg, and in rural households 135 kg. By 2022, these figures had increased by 28 kg (to 225 kg) and 16 kg (to 151 kg), respectively (Figure 6) [7].

Agricultural enterprises are characterized by higher productivity, technological equipment, and a larger scale of production, which allows them to achieve a higher average slaughter weight of animals. In contrast, rural households are not technologically equipped and are self-sufficient, which leads to lower productivity, including lower average slaughter weight [14].

Fig. 6. Average slaughter weight (i.e., cattle sold for slaughter), kg per cattle head and per year

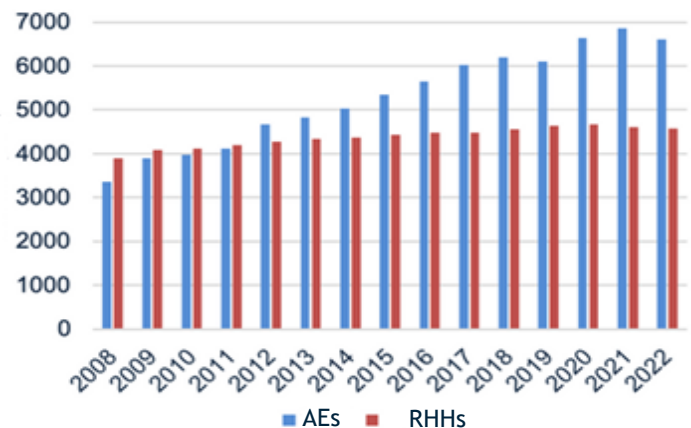


Source: own elaboration based on data from State statistics service of Ukraine

Average milk yield

In recent years, there has been a steady increase in the average annual milk yield at both agricultural enterprises and rural households. In 2008, the average annual milk yield at agricultural enterprises was 3,366 kg, and at private rural households 3,903 kg. By 2022, this figure had increased to 6,611 kg at enterprises and to 4,569 kg at households. Despite the initial lag, the enterprises have significantly improved their productivity indicators, outperforming the households (Figure 7) [7]. Agricultural enterprises have higher technological equipment, which allows them to achieve significantly higher productivity. Due to access to modern technologies, large-scale production, and innovative management approaches, the agricultural enterprises ensure rapid growth in average annual milk yield. In contrast, rural households are focused on self-sufficiency and have little incentive to increase productivity [1].

Fig. 7. Average milk yield, kg per cow and per year



Source: own elaboration based on data from State statistics service of Ukraine

Case study “Challenges for the households”

According to Mrs. Lyudmyla (born in 1972) head of a household

We've always kept a cow and a few pigs, but it's hard to compete with large farms now. We don't have the technology and feed available to large agricultural holdings, so our productivity is lower. For example, the average weight of animals at slaughter has always been much lower than at large enterprises, because we feed them with what we have and cannot afford expensive supplements or special feed. We milk manually, and the amount depends on the conditions and season. There used to be more hope, but now feed is getting more expensive. I observe how farmers use new milking machines and special feed, which increases their yields. We focus on self-sufficiency and sell only the surplus. For us, the main thing is stability, not quantity. We do everything by hand, on our own, and although not as productive, we do it using our own methods.

6. International trade

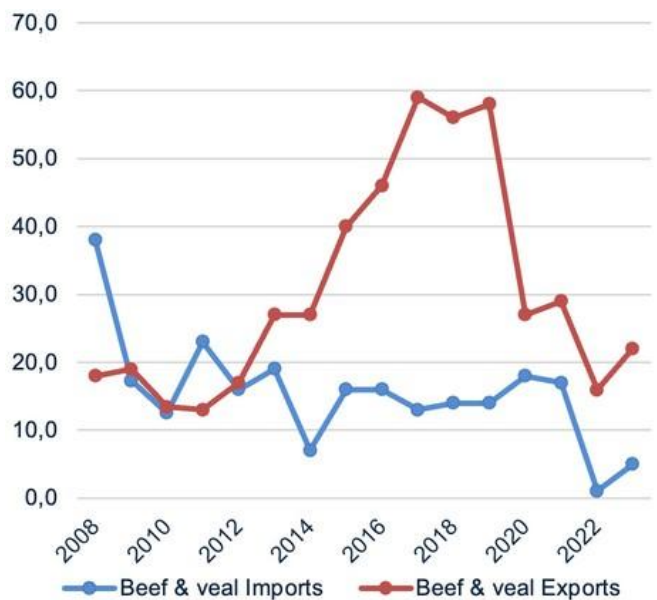
Cattle meat

Since 2008, Ukraine's cattle meat imports have been gradually declining, starting at 38 thousand tonnes and reaching only 5 thousand tonnes in 2023, with a particularly sharp drop to 1.1 thousand tonnes in 2022 (Figure 8). At the same time, cattle meat exports have been growing, peaking in 2017 at 59 thousand tonnes, before dropping to 22 thousand tonnes in 2023. These changes indicate a significant impact of both internal economic conditions and external factors affecting the supply and demand of cattle meat on the Ukrainian market. The main markets for Ukrainian cattle meat are the Middle East, North Africa and Asia. Imports of cattle meat come mainly from the EU and South America, meeting domestic demand in the face of declining domestic production [4].

