



infographic report

AGRIBUSINESS of UKRAINE

2023/24

Agribusiness in 2023/24 MY ~~~~~

The role of agribusiness in the economy of Ukraine.....	4
The role of Ukrainian agribusiness in the world economy ...	5
Losses of the Ukrainian agricultural sector during the war ..	6
Production of the main types of agri-food products	7
Agricultural specialization of Ukraine’s regions	8
Changes in regional specialization caused by the war	9
Geography of agri-food exports	10
Foreign trade in agri-food products	11
Wartime logistics	12
Land market	13
Land fund	14

Crop production ~~~~~

Sowing campaign	16
Main grain crops	17
Main oilseed crops	18
Vegetable crops	19
Fruits and berries	20
Occupation of agricultural land in Ukraine and its impact on major crops production	21

Livestock farming ~~~~~

Farm animals	23
Meat production	24
Poultry farming	25
Fish industry	26
Beekeeping	27

Processing industry ~~~~~

Processing industry	29
Vegetable oil industry	30
Sugar industry	31
Dairy industry	32

Infrastructure ~~~~~

Irrigation	34
Consequences of the Kakhovka HPP explosion	35
Grain storage	36
Fertilisers	37
Crop protection products	38
Agricultural machinery and seeds	39
BTU Biotech company	40

FINANCES ~~~~~

Investments in the agricultural sector	42
Agribusiness financing	43
State and grant support	44

Sustainable agriculture ~~~~~

Climate change	46
Sustainable agriculture	47
European integration	48
Donau Soja: Protein Partnership Programme	49
Bioenergy	50
Digitalisation of the agricultural sector	51

Purpose of the handbook

In preparing this infobook, it was important for us to understand **how the Ukrainian agricultural sector managed to adapt to the new reality** that the entire country faced after February 24, 2022. The full-scale russian invasion created **unprecedented challenges for Ukraine’s agriculture** — from the destruction of infrastructure to the disruption of supply chains and the loss of significant agricultural areas.

However, looking back over the past three years, we can say that **Ukrainian agriculture has survived and is gradually recovering**. Thanks to the joint efforts of farmers, the government, and international partners, our country continues to ensure food security for millions of people around the world. Moreover, Ukrainian agrarians have become one of the symbols of the nation’s strength and resilience in the struggle for survival.

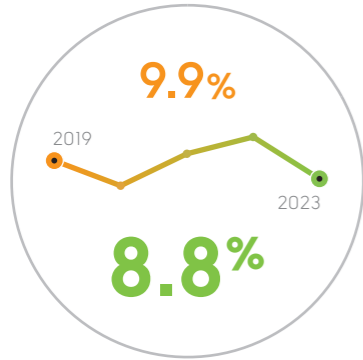
Why infographics?

Viewing infographics does not require much time and allows for the perception of large volumes of data about the agricultural market of Ukraine and the world in a simple and understandable format. In an era of information overload and time constraints, **infographics serve as an effective communication tool**, helping to quickly and visually convey complex statistical information, identify trends, and uncover patterns in the agricultural sector.



Agribusiness in 2023/24 MY

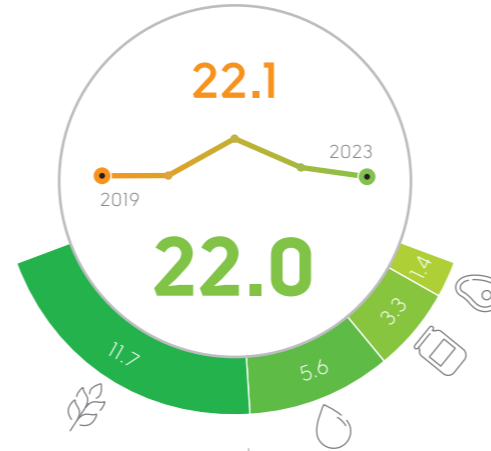
Agricultural production, % of GDP
In prices of the previous year



Labor productivity in agriculture, USD thou.
Per 1 employee per year, in constant prices of 2021



