

Food safety and the dairy industry of Ukraine

With the beginning of the full-scale war of the Russian Federation against Ukraine, the whole world began to actively talk about food security. The countries of the African continent were worrying about being dependent on the supply of Ukrainian grain. European farmers, who used to rely on Ukrainian fodder for their livestock, were also alarmed. The "food security" combination of words has also become more often used in Ukraine. Mined fields, taking away agricultural products from temporarily occupied territories, destroyed farms and loss of livestock, the danger of carrying out agri works on the already liberated lands, and a lot of other problems - all this make us return again and again to the topic of the country's food security, which is evaluated by a complex indicator, the so-called global food security index.

The Global Food Security Index (GFSI) takes into account:

- availability of food
- affordability of food
- quality and safety
- sustainability and adaptation of food production systems

These indicators are calculated by Economist Impact with the support of Corteva Agriscience for 113 countries around the world. The index is a dynamic quantitative and qualitative comparative model built on 68 unique indicators that measure the components of food security in both developing and developed countries. In 2012, when this index began to be calculated, an expert panel was created. It included representatives of different countries and different industries, which in one way or another are related to the production of food products. This panel is periodically updated, and the model itself is being constantly improved.

In April - July 2022, the Economist Impact conducted a study of the state of food security in different countries including Ukraine, and presented the data obtained in their report. According to this study, Ukraine ranks 71st in the world and 26th out of the 26 European countries. On the world map, according to the level of food security, Ukraine looks like this:

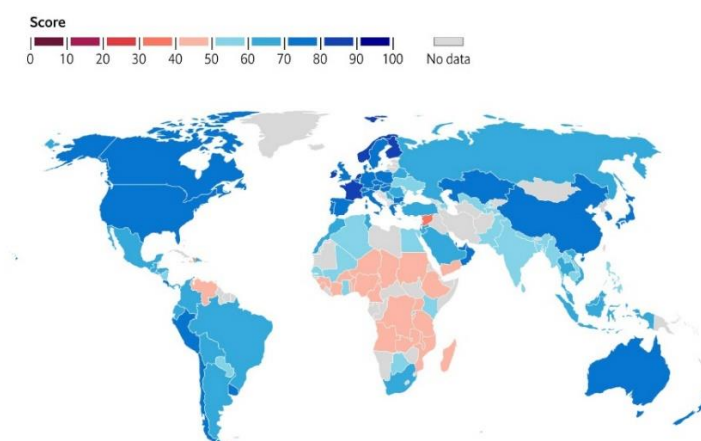


Fig. 1. The level of food security worldwide according to the GFSI
Source: *Global Food Security Index 2022*

Here are the 4 components of the GFSI index for Europe and Ukraine (Fig. 2):