Dairy

Since 2004, the Ukrainian dairy exports have shown significant fluctuations. Up until 2013, nearly half of exported dairy commodities were cheeses, i.e., HS0406. The main market for these cheese exports was Russia. Since the Russian invasion of 2014, exports to Russia were ceased, including exports of dairy. In terms of volume, the trade was able to recover by increasing exports of milk and cream (HS 0401), and of butter (HS 0405). In terms of value, however, as cheese constituted a significant value share, the recovery did not take place (Figures 9 and 10).

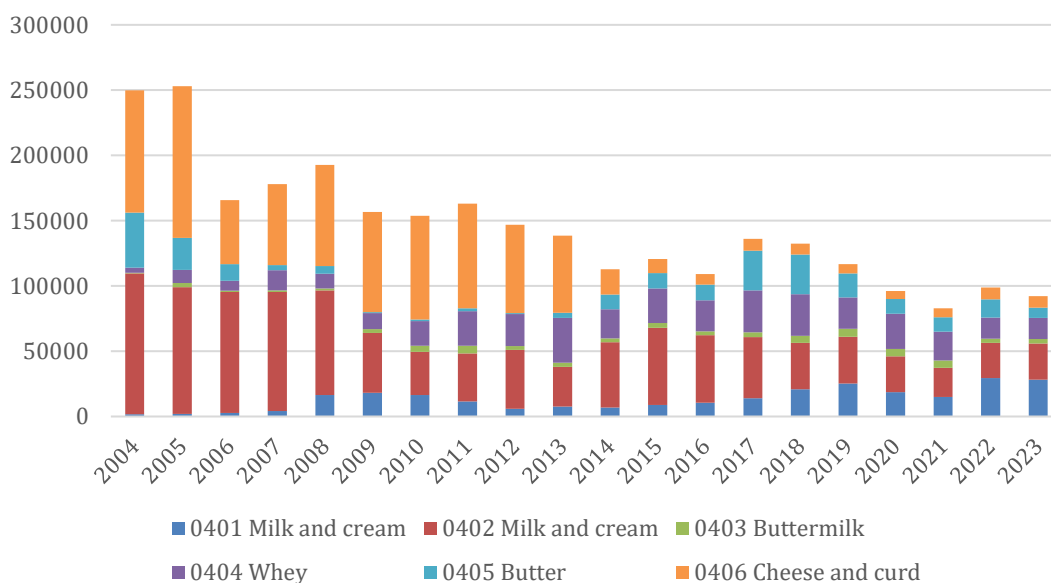
Fig. 8. Dynamics of exports and imports of cattle meat, thsd tonnes



Source: own elaboration based on data from State statistics service of Ukraine

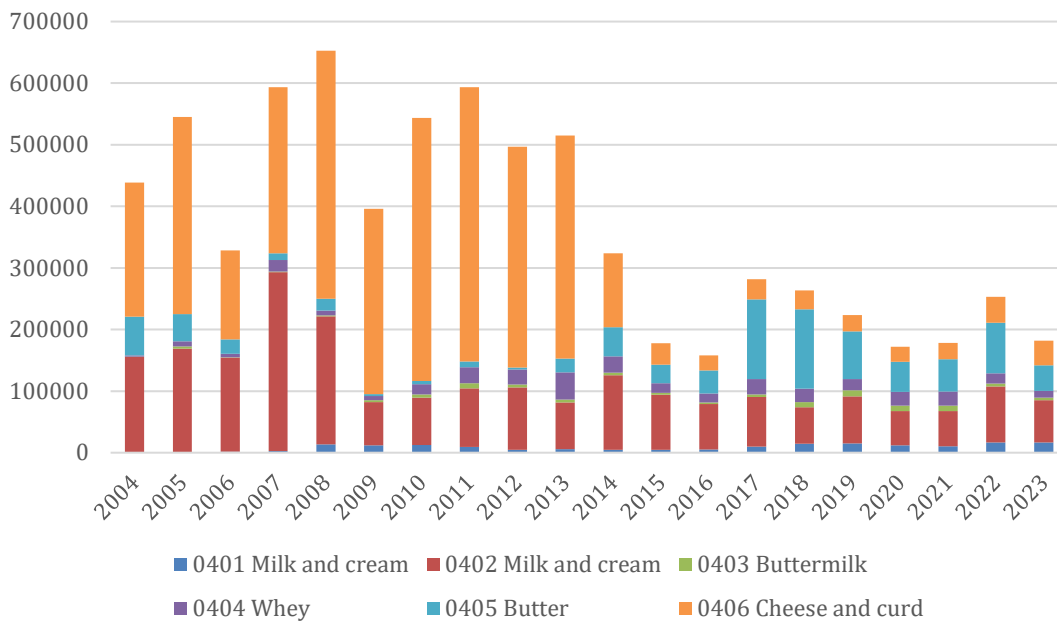
Exports of dairy commodities to the EU (Figure 11) constituted less than 5% in the total volume and value of dairy exports. This share increased to 24% in the years since the Russian invasion of 2022 [ITC, 4].