Agri-food exports, USD bln



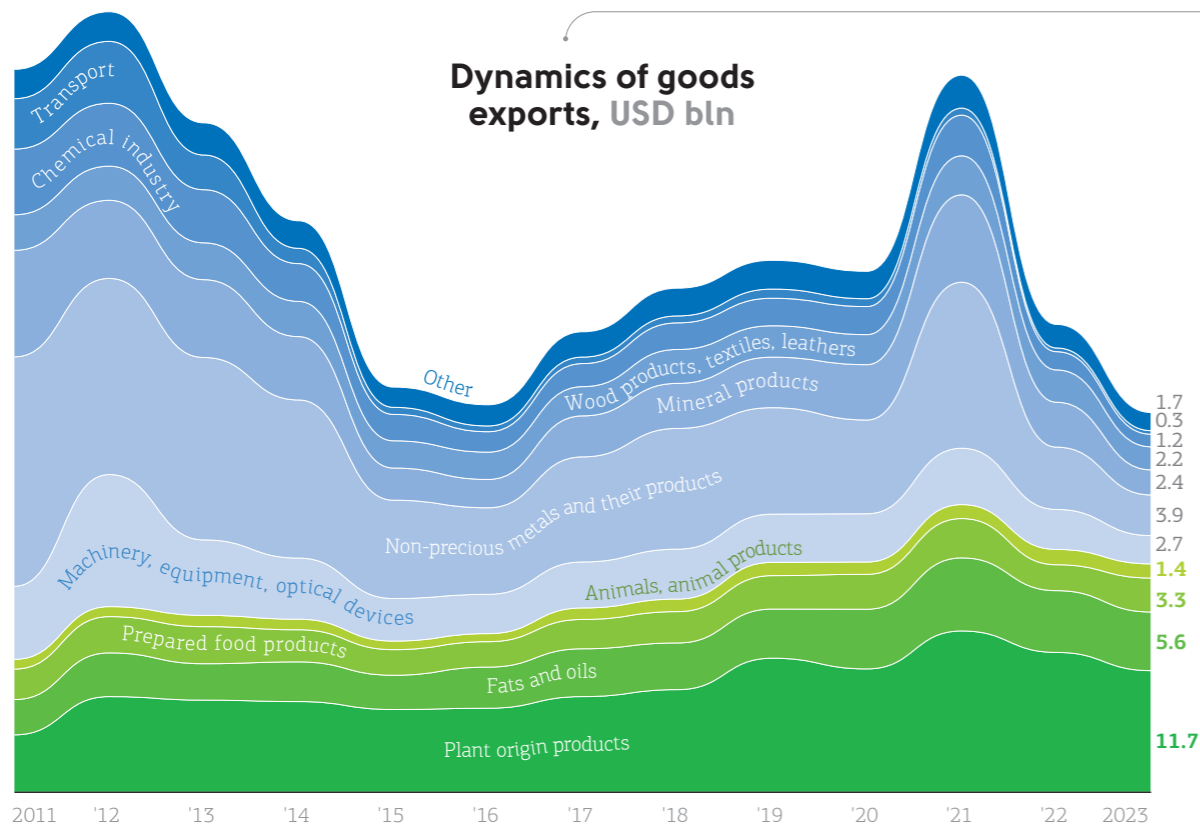
Capital investments, USD bln



Foreign direct investments, USD mln¹

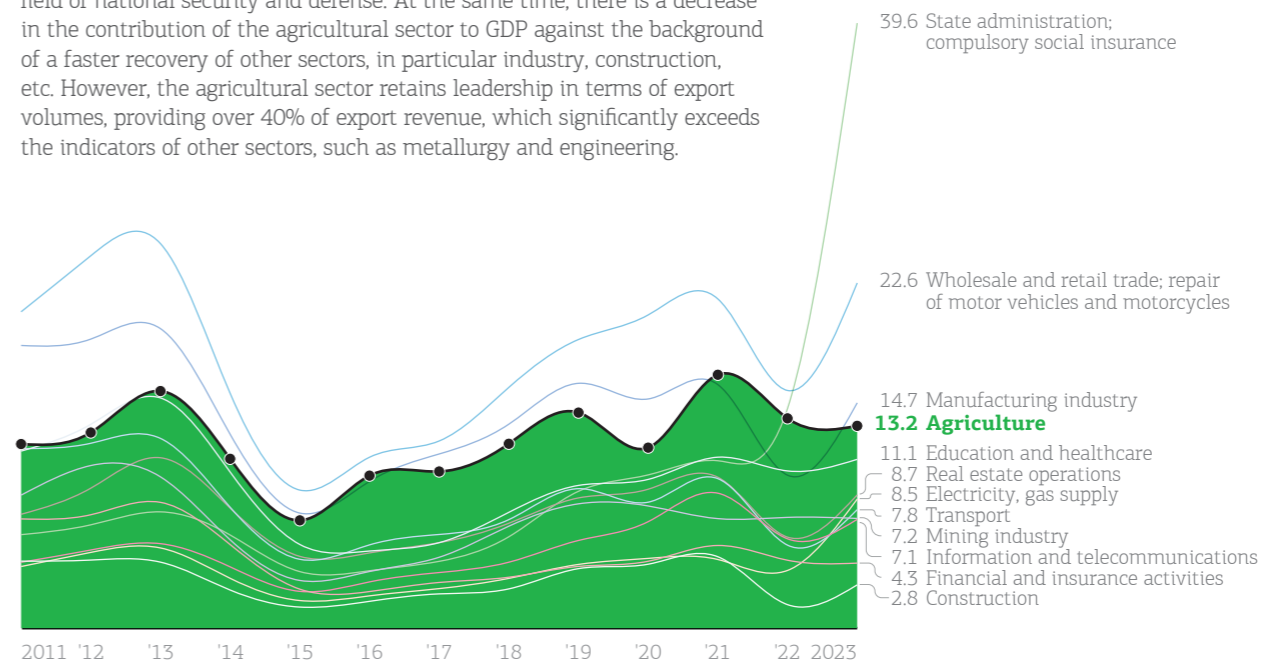


Dynamics of goods exports, USD bln



GDP growth of the main sectors of the economy, USD bln

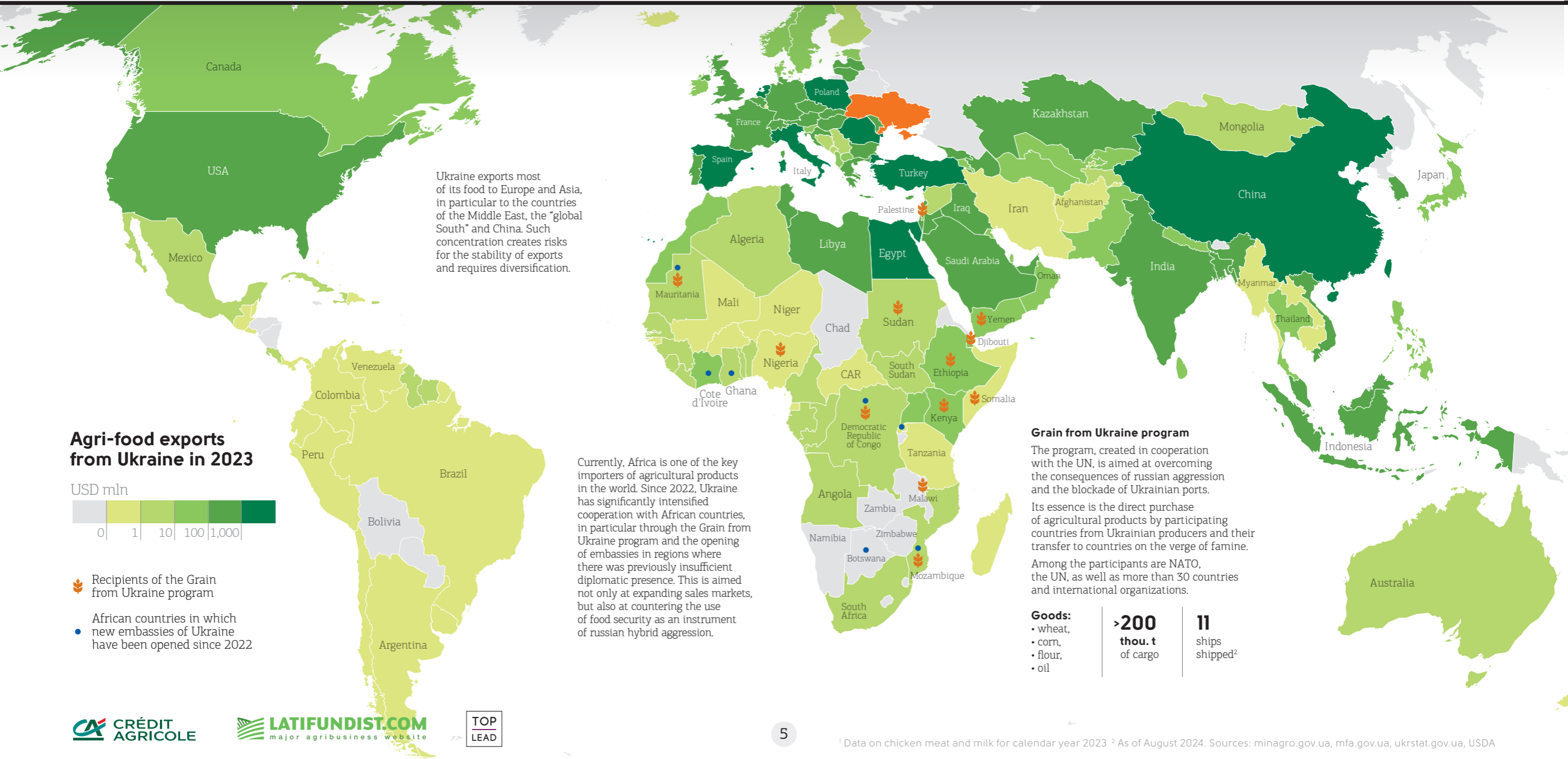
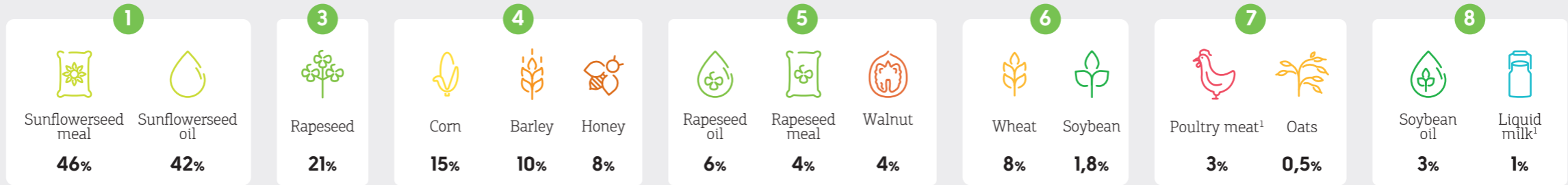
The role of the state has increased due to significant expenditures in the field of national security and defense. At the same time, there is a decrease in the contribution of the agricultural sector to GDP against the background of a faster recovery of other sectors, in particular industry, construction, etc. However, the agricultural sector retains leadership in terms of export volumes, providing over 40% of export revenue, which significantly exceeds the indicators of other sectors, such as metallurgy and engineering.



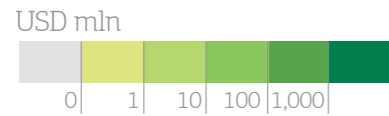
Place among exporting countries

Ukraine on the world market in 2023/24 MY

% of world exports, by tonnage



Agri-food exports from Ukraine in 2023



- Recipients of the Grain from Ukraine program
- African countries in which new embassies of Ukraine have been opened since 2022

Currently, Africa is one of the key importers of agricultural products in the world. Since 2022, Ukraine has significantly intensified cooperation with African countries, in particular through the Grain from Ukraine program and the opening of embassies in regions where there was previously insufficient diplomatic presence. This is aimed not only at expanding sales markets, but also at countering the use of food security as an instrument of Russian hybrid aggression.

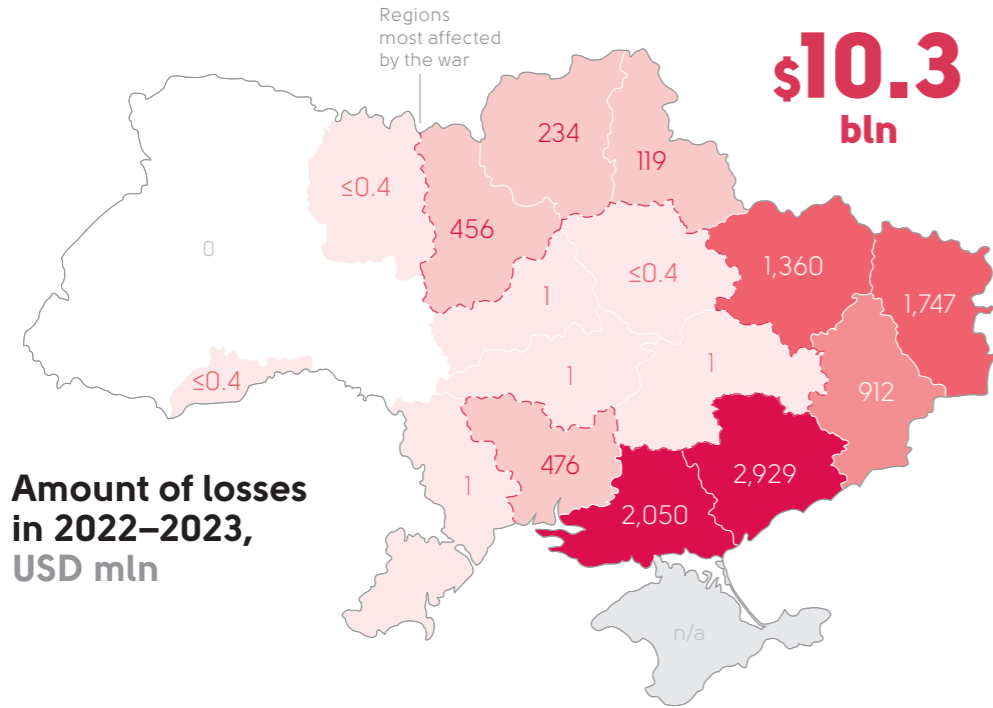
Grain from Ukraine program

The program, created in cooperation with the UN, is aimed at overcoming the consequences of Russian aggression and the blockade of Ukrainian ports. Its essence is the direct purchase of agricultural products by participating countries from Ukrainian producers and their transfer to countries on the verge of famine. Among the participants are NATO, the UN, as well as more than 30 countries and international organizations.

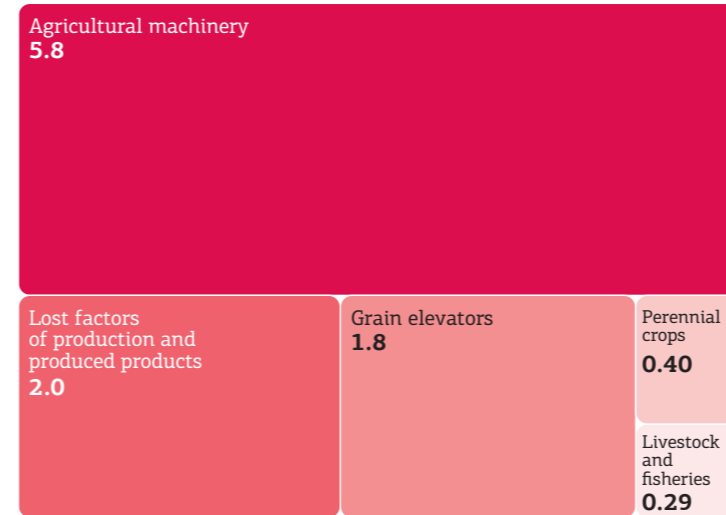
Goods:
 • wheat,
 • corn,
 • flour,
 • oil

>200
 thou. t
 of cargo

11
 ships
 shipped²



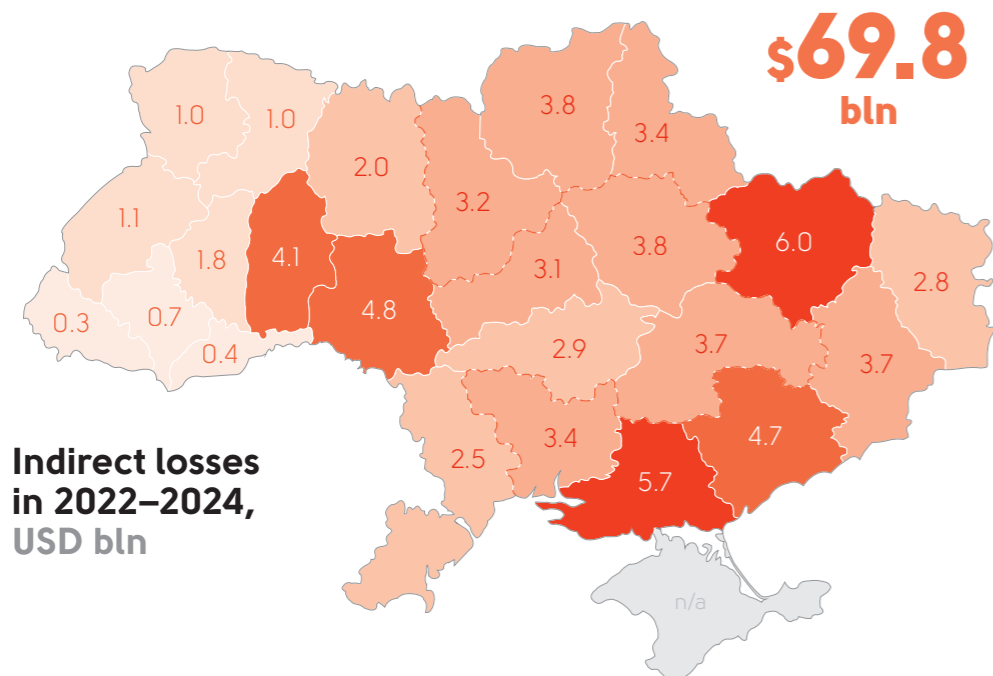
Amount of losses in 2022–2023, USD bln



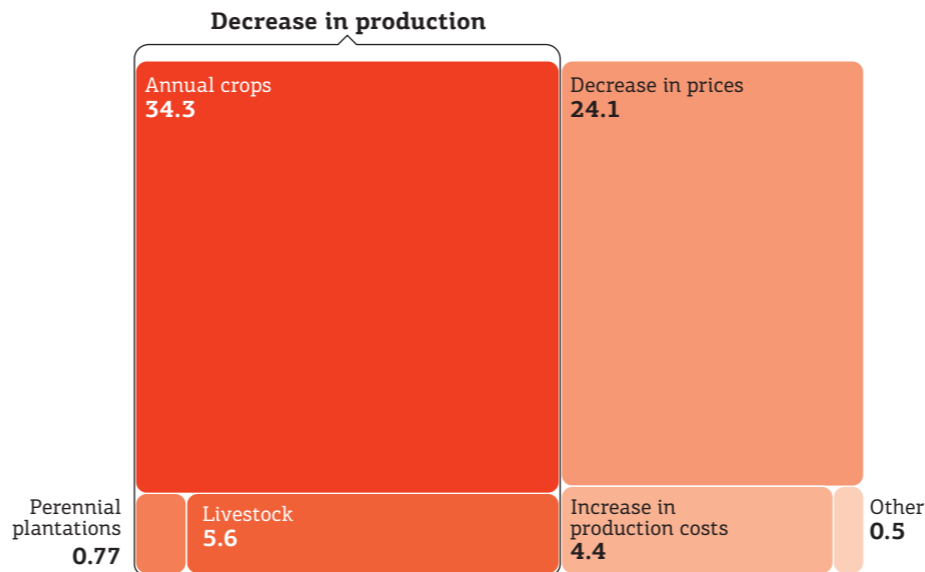
Damages are the monetary value of material assets that were destroyed, stolen, or partially damaged (but still suitable for repair or restoration) due to hostilities and occupation.

Agricultural machinery was the most affected, especially tractors, of which over 18,000 were destroyed. Significant damage was caused to grain elevators, with a total loss of capacity of 19.5% (excluding those inaccessible due to occupation). In addition, production was lost on the occupied territories, as well as destroyed stocks of fertilizers, fuel, and crop protection products.

Livestock farming suffered, in particular due to the deaths and forced slaughter of animals: 238,000 cattle, 544,000 pigs, 131,000 sheep and goats, and almost 13,000,000 poultry were lost. Aquaculture and fisheries have also suffered losses due to the destruction of the Kakhovka Dam.



Indirect losses in 2022–2024, USD bln



Indirect losses are the difference between actual income and the income that agricultural producers would have received if it were not for Russia's invasion of Ukraine. Indirect losses are felt by farmers across the country, not just in areas affected by the fighting. The estimates cover data for 2022 and 2023, as well as a forecast for 2024.