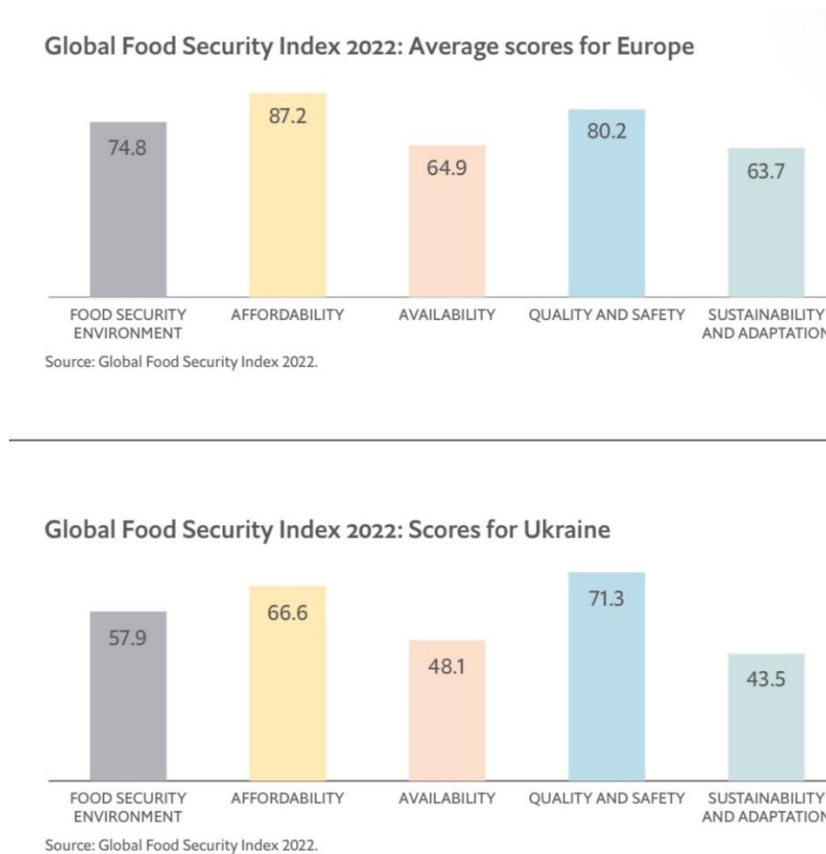


Fig. 2. Global Index of Food Security: Europe and Ukraine

In Ukraine, of all the GFSI components, the "Quality and safety" component looks the best: 71.3 (this indicator is quite high thanks to the parameters "Protein quality" and "Food safety"). The country ranks the worst on the "Sustainability and adaptation" scored 43.5. Experts of the GFSI panel believe that Ukraine is underperforming in the development of policies for the protection and adaptation of its natural resources, in particular agricultural water sources. "There has been an improvement in political commitment to adaptation over the past decade, but much more can be done. Moreover, despite an adequate supply of food in the country, its availability rate in Ukraine is low due to weak supply chain infrastructure, armed conflict, corruption, and political instability, as well as the lack of a food security agency or strategy." This is the conclusion of the Economist Impact experts.

Ukraine

The diagram below shows country performance in 2022 (latest available data). Scores are normalized 0-100, where 100=best conditions. Δ = change in score, 2022 compared with 2012. \uparrow = Score improved \downarrow = Score deteriorated \leftrightarrow = no change in score



Fig. 3. Components of food safety

According to the latest data (2022), the food security index of Ukraine is 57.9, +2.1 compared to 2012. The first place with the highest GFSI, 83.7 out of 100, is held by Finland, and the second place belongs to Ireland, 81.7.

The ongoing war in Ukraine is making a sharply negative impact on food production and in the most affected regions it puts food security at risk. Hostilities lead to the reduction of livestock, the destruction of farms and production buildings, disruption of logistics routes. They create political barriers in access to food in the world and lead to an increase in food prices.

Dairy production is an important component of food security. The situation in the dairy industry affects not only the supply of the country's population with dairy products but also the country's food security in general.

Vadym Chagarovsky, Head of the Union of Dairy Enterprises of Ukraine, shared his thoughts on the link between the current state of the dairy industry in the country and the components of food security - the availability of products, their affordability, quality and safety, and the sustainability and adaptation of food production system:

*In your opinion, does Ukrainian milk processing now fully meet the consumers' demand for dairy products? What does the obvious narrowing of the assortment mean? What is the prospect of increasing demand in the domestic market and are Ukrainian dairies capable to boost the production of dairy for the Ukrainian market? (**availability**).*

Before talking about the provision of dairy products, it should be said that, unfortunately, the state currently does not have a national food security strategy. Those [developments](#) that were formed before the war, but had never been approved, are clearly no longer relevant for Ukraine. Meanwhile, the state operates following the "Plan of Measures to Ensure Food

Security Under Martial Law" in accordance with the [Order](#) of the Cabinet of Ministers of Ukraine. For the future, an important strategic goal should be the balance of food security - Ukrainian food industry should stop being commodity-oriented so that we can have a balanced domestic market and provide the foreign market not only with raw materials but also with food products. A balance must be achieved between crop production and livestock production, as it is envisaged by the [National Economic Strategy of the State for the period up to 2030](#). The dairy industry is the main component of our agricultural sector therefore it needs attention as an industry that is of great importance for the entire agricultural sector and for the food security of the country.

Regarding providing consumers with dairy products. Today, the general state of the dairy industry makes it possible to fully meet domestic demand, we do not have a shortage of dairy products. In 2022, our plants processed 2.7 million tons of milk with a processing capacity of 6 million tons. Undoubtedly, in the event of an increase in the number of consumers and an increase in demand, they can fully supply the domestic market with dairy products. At the same time, it should be noted that the supply of milk produced by households for processing has decreased (350,000 tons in 2022 versus 500,000 tons in 2021).