Fig. 9. Dynamics of exports of dairy products, tonnes



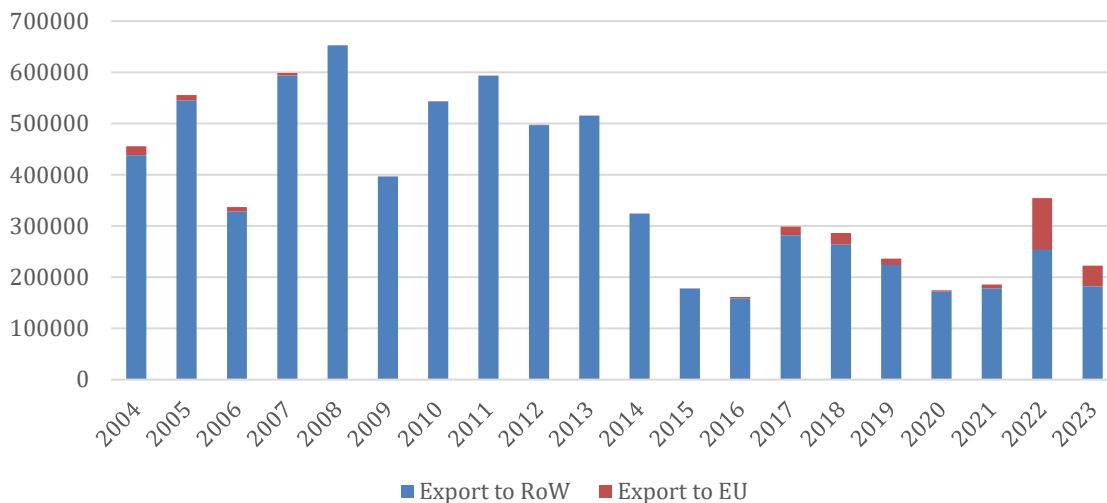
Source: own elaboration based on data from ITC

Fig. 10. Dynamics of exports of dairy products, USD (nominal)



Source: own elaboration based on data from ITC

Fig. 11. Dynamics of exports of dairy products to the EU and rest of the world, USD (nominal)



Source: own elaboration based on data from ITC

Case study “Economic disadvantage of keeping livestock for private rural households”

According to Ms. Olga (born in 1972), head of a household

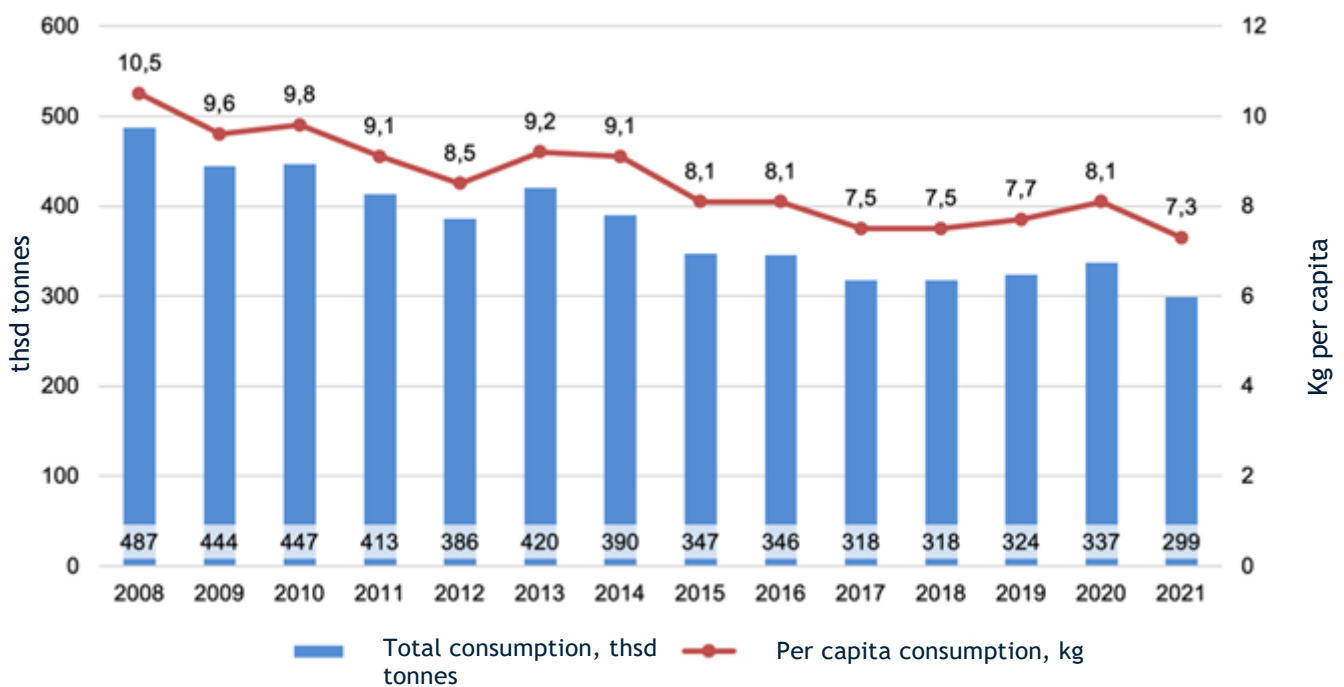
In 2010, we began to notice that it was no longer profitable to keep bulls and pigs for meat. Previously, before all the land was leased by one large agricultural enterprise, we could get feed from the rent for shares or even “get it somewhere”. Now it has become impossible and risky. In 2017, we finally stopped keeping pigs and bulls. Instead, we started buying meat in stores, in particular Polish lard and ham, which turned out to be not only cheap but also delicious. Today, there are Polish stores in the city that offer a lot of quality products at an affordable price, including dairy products that are as good as ours. This was a real solution for us.