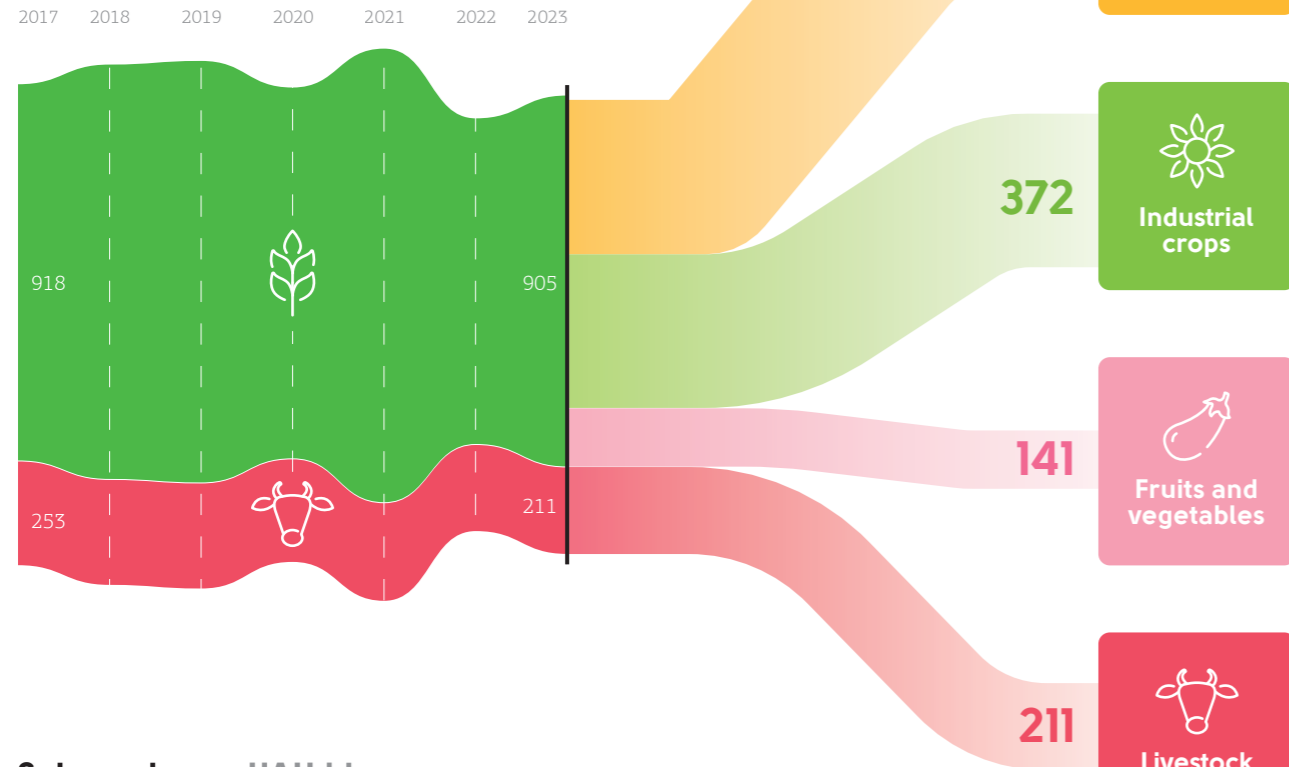
Among the main impacts is the reduction in the production of annual crops, which are key to the agricultural sector. Losses in 2022–2023 are estimated at a total of 48.6 mln tons for grain crops and 8.7 mln tons for sunflower.

The decline in livestock numbers and productivity has had a significant impact on livestock production. Dairy production has suffered the most losses, with indirect losses estimated at \$2.9 billion over three years out of a total of \$5.6 billion.

Disruptions to exports due to the Russian naval blockade have complicated logistics, reducing demand for products and increasing costs. While the maritime corridor has increased export potential, the gap between domestic and world prices remains wider than before the invasion.

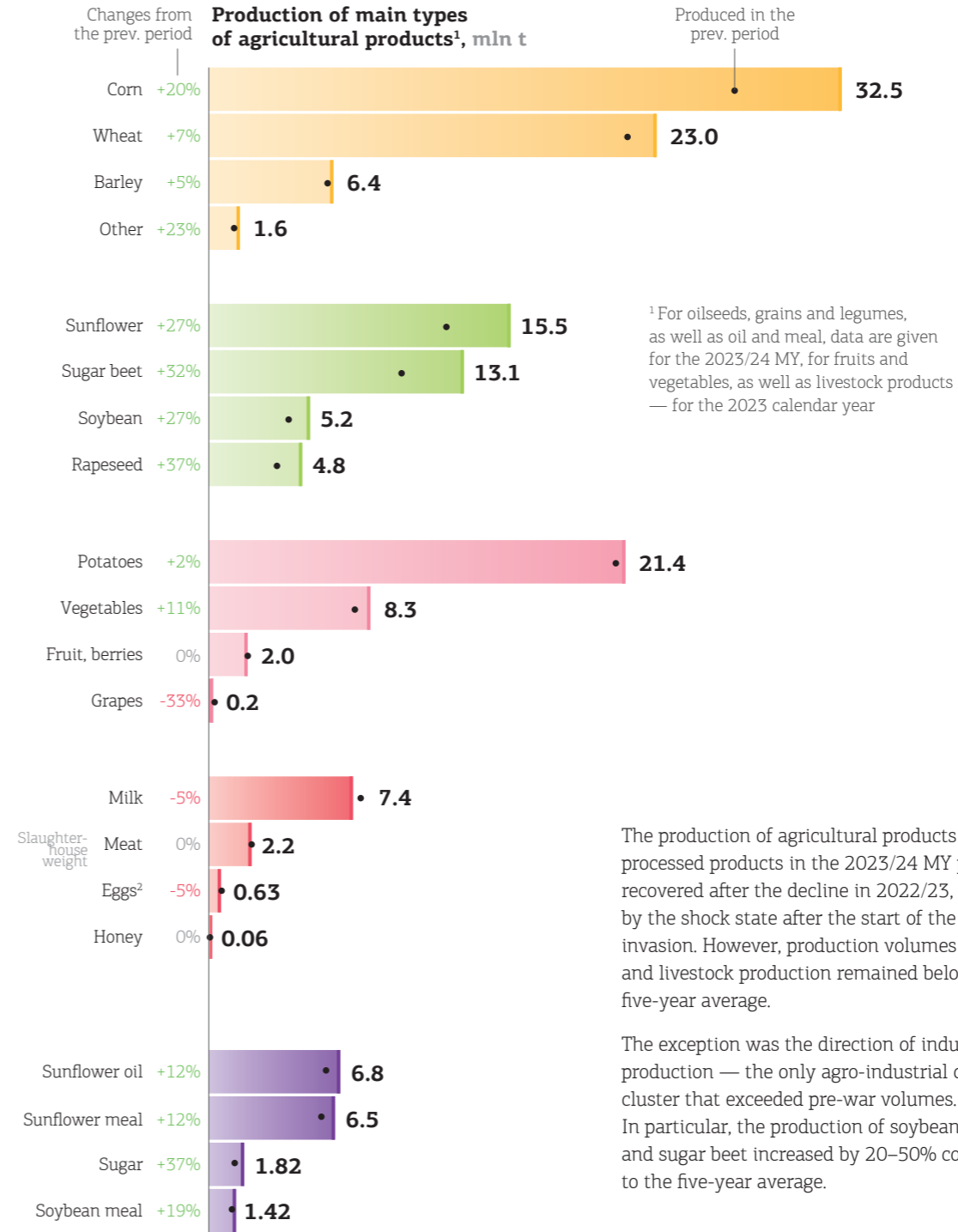
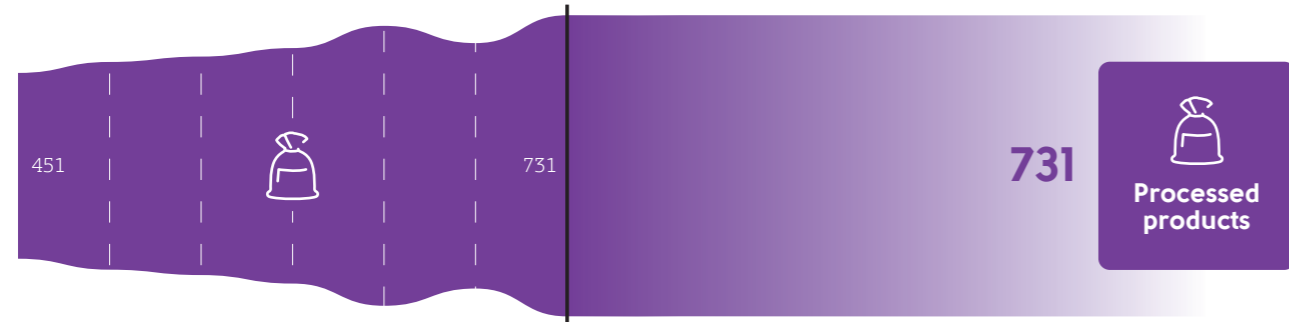
Agricultural products, UAH bln

In constant 2021 prices



Sales volume, UAH bln

Excluding VAT and excise in actual prices

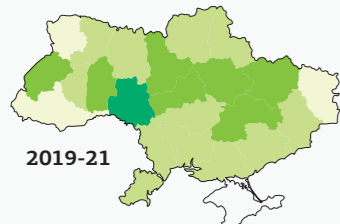


¹ For oilseeds, grains and legumes, as well as oil and meal, data are given for the 2023/24 MY, for fruits and vegetables, as well as livestock products — for the 2023 calendar year

The production of agricultural products and processed products in the 2023/24 MY partially recovered after the decline in 2022/23, caused by the shock state after the start of the full-scale invasion. However, production volumes in crop and livestock production remained below the five-year average.

The exception was the direction of industrial crop production — the only agro-industrial complex cluster that exceeded pre-war volumes. In particular, the production of soybeans, rapeseed and sugar beet increased by 20–50% compared to the five-year average.

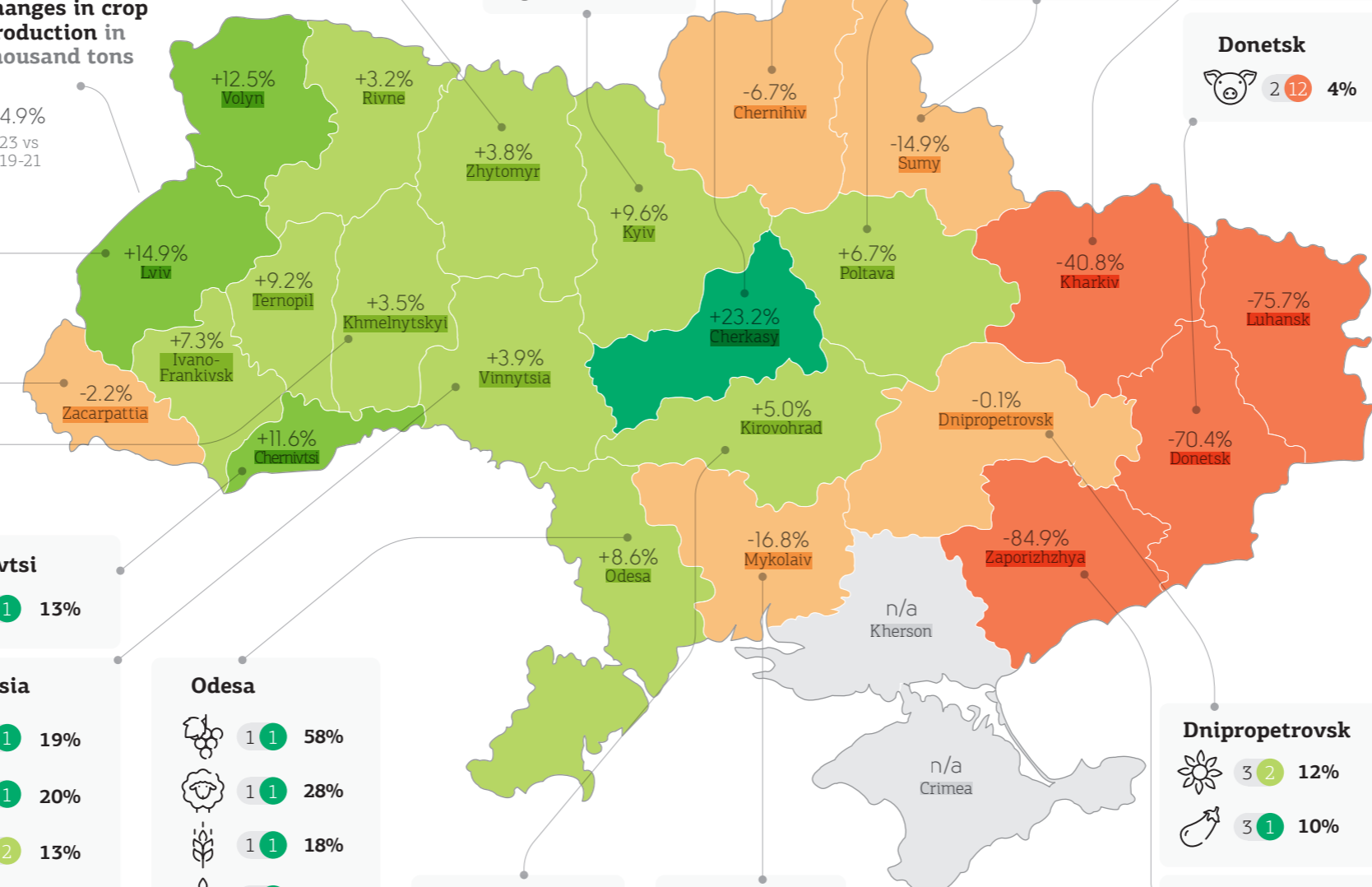
Regional shift in agricultural production



Indices were calculated for each crop, showing the region's place in production. The sum of the indices gives the overall indicator for 2019–2021 and 2023.