Now regarding providing consumers with dairy products. Today, the situation in the Ukrainian dairy industry allows to fully meet domestic demand, we have no shortage of dairy products. But one needs to think about what happens to the industry in the future, how it will be developing and transforming along with the changes in consumer tastes and volume of consumption.

The dairy industry consists of dairy farming and processing. During the years of independence, the industry has not been supported by the state. The measures taken to support dairy farming were so limited that no positive result was obtained. Today we have a significant decrease in the number of cows. Compared to the beginning of the 90s, it is about 8 times less. Production of raw milk also decreased several times, almost by 6, and now, according to experts, it is about 6 million tons.

During the war, of course, changes occurred in the assortment of dairy products. The production of dairy desserts decreased significantly, our dairies began to focus on the production of traditional products in accordance with the changing demand. Due to the forced migration, the demand decreased and so did a production of dairy products - it reduced by 22%. This means that less milk was processed. In the pre-war year 2021 the milk intake of the dairies was 3.2 million tons, in 2022 it became 2.7 million tons.

Fortunately, there were no job losses in the dairy industry. We must pay tribute to our milk processing enterprises for their saving jobs. In the difficult wartime, they keep production in working order understanding that people must work, receive wages, support their families, and consumers must be provided with dairy products.

Despite the war, the results of 2022 are positive for the industry. First of all, this is due to the fact that last year it was possible to export Ukrainian dairy products to the European Community, and besides of that on the world market prices for dairy commodities were high, primarily it concerns butter and skimmed milk powder. Ukraine got the opportunity to compete on the European Union market. But, as you know, prices on the global dairy market are very volatile. Now, in spring

2023, for example, they are 20-30% lower than last year, and this means that in the current year the dairy industry will face new challenges.

*The state statistics are currently closed. But there are figures provided by the business, they show reduction in production, a decrease in wages, and a deterioration in purchasing power. At the beginning of 2023, unemployment reached 30%... Dairy processing plants also have problems, they are also under pressure. What can you say about price formation? In your opinion, can dairy products be considered affordable for most consumers? (**affordability**).*

In order to talk about the prices of dairy products, it is necessary to consider pricing along the entire marketing chain "from farm to fork". The price that consumers see on the shelf is formed not only by the processing company, it depends also from the price of raw milk.

In the USA and the EU, most milk processing enterprises and their raw milk suppliers are organized in cooperatives. In Ukraine, the milk production business and the processing business exist independently of each other. The disadvantages of this model are obvious. It is very difficult for processors who are solving their own problems to understand milk producers when they talk about increasing the price of raw milk. As I said, final price for the consumer largely depends on the price of raw milk.

By and large, we have a shortage of raw milk. This was especially clear in 2021, when Ukraine imported dairy products in the amount equivalent to one million tons of raw milk. In 2022, this deficit decreased, but this was not due to an increase in milk production, but due to a decrease in the number of consumers because of migration and a decrease in imports because of the difficulties in logistics and other problems.

We are now entering the period of spring-summer growth in milk production. This milk should be processed. At the same time, milk producers, processors and state authorities must understand that with the current shortage of operational funds that dairy processors have to work now, especially those engaged in export, they will be forced to come to a decision on the need to restrain or reduce the price of raw milk in order to maintain the affordability of dairy products for the consumer.

*What can you say about the quality and safety of our dairy products? (**quality and safety**)*

The problem that concerns the quality and safety of dairy products is the so-called shadow market, the share of which is now 15-20%. What does it mean? This means that there are small dairies that buy raw milk produced by back-yards farms. These dairies work only for cash, "in the shadow". Now, in the conditions of martial law, the state inspections are temporarily prohibited, so these dairies feel quite comfortable.

I believe that there are enough laws, regulations and orders to fight against such shameful phenomena as counterfeiting and unfair competition. In order to protect Ukrainian consumer and provide him with only high-quality and safe products, only political will is needed. The dairies operating in the shadow cannot produce quality products.

The Union of Dairy Enterprises of Ukraine, together with a group of people's deputies, developed the "Draft of the Law on Amendments to Certain Legislative Acts of Ukraine on State Support for

the Development of Production and Processing of Animal Products" #7072, which provides for subsidizing those milk producers who officially supply milk to processing enterprises. If this bill were passed, our processing plants could increase the production of quality dairy products.