7. Consumption of cattle meat

Consumption of cattle meat in Ukraine depends on two main socio-economic factors: consumption culture and financial capacity of the population. The overall trend in meat consumption from 2008 to 2021 shows a steady decline: it decreased from 10.5 kg per capita in 2008 to 7.3 kg in 2021. For comparison, currently cattle meat consumption per capita in the EU countries is much higher: 20.76 kg in France and 15.86 kg in Italy.

In the United States of America, the consumption is 37.87 kg [3]. The trend in Ukraine reflects the impact of economic challenges that have reduced the purchasing power of the population and led to a decrease in the consumption of more expensive meats, including cattle meat, in favor of more affordable alternatives (Fig. 12) [13].

Fig. 12. Dynamics of cattle meat consumption



Source: own elaboration based on data from State statistics service of Ukraine

Case study “Economic disadvantage of keeping livestock for a household”

According to Olena (born in 1962), head of a household

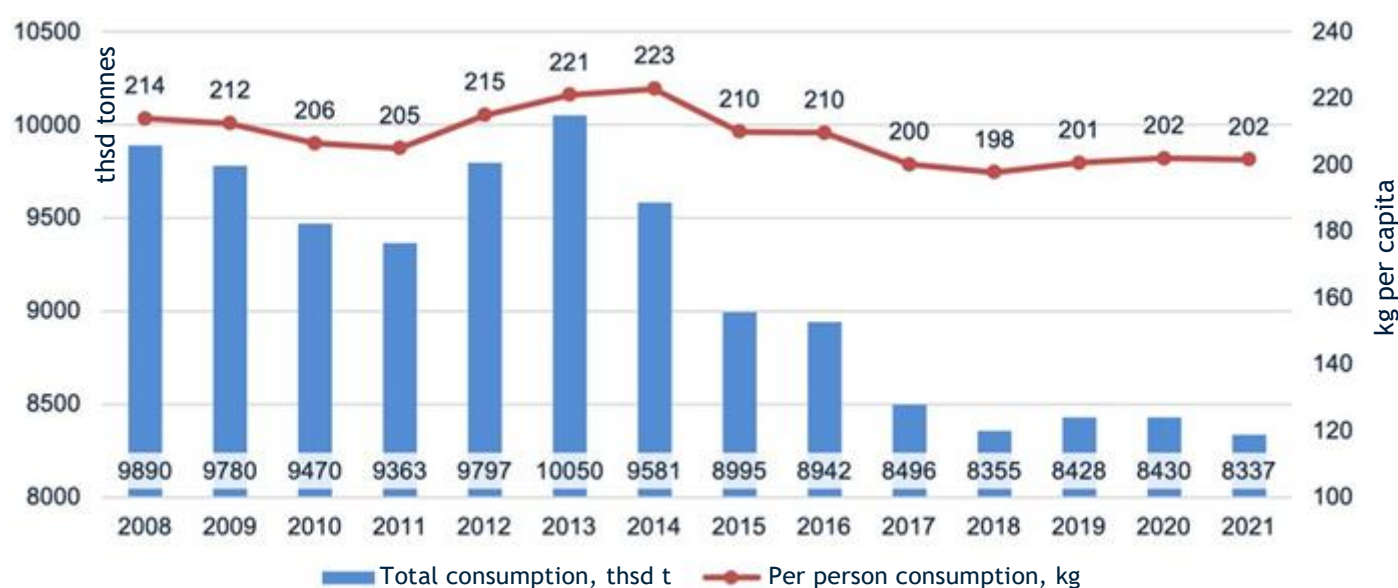
Our family has always been involved in agriculture, and cows have been an integral part of our lives. Until 2010, we used to leave newborn calves to grow up: if it was a heifer, we kept it, and if it was a bull, we kept it for slaughter, but not for more than one winter. It was unprofitable to keep the bull longer because of the constant shortage of feed. In 2010, the situation began to change. Feed was becoming more and more expensive. We started selling calves to dealers for meat immediately after birth. It was more profitable because it did not require additional resources for their maintenance. Only in rare cases did we keep a calf to replace an old cow. As for old or sick cows, we didn't have much choice. We usually sent them to a slaughterhouse.