The map shows changes in crop production in thousand tons

+14.9%
2023 vs 2019-21



Lviv

- Vegetables: 2 2 10%
- Pig population: 3 2 8%
- Potatoes: 3 2 9%

Zacarpattia

- Grapes: 2 2 18%
- Sheep and goat population: 2 2 13%

Khmelnyskyi

- Soybean: 2 2 14%
- Vegetables: 2 1 13%
- Wheat: 1 2 12%
- Cattle population: 1 1 10%
- Milk: 3 1 9%
- Eggs: 2 2 8%

Chernivtsi

- Fruit, berries: 2 1 13%

Vinnysia

- Poultry population: 1 1 19%
- Vegetables: 1 1 20%
- Fruit, berries: 1 2 13%
- Soybean: 6 2 10%
- Wheat: 6 2 9%

Odesa

- Grapes: 1 1 58%
- Sheep and goat population: 1 1 28%
- Wheat: 1 1 18%
- Wheat: 4 1 11%
- Rapeseed: 1 1 11%

Kirovohrad

- Sunflower: 2 1 12%

Mykolaiv

- Wheat: 2 2 9%

Zhytomyr

- Potatoes: 2 1 9%
- Wheat: 2 7 7%

Cherkasy

- Poultry population: 3 2 13%

Kyiv

- Eggs: 1 1 22%
- Pig population: 1 1 13%

Chernihiv

- Wheat: 1 2 12%

Poltava

- Wheat: 2 1 12%
- Wheat: 4 1 12%

Sumy

- Vegetables: 4 2 9%

Kharkiv

- Wheat: 1 11 5%

Donetsk

- Pig population: 2 12 4%

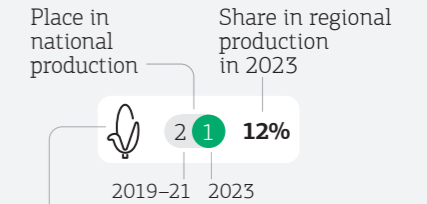
Dnipropetrovsk

- Sunflower: 3 2 12%
- Vegetables: 3 1 10%

Zaporizhzhya

- Wheat: 2 18 1%

Legend



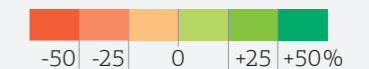
Agricultural products and animals

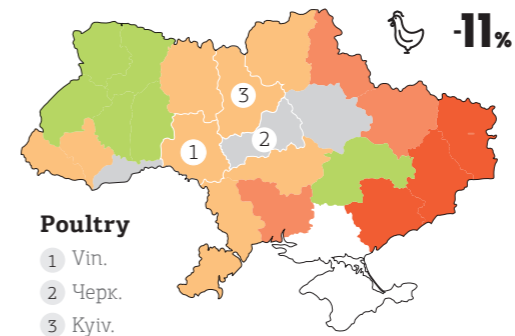
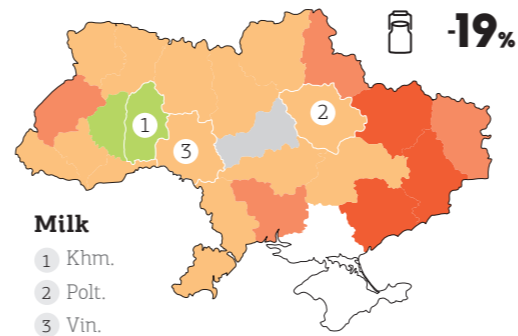
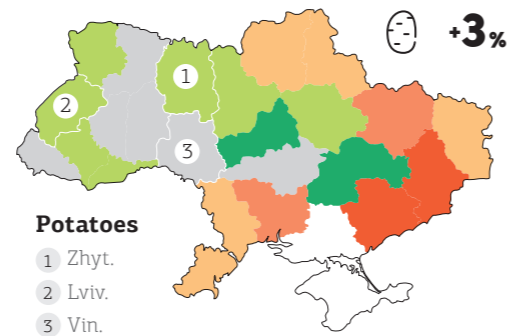
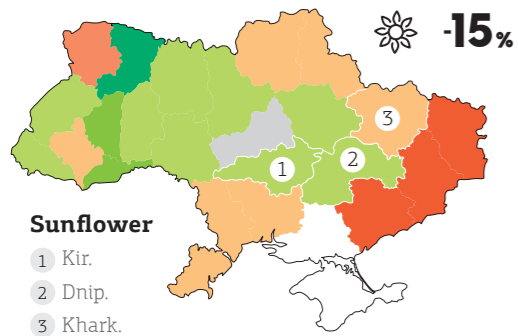
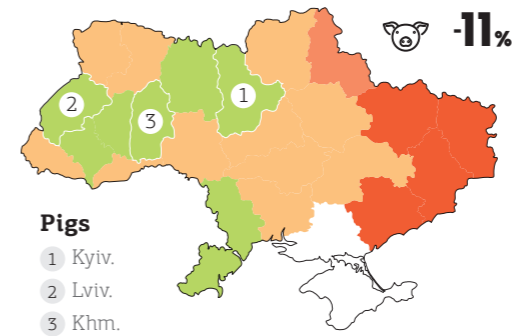
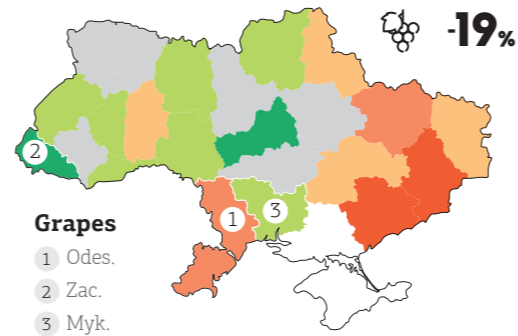
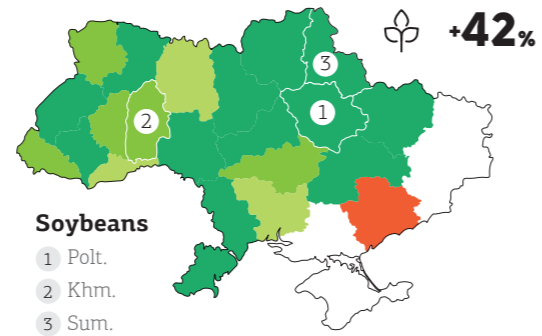
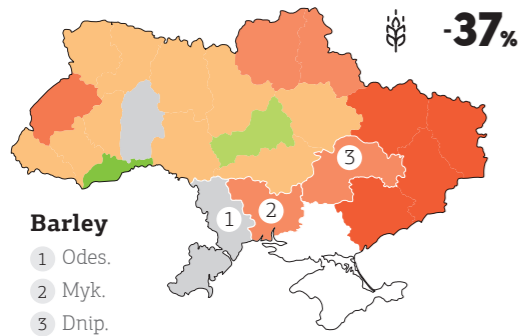
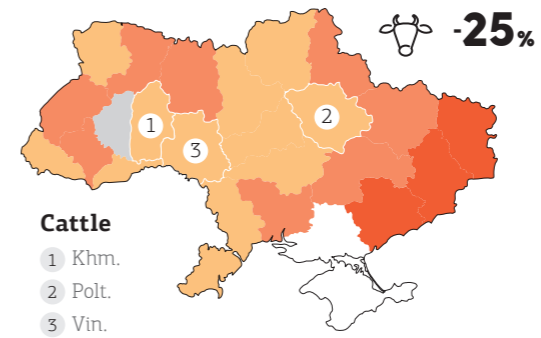
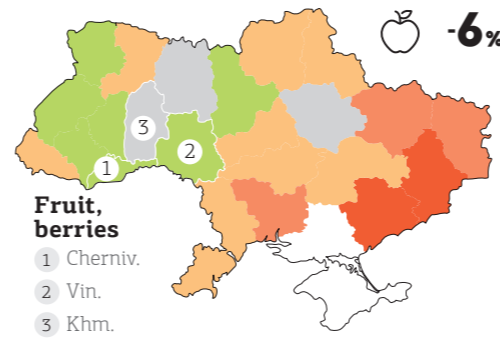
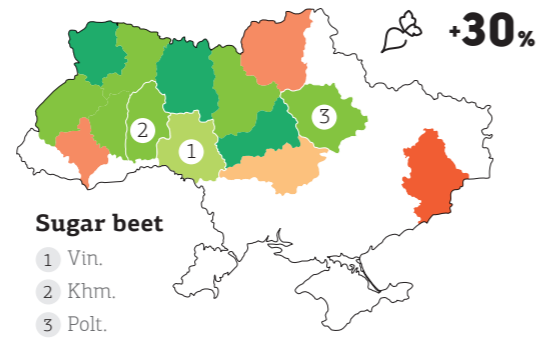
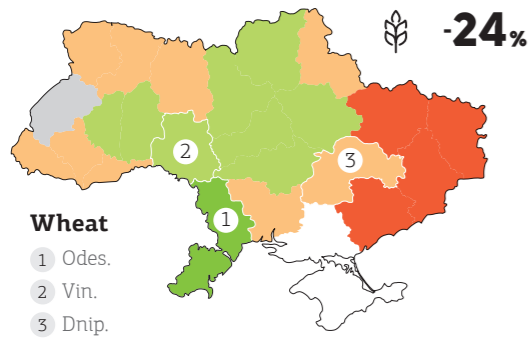
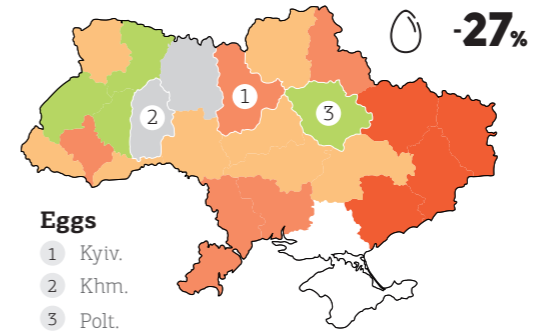
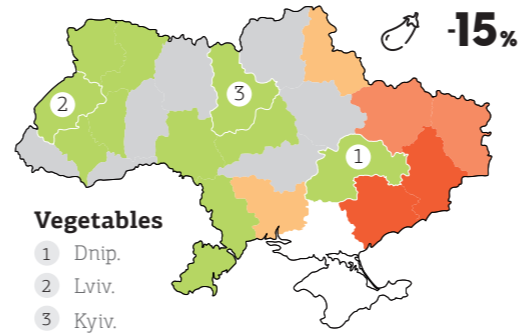
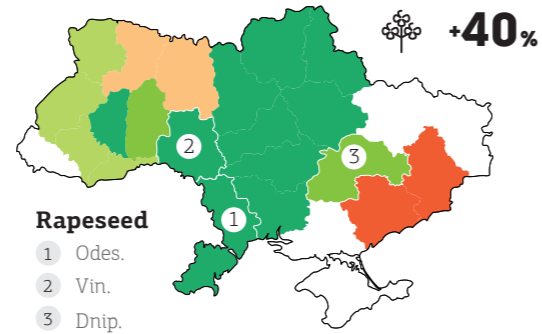
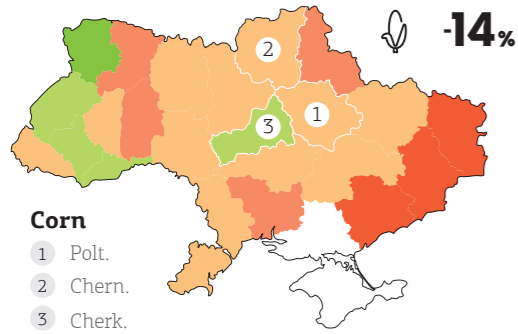
- Corn
- Wheat
- Barley
- Potatoes
- Vegetables
- Fruit, berries
- Grapes
- Sugar beet
- Sunflower
- Soybean
- Rapeseed
- Milk
- Eggs
- Honey
- Cattle population
- Pig population
- Sheep and goat population
- Poultry population

For comparison with the period before the full-scale invasion, we used average production figures for 2019–2021 (except for honey, where 2021 figures were used).