In addition to this draft law, the "Draft of the Law on Amendments to Certain Laws of Ukraine Regarding Food Products and Other Objects of Sanitary Measures" #6248 was submitted to the Parliament, which provided for the definition of terms for falsification, in particular the definition of this phenomenon as food fraud. If criminal liability were provided for this, counterfeiters would already feel not so confident. But after consideration by the Agrarian Policy Committee, this draft law was initially sent for revision, and in September 2022 it was withdrawn from consideration. We expect that after finalizing this important draft law, it will again be sent for consideration by the Verkhovna Rada.

It is not only control that contributes to quality improvement. Great advantages and opportunities are provided by the technical modernization of production facilities. It allows enterprises to be competitive on the world market. Last year, 11 Ukrainian milk processing enterprises received permission to export to the EU. In terms of quality, the products of national manufacturers are not inferior to the products of multinational companies operating on the Ukrainian market.

It should also be noted that the situation with raw milk supply is improving. Of the 2.7 million tons of milk processed in 2022, 2.4 million tons were produced in agricultural enterprises. 47% of this volume is "extra" grade milk (in 2021, the share of milk of this grade was 37%).

How strong is the influence of the war and the economic problems caused by military actions on the dairy industry in comparison with the three factors already mentioned? (sustainability and adaptation)

The sustainability of the Ukrainian dairy industry, in my opinion, primarily depends on cooperation with our partners, producers of raw milk, especially during the war.

Many factors affect the sustainability of raw milk production and adaptation to real conditions, especially in the wartime period, when the key problems are transport logistics, uninterrupted supply of electricity, the use of generators (due to which the cost of production increases), the mobilization of personnel to the Armed Forces, and others.

Dairy processors believe that the development of dairy farming should be a priority in the state programs for the development of the dairy industry. It is known that one job in dairy farming provides an opportunity to create 9 jobs in related industries. Therefore, the development of dairy farming can become a catalyst for the development of other, related industries. Today, the total number of personnel on dairy farms is 45,000, accordingly, multiplying by 9, we get the total number of employees in industries related to dairying.

Increasing the number of jobs in dairy farming will give an impetus to the development of dairy farming and contribute to the development of processing, as well as dairy exports, because there is a shortage of animal protein in the world. In its forecasts for the development of the global dairy industry, IFC mentions Ukraine as one of the key countries for solving the problem of protein deficiency, a country that has all the prerequisites for the successful development of dairy farming. One of the measures aimed at the development of animal husbandry is the creation of

family dairy farms to regulate the production of milk in the so-called "back-yard farms" and establish milk civilized collection and delivery to processing enterprises.

The adoption of the Law on Trade, which is persistently promoted by the Union of Dairy Enterprises, will also contribute to strengthening the stability in providing consumers with dairy products. We hope that this will solve the problem of chronic payment delays the trade networks practice in the business relationship with their suppliers, not only dairies. Adoption of the Law will stabilize the financial activity of dairy enterprises and will allow them not only to fight to survive but also to modernize production and develop.

The sustainability of the dairy production system in the conditions of martial law is supported by milk producers, and by the milk processing enterprises themselves. We should also pay tribute to the support provided by the central executive authorities, the Ministry of Agrarian Policy and Food, and the State Service for Food Safety and Consumer Protection, which did a lot to ensure that even in the difficult conditions of the war, the dairy industry received assistance.

*When you compare all the factors mentioned, namely **availability, affordability, quality and safety and sustainability and adaptation**, that is, those used for the global food security index calculation, do you agree with the opinion of the GFSI panel experts who believe that the strongest is the influence of the last factor, which, according to their calculations, currently has the greatest negative impact on Ukraine's food security?*

Yes, I think that now, during the war, the factor of sustainability and adaptation is especially important. First of all, stabilization of the number of livestock contributes to increasing stability, and in the future, it means growth of the number of cows and bringing it to at least 2.5 million.

In order to ensure the stable operation of processing enterprises and their adaptation to the conditions of export to international markets, including markets that are quite demanding in terms of product quality, it is necessary to modernize processing technologies and equipment, which would allow the production of dairy products with high added value and successfully compete with foreign companies. It is also important, from my point of view, to eradicate counterfeiting as a phenomenon that should not exist in the Ukrainian dairy industry.

Step-by-step planning of real measures and implementation of the planned over several years should create the possibility of bringing the amount of milk available for processing to 8 million tons. And then it will be possible to talk about the unconditional sustainability of the dairy industry as a component of the country's food security.

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