8. Consumption of milk and dairy

In 2008-2021 total milk and dairy commodities consumption in milk equivalent in Ukraine declined from 9,890.4 thousand tonnes to 8,337.3 thousand tonnes [13]. Consumption per capita decreased from 213.8 kg to 201.5 kg (Figure 13). In 2013 there was a temporary increase in total consumption of up to 10,050 thousand tonnes. This was related to decreased consumer prices which in turn were affected by higher quantities produced. The latter were driven by lower feed prices. The lower feed prices reflected the decrease in the world market prices for feed wheat, corn and barley.

There are significant differences in consumption between urban and rural residents: rural households with lower incomes prefer cheaper fresh dairy products, while urban residents are more likely to buy more expensive products such as cheese and butter. The war in Ukraine in 2022 further exacerbated the situation, causing the destruction of dairy farms, supply chains, and reduced consumption due to massive population displacement and lower incomes [31].

Fig. 13. Dynamics of consumption of milk and dairy products in milk equivalent



Source: own elaboration based on data from State statistics service of Ukraine

Case study “Dairy products from a household”

According to Ms. Anna (born in 1962), head of a household

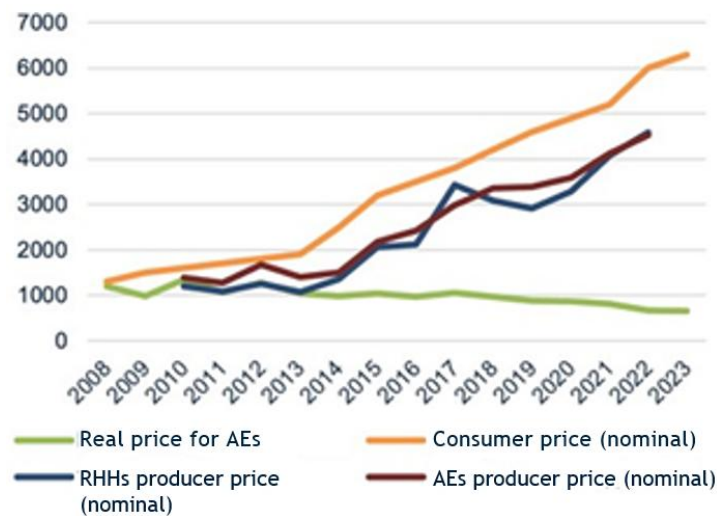
In our family, almost all the milk from two cows is sold at the market. Mostly older people deliver milk to the dairy plant, as it is difficult for them to go to the market or process the products themselves. Since 2000, we have come to the conclusion that selling raw milk is unprofitable, so we produce cottage cheese (sour milk cheese), hard cheese, sour cream and whey. My husband does the fodder preparation and feeding of the cows, while I do the milking three times a day and take the products to the market twice a week to sell them. This provides us with a better income - almost two and a half times more than if we delivered milk to the processor. At the market, customers appreciate the home-made quality, and for us it is an additional income that supports our family. I always follow hygienic conditions during processing, although I have no certificates or special knowledge of quality standards. During the COVID-19 pandemic, our regular customers from the city came directly to us and bought products right in the yard. For now, my husband and I have decided to keep two cows only until the war is over.

9. Prices

Cattle meat

An analysis of cattle meat prices in Ukraine from 2010 to 2023 shows a significant increase in nominal value. The nominal price at slaughter houses increased from 1,340 UAH per 100 kg in 2010 to 5,269 UAH in 2023. However, the real price, when inflation is accounted for, shows a decline: from UAH 1,340 in 2010 to about UAH 651 per 100 kg in 2023 [10]. Consumer price increased almost four times during this period, from UAH 1,600 in 2010 to UAH 6,300 in 2023 (Figure 14) [32]. An analysis of the difference between prices of rural households and agricultural enterprises shows that in 2010, prices at rural households were lower than prices at agricultural enterprises. The dynamic became interchanging in 2016, when price at rural households became lower than at the enterprises for the first time.