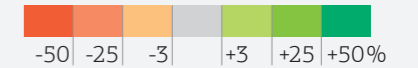
The map shows changes in the production of crop products in thousand tons

2023 vs 2019-21





Legend



-26%

Change in production in kind in 2023 compared to the average for 2019–2021

1 2 3

Top 3 leading regions in agricultural production or livestock

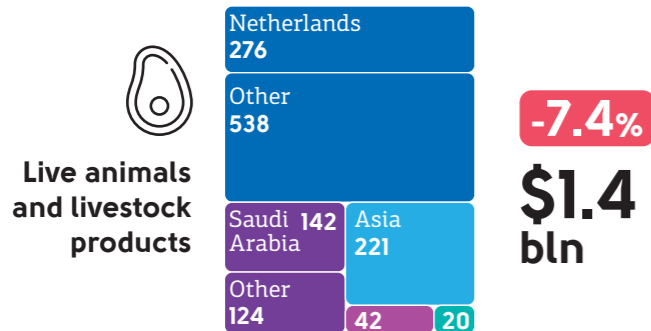
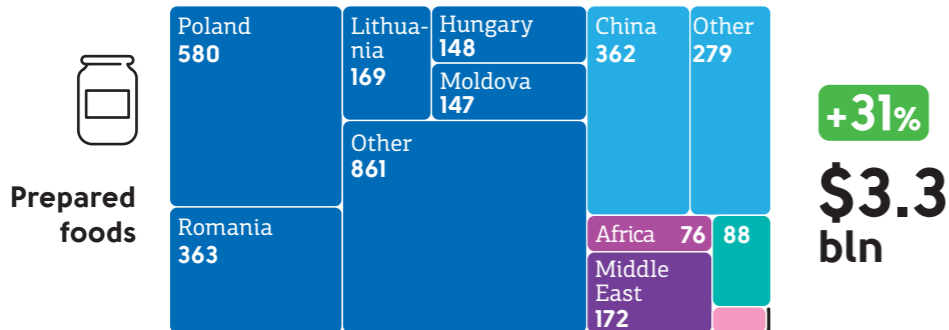
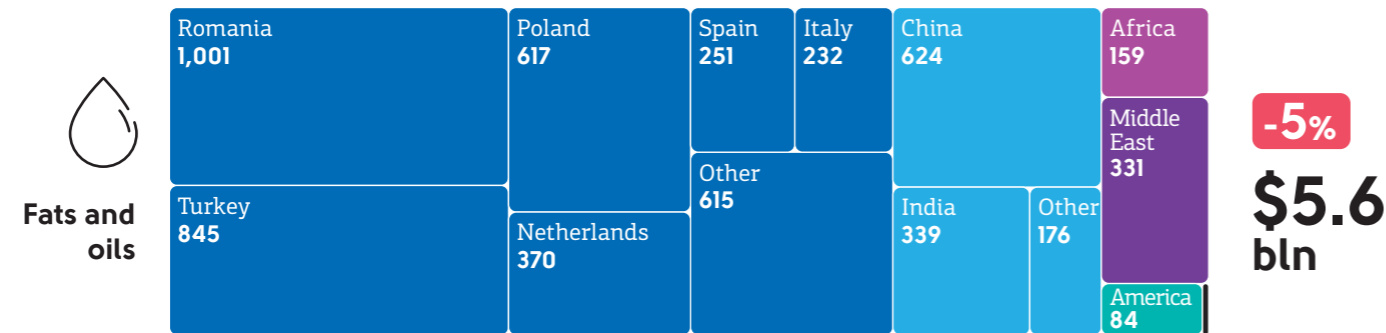
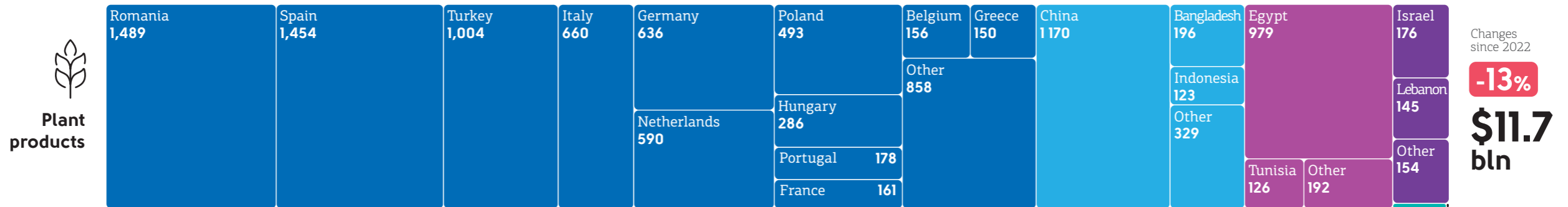
For comparison with the period before the full-scale invasion, we took the average production figures for 2019–2021.

The Ukrainian agricultural sector is undergoing a complex transformation, triggered by the full-scale war with Russia.

One of its elements is the shift in traditional cultivation (production) regions, caused by occupation and proximity to combat zones, leading to the disruption of previously established specialization belts.

However, the relocation of production to safer regions helps partially compensate for the lost volumes. There is a clear decline in the role of areas adjacent to the combat zone, while the contribution of the Central and Western regions to Ukraine's agricultural sector is gradually increasing.

Exports from Ukraine in 2023, USD mln



Despite the fact that the export of agricultural and food products in 2023 decreased to the lowest levels in the past five years, the volume of exported products in monetary terms amounted to \$22 billion, almost matching the figures for 2019–2020. The largest decline in revenue was recorded in the crop production segment, especially grain crops. The main reasons are the decrease in production due to the war and the decline in global agricultural prices after the peak in 2022.

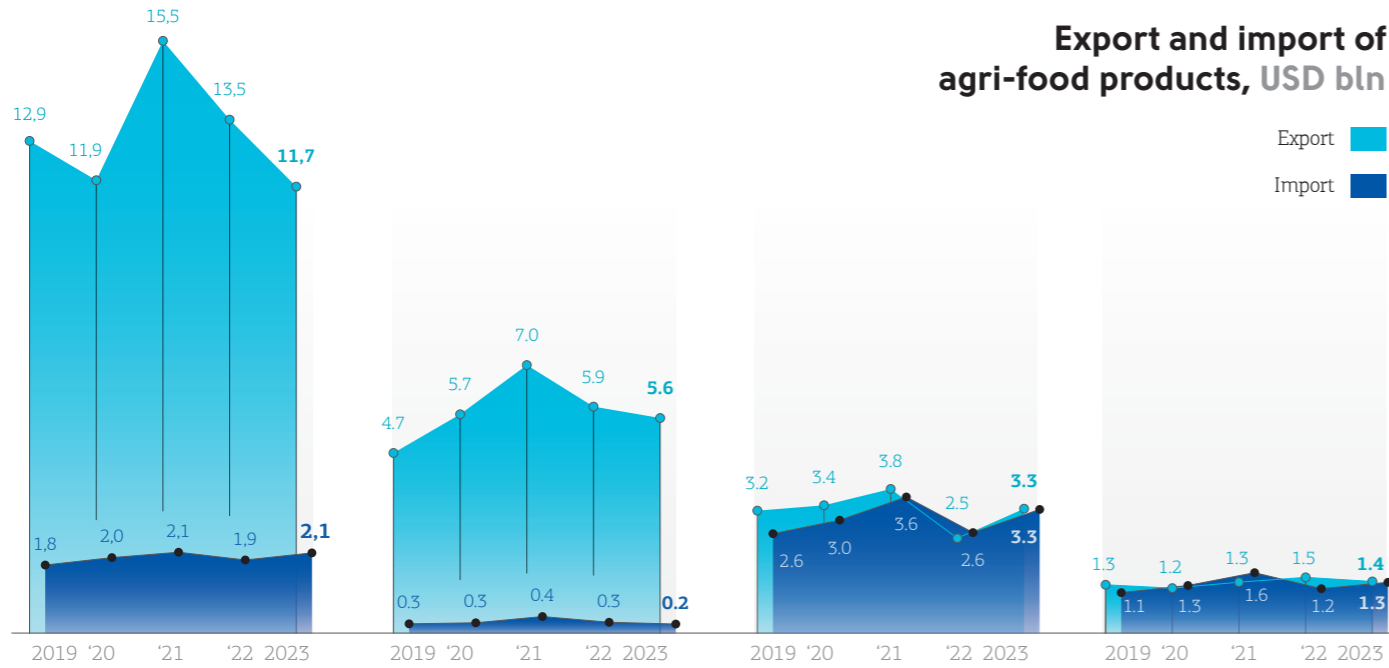
Europe remained the primary export destination, accounting for \$15.2 billion (69% of total exports). Issues with maritime logistics led to a reorientation of export flows to EU markets, but the actual end consumers were other countries. The launch of the temporary maritime corridor is gradually restoring shipments to the usual logistics routes.

Top importers, USD bln

Romania	2.9
China	2.2
Turkey	2.0
Spain	1.8
Poland	1.8
Netherlands	1.3
Egypt	1.1
Italy	1.0
Germany	0.9
Hungary	0.5
Other	6.7

Top products, USD bln

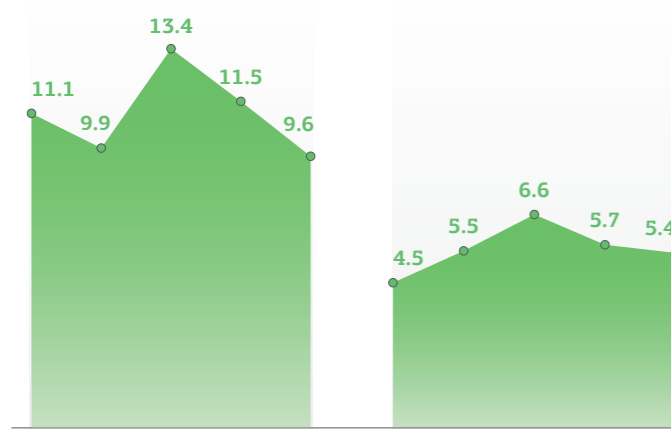
Sunflower, safflower or cottonseed oil	5.0
Corn	5.0
Wheat	2.9
Soybeans	1.3
Oilcake	1.3
Rapeseed	1.2
Poultry meat and offal	0.8
Other	4.7



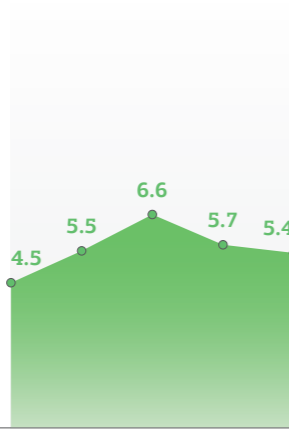
Change in export from Ukraine, USD bln



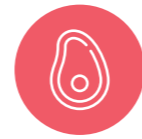
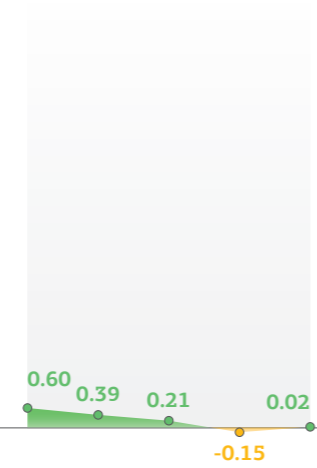
Plant products