Fig. 14. Dynamics of cattle meat prices, UAH/100 kg

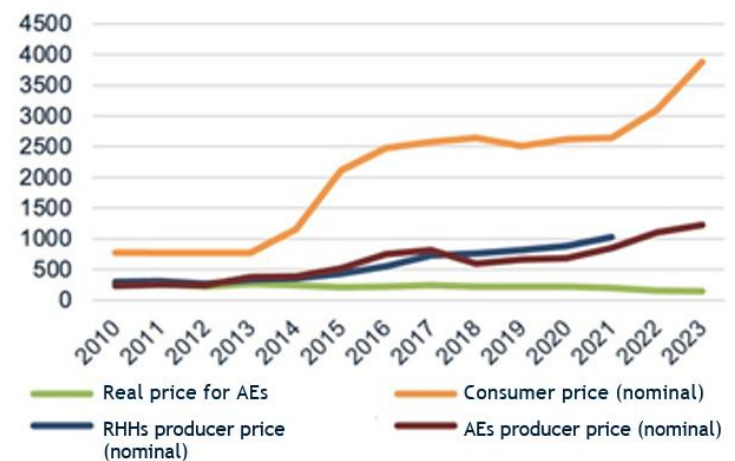


Source: own elaboration based on data from State statistics service of Ukraine

Milk

The analysis of milk producer prices in Ukraine from 2010 to 2023 shows several important trends. The nominal producer price increased from UAH 293.75 per 100 kg in 2010 to UAH 1,223 in 2023, indicating a significant increase in market prices (Figure 15). However, the real price (adjusted for inflation) decreased from UAH 293.75 in 2010 to about UAH 151.09 in 2023 per 100 kg [10]. The nominal consumer price of milk also increased from UAH 770.18 in 2010 to UAH 3,873.21 in 2023 per 100 kg [33]. It is important to note that prices for agricultural enterprises and rural households show different trends. For rural households, milk prices have been higher throughout the period, especially in recent years.

Fig. 15. Dynamics of milk (raw milk at producers, drinking milk at consumers) prices, UAH/100 kg



Source: own elaboration based on data from State statistics service of Ukraine

Case study “Functioning without efficiency”

According to Ms. Liliya (born in 1976), head of a household

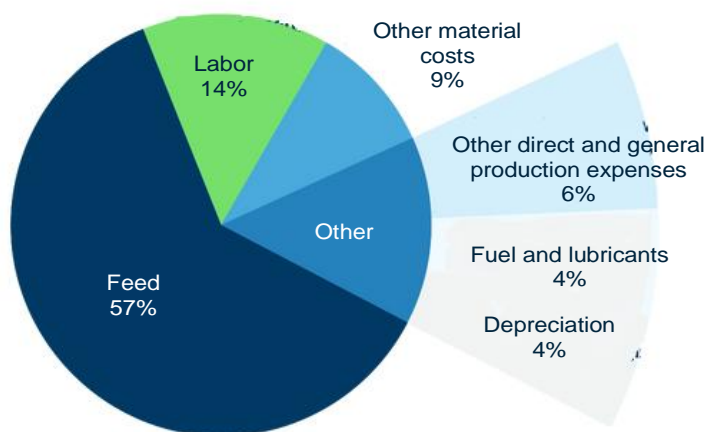
In recent years, meat and milk prices have risen significantly, and this is felt by everyone who is trying to make ends meet. Earlier, back in 2010, the price of meat was relatively affordable, but now it is a luxury. In our village, most people try to sell meat directly on the market, as this way they can get more money than by selling it to dealers or to a factory. However, even in this case, the real income is much less than it used to be, as prices for other goods and services are growing even faster. We don't sell milk either, as there is little to no profit in it. My husband gets up early to feed the cow, and I milk it and prepare dairy products. Prices for feed, electricity, and other costs have risen so much that it simply doesn't make sense to sell milk for the little money offered by large enterprises. So we make cottage cheese and sour cream and sell it all at the market. It is hard work. The money we earn does not always cover our expenses.

10. Production costs

Cattle meat

The production of cattle meat in Ukraine is a complex and capital-intensive process that depends on many variable factors. The main cost components are feed (57% of total costs), direct labor costs (14%), other material costs (9%), as well as fuel and lubricants, depreciation, third-party services and social contributions [12] (Figure 16). In the context of rising feed prices, enterprises are forced to optimize technological processes, introduce innovative methods of feeding and livestock management. In addition, factors such as access to finance, the technological level of the farm and the qualifications of staff have a significant impact on production efficiency and cost structure. As a result of the war, logistical challenges and rising energy prices have put additional pressure on the business, resulting in higher costs and reduced production volumes.