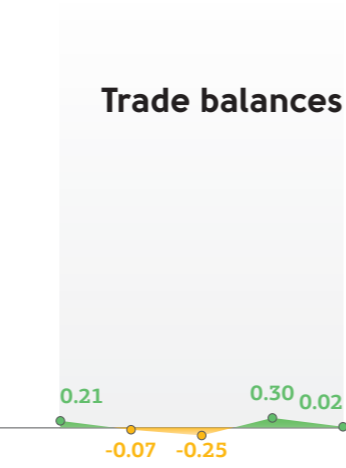
Fats and oils



Prepared foods



Live animals and livestock products



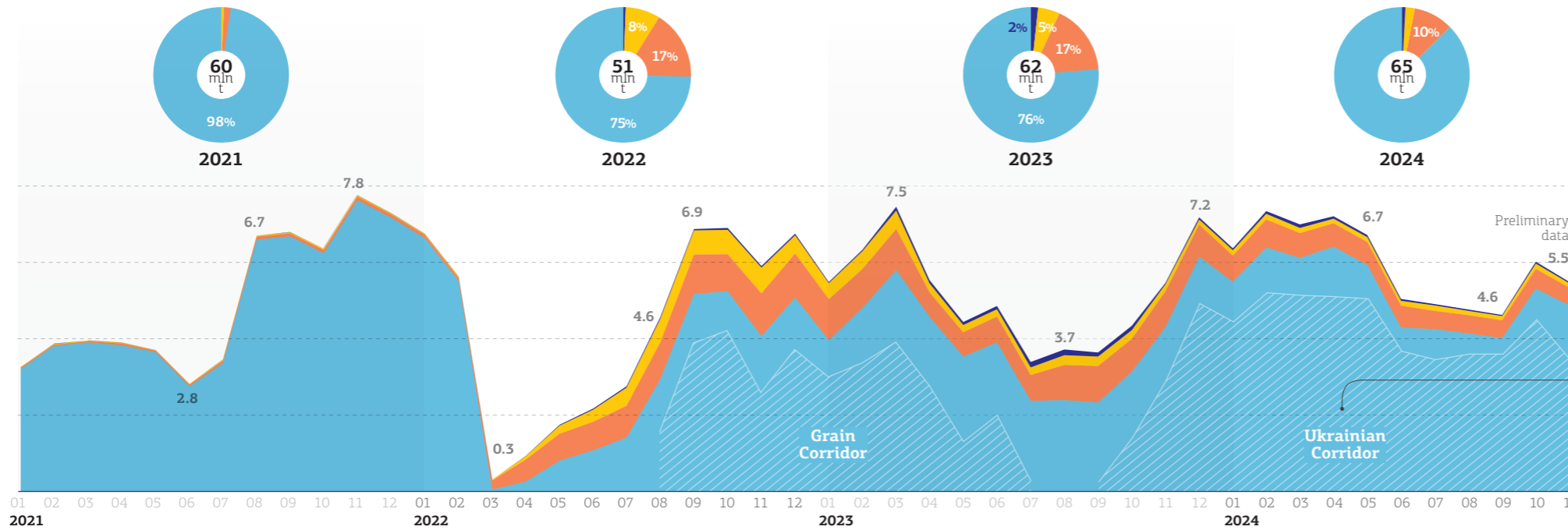
Trade balances

Top groups of agricultural export, USD bln



Exports of agri-food products by mode of transport, mln t

● Marine ● Railroad ● Road ● Ferry



Ukrainian Maritime Corridor

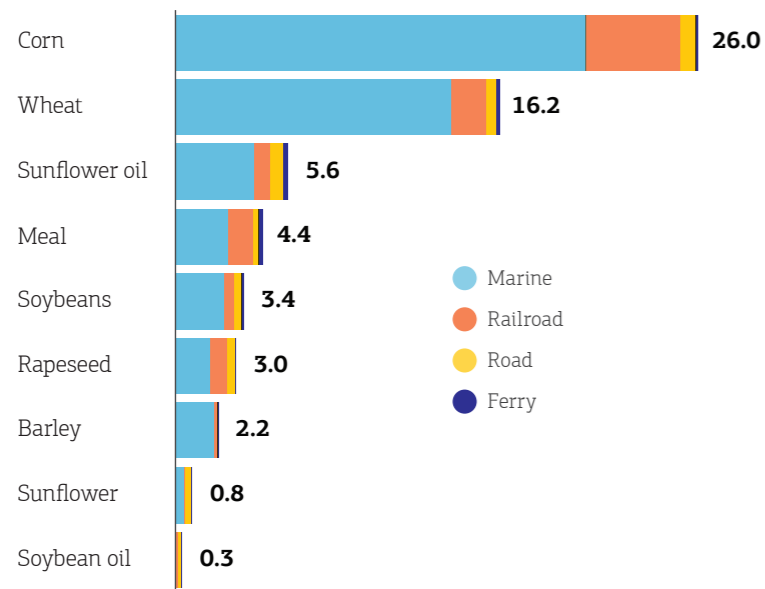
After systematic violations of the Grain Corridor agreement by Russia, an alternative Ukrainian Corridor was organized, allowing for the transportation of not only agricultural products but also other goods. The only guarantor of shipping safety is the Armed Forces of Ukraine.

Starting from March 15, 2024, the Ukrainian Corridor, which passes through the ports of Greater Odesa, began operating around the clock, leading to a 20% increase in the export of agricultural and other products.

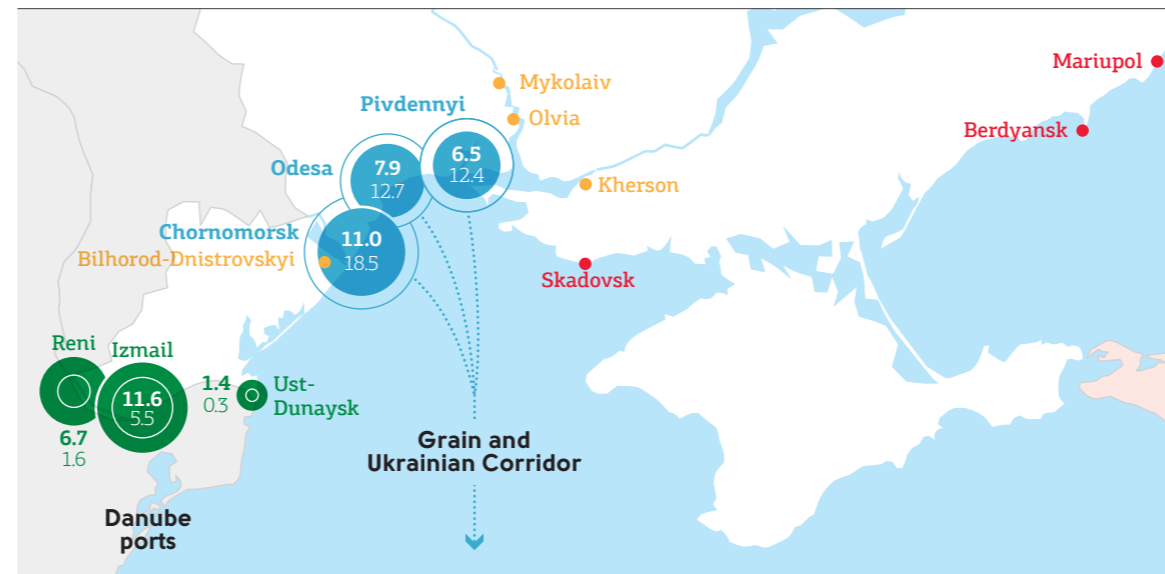
57 mln t

of agricultural products have been transhipped through the Ukrainian Corridor since its launch (as of 11.28.2024)

Structure of export shipments in 2023, mln t



Transshipment of agricultural cargo in Ukrainian ports in 2023 and 2024, mln t



● Ports of the Grain and Ukrainian Corridor ● Ports that Ukraine does not control
 ● Ports of the Danube Cluster ● Ports that are not working

1.4 ● Transshipment of agricultural cargo in 2023
 1.4 ○ Transshipment for 11 months of 2024 (October and November — operational data)

Due to the blockade of the Black Sea and the termination of the grain agreement, the shipments of agricultural products through Danube ports in 2023 nearly doubled compared to 2022, reaching 19.7 million tons. However, following the launch of the Ukrainian Corridor, cargo flows shifted in favor of the Greater Odesa ports.

Despite constant shelling on port infrastructure by Russia, the total agricultural cargo turnover over 11 months of 2024 amounted to 56.1 million tons, compared to 39.4 million tons in 2023.

Land market results

July 1, 2021 — December 16, 2024

401 thou.

Number of alienated land plots

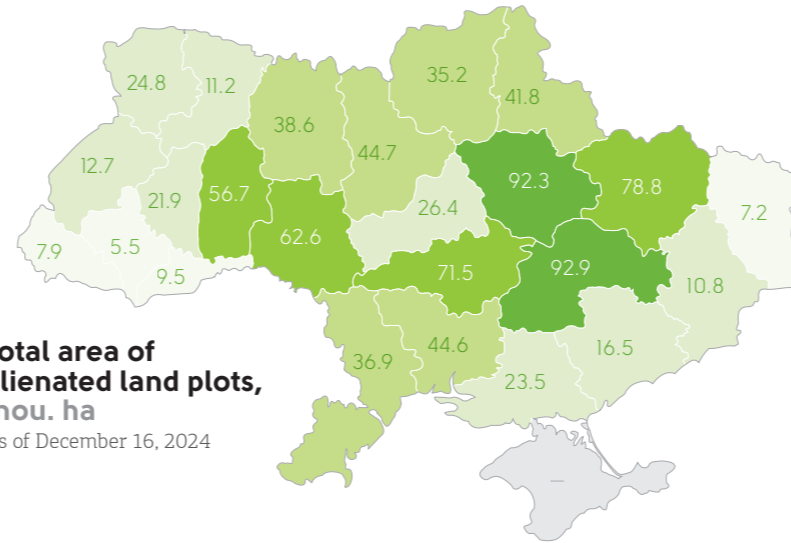
42.8 UAH thou.

Weighted average price of 1 ha

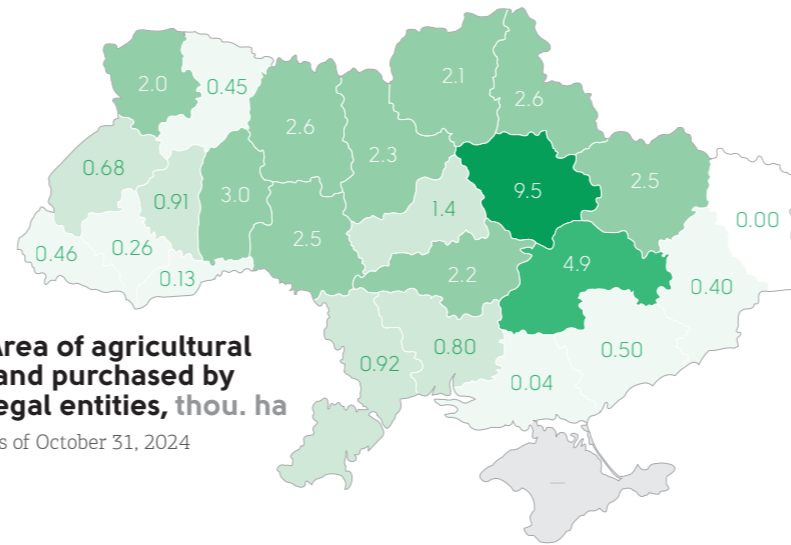
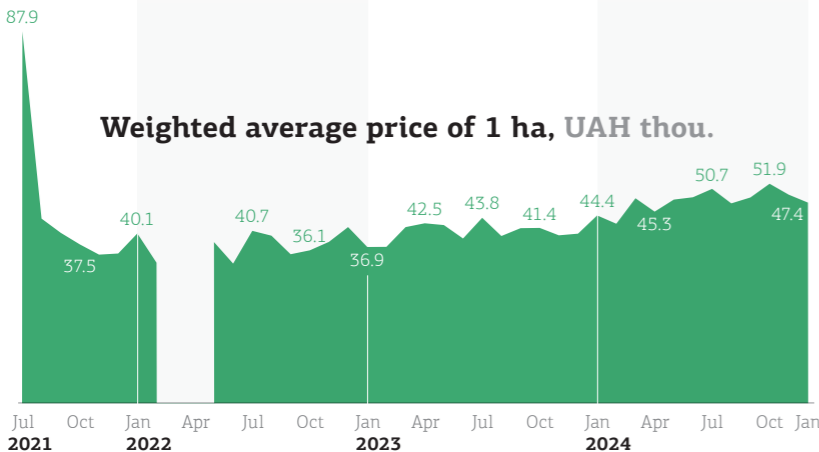
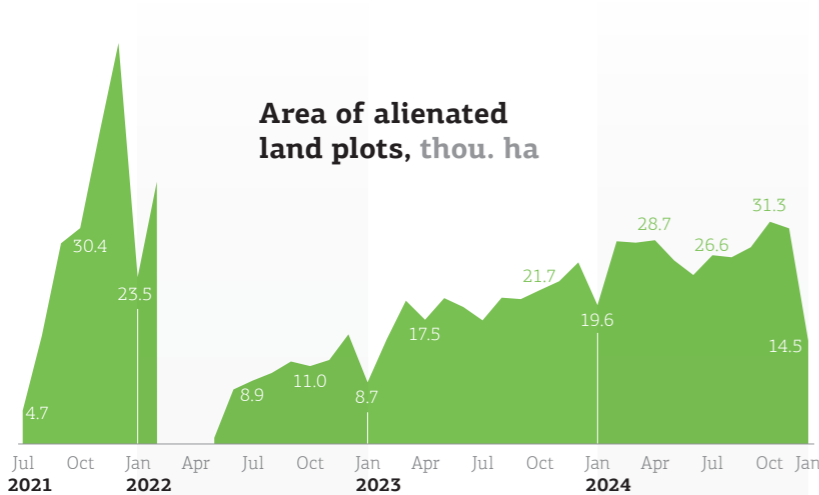
875 thou. ha

Area of alienated land plots

Since the opening of the market until December 16, 2024, a total of 875.2 thousand hectares of land have been sold, with the largest volumes recorded in Poltava and Dnipropetrovsk regions. Over 400 thousand agricultural land purchase and sale agreements have been concluded. To date, a quarter of the land plots have changed ownership through purchase and sale transactions, and while 65% of transfers involved inherited land.