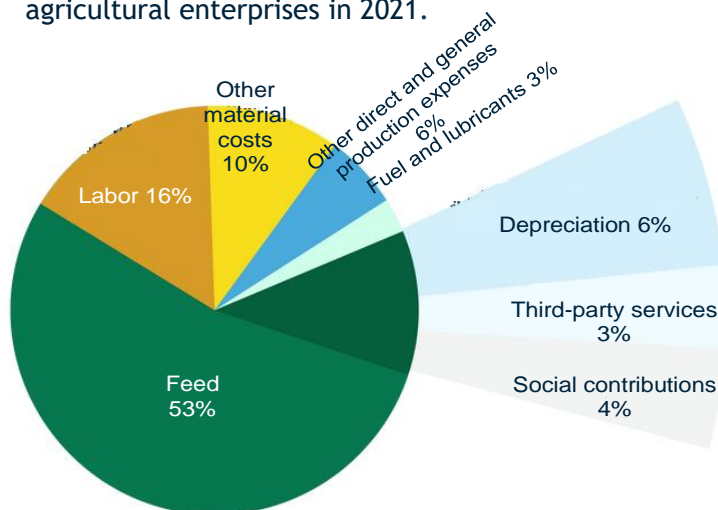
Fig. 16. Structure of costs of cattle meat production by agricultural enterprises in 2021.



Milk

Milk production costs of Ukrainian agricultural enterprises also have a multi-component structure. The main items are feed (53% of total costs), direct labor costs (16%), other material costs (10%), as well as depreciation, fuel and lubricants, third-party services, and social contributions [12] (Figure 17). High dependence on imported ingredients for feed and veterinary drugs increases the financial risks of the industry. In the context of rising energy prices and reduced access to the domestic market due to the war, companies are facing rising costs and the need to increase cow productivity through genetic selection, improved housing conditions, and the introduction of modern milking technologies. The ability of farms to adapt to new market conditions and attract investments to reduce costs remains a decisive factor.

Fig. 17. Structure of costs of milk production by agricultural enterprises in 2021.



Source: own elaboration based on data from State statistics service of Ukraine

Case study “Costs of keeping 1 cow”

According to Mr. Viktor (born in 1953), the head of the household

In 2023, Viktor decided to calculate all the costs per cow in detail to assess the profitability of the farm in the current environment. Some of the costs were for roughage: fertilizing grass with mineral fertilizers, mowing, baling, and transportation, which cost him UAH 8,000. He spent another UAH 12,000 on concentrated feed - soybeans, corn, barley - and the cost of the mill. Veterinary services and medicines cost 4,000 UAH. The weekly expenses for the market where Viktor's wife sold her produce (renting a place, tests, fuel for delivery) amounted to UAH 2,000. The shepherd's salary was UAH

5,500 per year. In total, the costs per cow amounted to UAH 31,500. As for income, Viktor and his wife processed all the milk, selling it as cottage cheese, hard cheese, sour cream, and whey, which allowed them to earn an average of UAH 30 per liter. In a year, he received about 4,600 liters of milk from one cow, where 1,000 liters went to his family's consumption. The income per cow was estimated at UAH 108,000. In 2023, Viktor also sold a dairy calf for UAH 5,000. The revenue (net income) amounted to UAH 81,500, which in terms of months and two people amounted to about UAH 3,400 per person per month. It is important to note that these calculations do not take into account the personal labor that Viktor and his wife put into keeping the cow every day. Due to the difficult economic conditions and the constant increase in costs, Viktor decided to sell the cow in 2024, as he estimated that it was no longer profitable to continue keeping it.

11. Public support

The Soviet period (until 1991)

During the Soviet era, Ukrainian agriculture functioned on the basis of a planned economy. Collective and state farms received state funding, machinery, and inputs. The state set prices for agricultural products and controlled the distribution of resources.

The period of independence (1991-2000)

After gaining independence, Ukraine faced the need to reform its agricultural sector. The land and property of former collective farms were privatized, which led to the creation of new forms of management - agricultural enterprises and farms. However, state support during this period was limited due to economic difficulties and lacked clear strategy.

Transformation of support concepts in the 2000s

During this period, the state began to implement policies aimed at supporting the agricultural sector through market mechanisms. Concessional lending programs, subsidies for the purchase of machinery and equipment, and tax breaks for farmers were introduced.

After 2014

The signing of the Deep and Comprehensive Association Agreement with the European Union was the impetus for the harmonization of Ukraine's agricultural policy with European standards. State support began to focus on competitiveness, innovation, and sustainable development of rural areas [28].

Support for agricultural enterprises is provided through financial and tax assistance. Financial support includes subsidies and grants for the production of certain types of agricultural products, as well as concessional lending for the purchase of machinery and equipment. An important element is tax privileges: agricultural producers can apply for the fourth group of the simplified taxation system, which provides for the payment of a single tax depending on the area of agricultural land and its normative monetary value. This regime exempts from

income tax, VAT and some other taxes, which significantly reduces the tax burden and stimulates the development of agricultural business. Additionally, investment support is provided through compensation of interest rates on loans and grant programs for the introduction of innovative technologies.

Export support includes the development of infrastructure for storage and transportation of products and promotion to international markets through participation in exhibitions and fairs.