Total area of alienated land plots, thou. ha
As of December 16, 2024



Area of agricultural land purchased by legal entities, thou. ha
As of October 31, 2024

43.3 thou. ha
or 15,035 plots were purchased by legal entities



As of January 1, 2024, legal entities founded by Ukrainian citizens, on which no sanctions have been imposed, have received the right to purchase agricultural land that was previously under a moratorium. Also, since the beginning of the year, the limit for agricultural land acquisition has been increased to 10 thousand hectares for one person.

Land Bank State Program

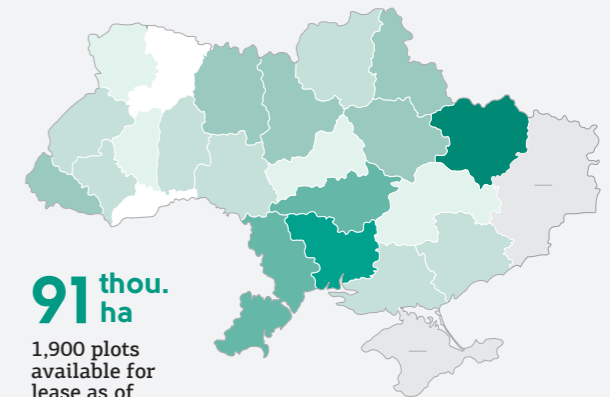
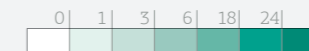
The Land Bank is a project of the State Property Fund of Ukraine that creates a transparent market for leasing state agricultural lands through online auctions on Prozorro.Sales. The goal is to eliminate corruption and shadow schemes, as well as to improve the efficiency of state land use.

Land plots can be leased for up to 14 years for annual crops or up to 25 years for perennials. The starting rental price begins at 12% of the normative land value assessment.

How to participate in land auctions?

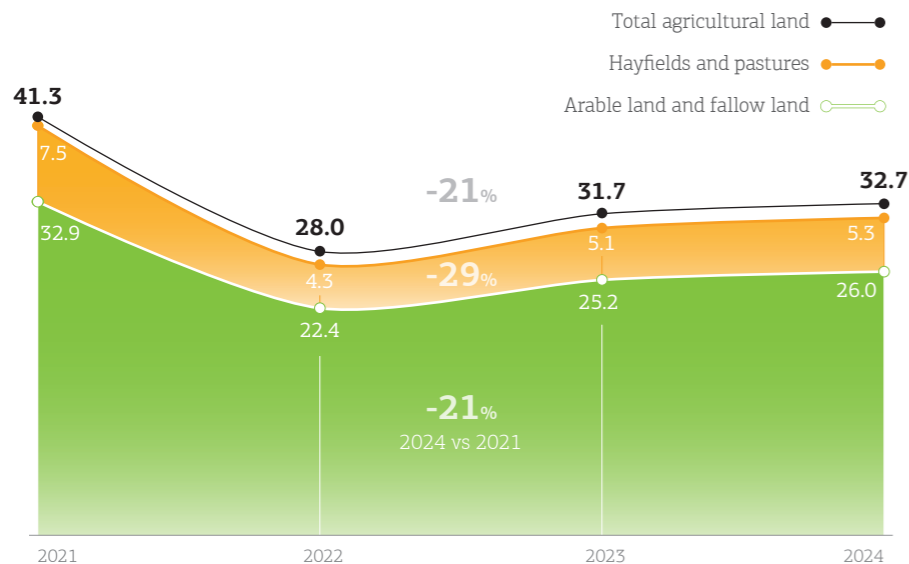
1. Register on any of the sites connected to the system.
2. Apply for participation in the auction via e-cabinet.
3. Pay the registration and guarantee fees.
4. Participate in the auction by placing your winning bid.
5. Pass the qualification process.
6. Sign an agreement based on the auction results and pay the sublease fee for the first year

Area of plots available under the Land Bank state program, thou. ha

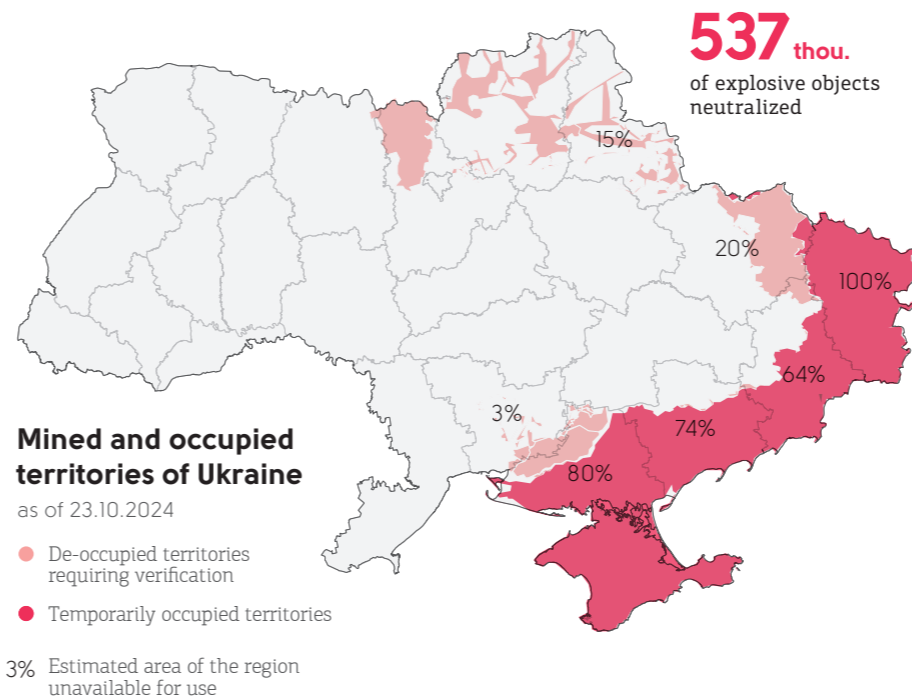
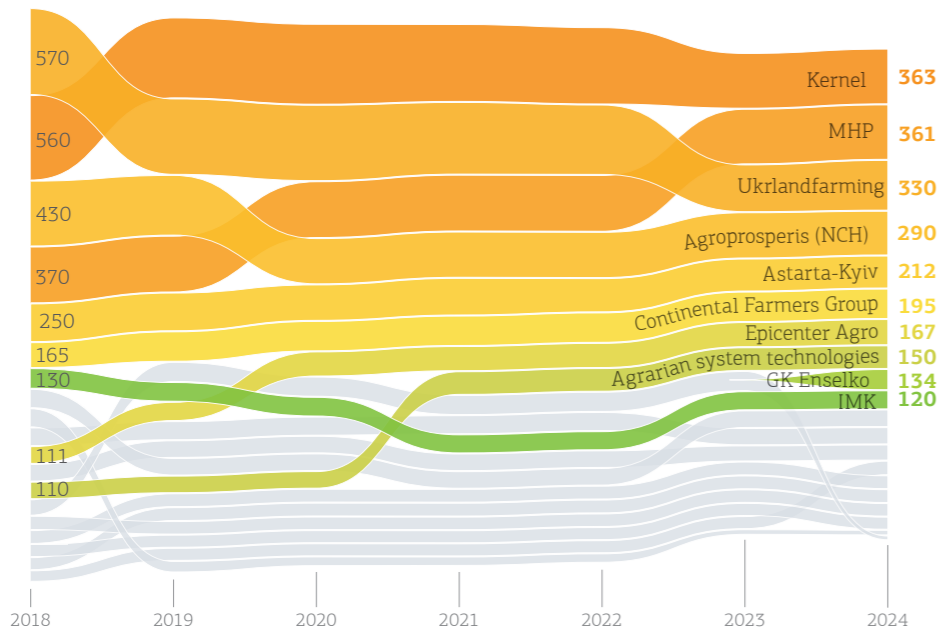


91 thou. ha
1,900 plots available for lease as of 22.10.2024

Dynamics of Ukraine's land resources, mln ha



Top 10 agricultural holdings by land bank size, thou. ha



Ukraine demining

The Government of Ukraine has implemented the National Mine Action Strategy for 2023–2025 to demine critical areas: agricultural lands, residential areas, transport infrastructure, etc. As of October 2024, 57 mine action operators have been certified in Ukraine (43 Ukrainian and 14 international).

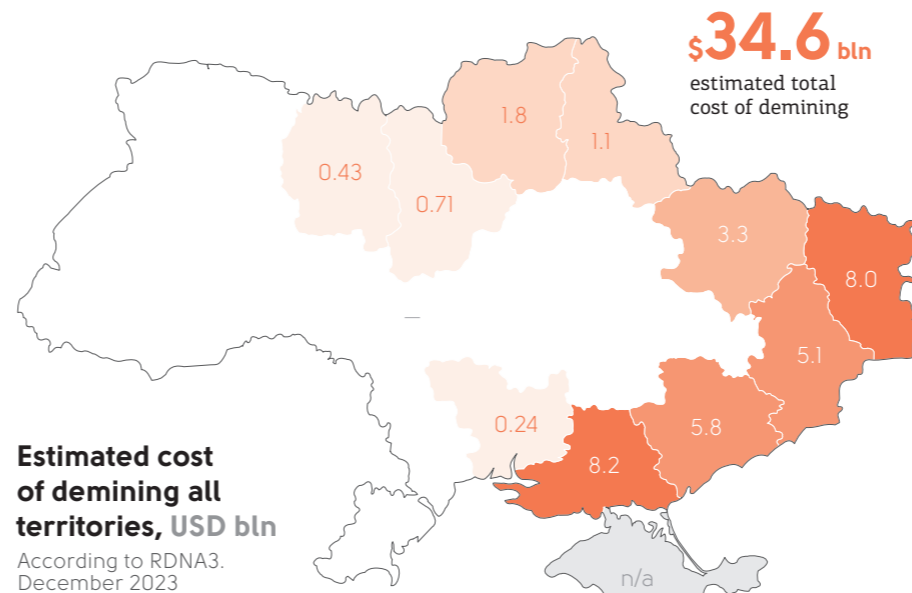
The state is collaborating with international partners, engaging experts and technical support. Over 48 countries have already provided assistance, contributing a total of \$998 million.