Rural households' support is aimed at developing them into small and medium-sized farms. In recent years, there has been a tendency to transform rural households into family farms, which aims to increase their efficiency and improve access to markets. This includes the formation of officially registered enterprises with a clear legal status and the possibility of receiving public support. Family farm development programs included grants, subsidies for machinery and equipment, and support for cooperatives to facilitate market entry

Current support (as of 25.09.2024)

In 2024, the Ministry of Agrarian Policy and Food of Ukraine restored budget subsidies for farmers who kept 3 to 100 cows. The payments are UAH 7 thousand per head. The State Agrarian Register has received 14815 applications from farmers from different regions of Ukraine for budgetary support for livestock of cows totaling UAH 607.8 million. Most applications were received from agricultural producers registered in Khmelnytsky, Vinnytsia and Ivano-Frankivsk regions. On average, the support per farm amounts to UAH 42 thousand. The average number of cows per farm is 6 cows [18].

Case study "Catastrophic reduction"

According to the Cherniakhivska village territorial community, Zhytomyr region

According to the Cherniakhivska settlement territorial community, Zhytomyr region, there has been a significant decrease in the number of cattle in recent years.

The number of cows in rural households decreased from 1314 in 2020 to 847 in 2023, with the largest decrease occurring in 2020-2021 (minus 199 cows). As of 2023, only 71 cows are kept in rural households with more than three cows, which theoretically allows these households to participate in the state support program. However, as of 25.08.2024, none of these households are participants in the program.

12. Russia's invasion of 2022

Agricultural enterprises

Loss of production capacity. The hostilities have destroyed infrastructure, including farms, warehouses, and factories, which limits the ability of businesses to maintain current production levels. For example, damage to facilities in the frontline areas is forcing businesses to reduce the number of animals due to a lack of feed and inability to provide care (based on expert's opinions).

Problems with feed supply. The war has disrupted logistics chains, making it difficult to deliver feed and veterinary medicines. This is especially noticeable for businesses in eastern and southern Ukraine, where the fighting is most intense. Lack of regular supplies leads to deteriorating animal welfare conditions and reduced productivity (based on expert's opinions).

Labor resources. Labor mobilization and migration have led to a shortage of skilled workers in the industry. This negatively affects the organization of production processes and the overall efficiency of enterprises (based on expert's opinions).

Decline in exports. Blocked ports and complicated logistics routes limit the export of livestock products, which negatively affects the income of enterprises. In some cases, companies are forced to reduce production volumes due to the inability to sell their products on foreign markets (based on expert's opinions).

Rural households

Loss of access to markets. Some rural households in the east and south of Ukraine have been deprived of access to local markets due to the ongoing hostilities. This resulted in a decrease in sales and a forced reduction in livestock.

Problems with access to feed and water. Feed prices have increased, which has become a critical factor for small farms. In many cases, farmers have been forced to reduce or eliminate livestock due to lack of feed and water.

Increased costs. Increased prices for fuel and veterinary medicines have increased the costs for rural households as well, making it even more difficult to keep livestock during the war (based on expert's opinions).

Security and migration. According to the World Bank, up to 10% of rural households were forced to move or evacuate, resulting in the loss of livestock and livelihoods. In the area of active hostilities, about 40% of farmers lost their farms either partially or completely [5].

Agricultural War Damages, Losses, and Needs Review [5]

Ukraine: Impact of the war on agricultural enterprises - Findings of a nationwide survey of agricultural enterprises with land [2]

According to the KSE report, the war has had a significant impact on Ukrainian agriculture, especially on livestock enterprises. About 17% of such enterprises have suffered losses, including livestock losses and farm destruction. The frontline regions suffered the most from the destruction: 94.4% of livestock losses occurred in these regions. The forced slaughter of animals was also widespread, especially in the east of the country. In addition, the storage of products, raw materials and equipment also suffered significant damage, with losses estimated at tens of millions of dollars. The total value of assets damaged nationally exceeds \$16 million, with the most damage recorded in the frontline and central regions. This has limited the ability to restore production processes, reduced production volumes and complicated exports.

Approximately 17 percent of livestock enterprises reported damage to their assets, of which 7 percent reported the death or loss of animals, 10 percent reported forced slaughter, and 2 percent reported both types of losses. The total value of destroyed (dead or lost) animals is estimated at USD 128.5 million, of which 94.4 percent is in the frontline areas. Involuntary slaughter of animals is most common in the frontline regions (62 percent), followed by the western regions (25 percent) and central regions (13 percent) with a total value of USD 77 million. About 2.2 percent of businesses reported damage to assets such as stored products, raw materials, equipment and infrastructure, with equal shares between these categories. The average cost of losses per directly affected enterprise is USD 43,909, or USD 4,891 per livestock producer. The total value of losses at the national level is estimated at USD 16.7 million. Most of the damaged assets are concentrated in the frontline regions (67 percent), followed by the central regions (33 percent).

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