14.4 mln ha territory affected by hostilities

3.5 mln ha cleared through demining or non-technical survey

6 mln ha potentially contaminated agricultural land

200 thou. ha demined according to the Ministry of Defense



Compensation for humanitarian demining costs

Since September 2024, a program has been in place that compensates 100% of the costs of humanitarian demining of de-occupied lands for farmers:

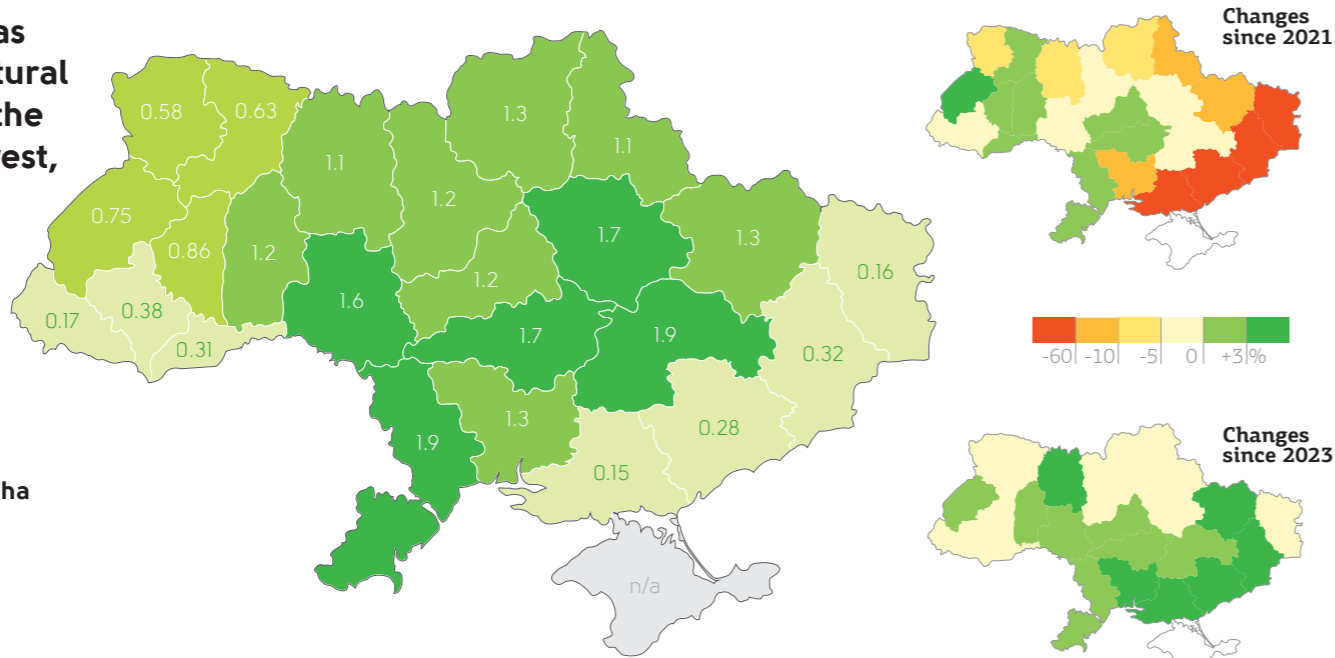
1. The farmer submits an application through the State Agrarian Register (SAR), where it undergoes initial verification.
2. The Humanitarian Demining Center checks the documents, estimates the cost of demining, and procures services through Prozorro. After the bidding process, the Center informs the farmer about the operator assigned to perform the work.
3. A certified mine action operator demines the designated area.



Crop production

Sown areas of agricultural crops for the 2024 harvest, mln ha

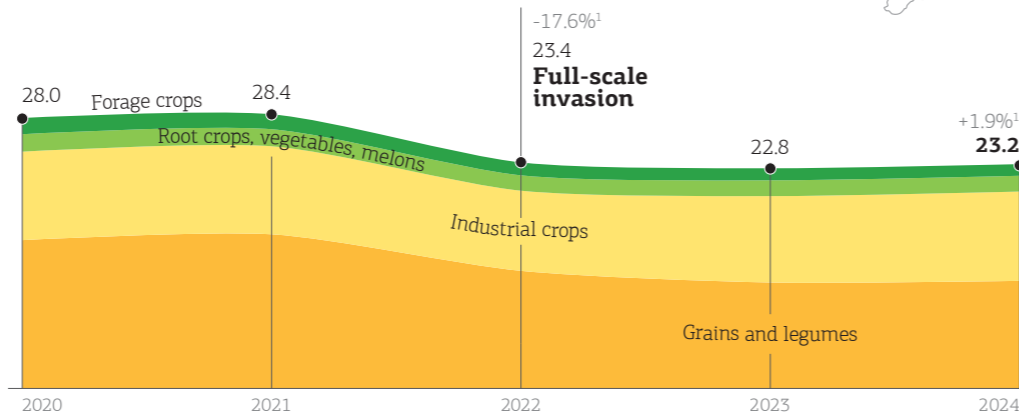
23.2 mln ha
Total sown area in 2024



Dynamics of sown areas, mln ha

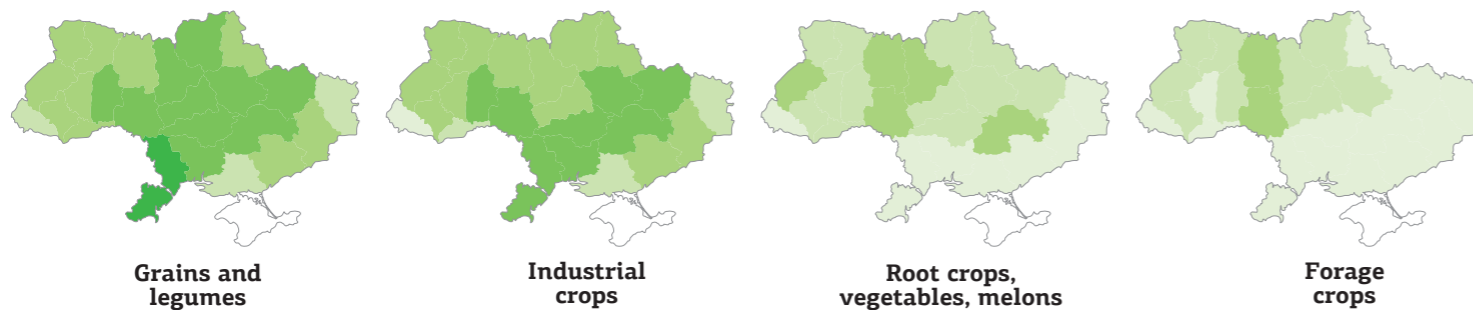
¹ Compared to the previous year

The area under cultivation for the 2024 harvest increased by 1.9%. An upward trend is observed across all crop groups, except for forage crops, where the area decreased by 4.5%.

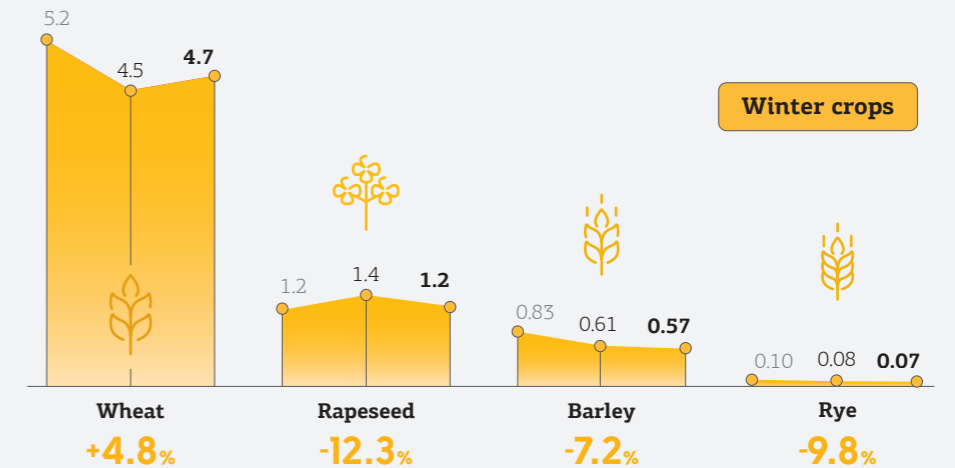
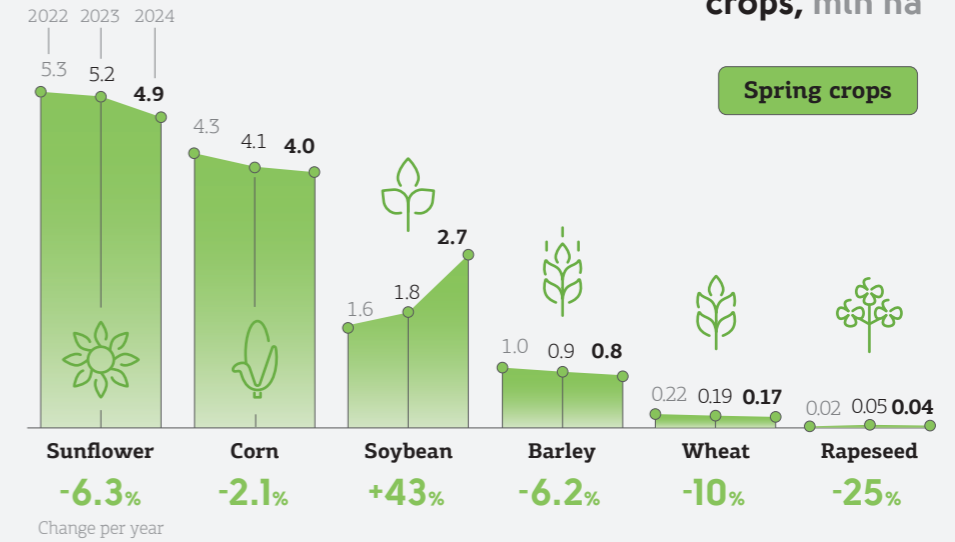


Sown areas by categories

50 100 500 1,000 thou. ha

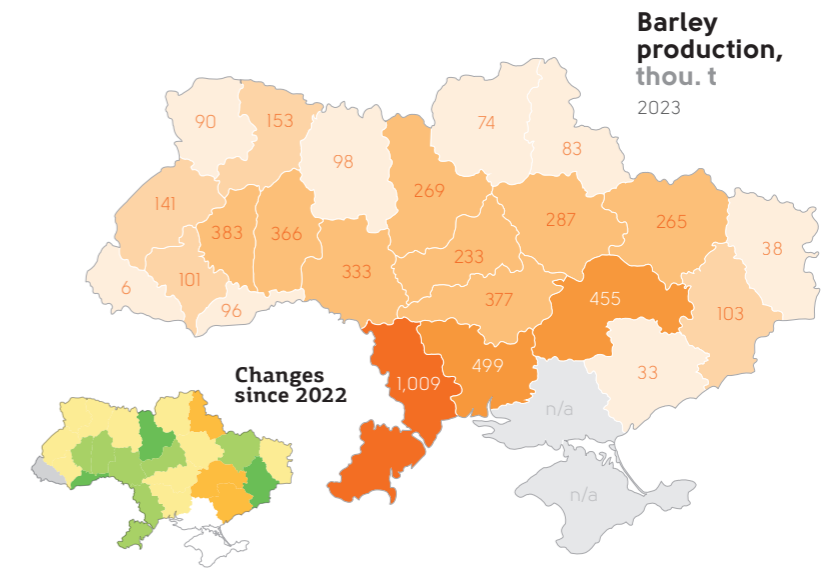
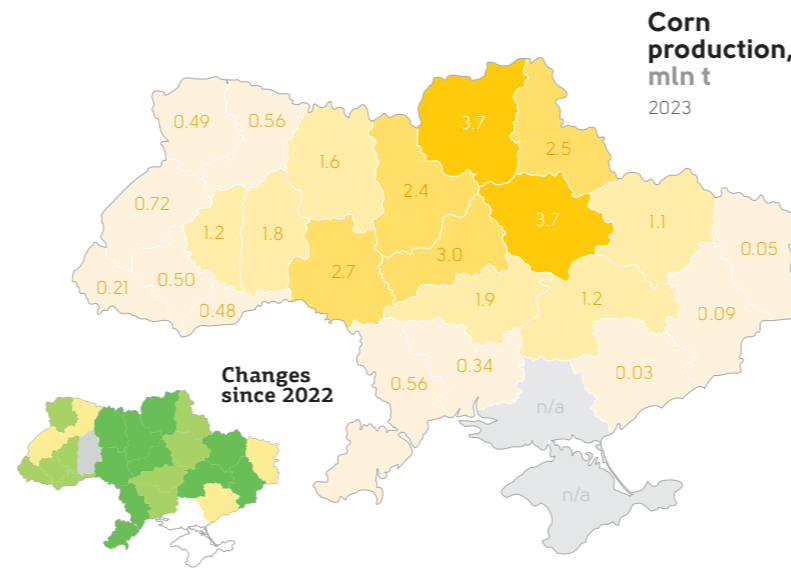
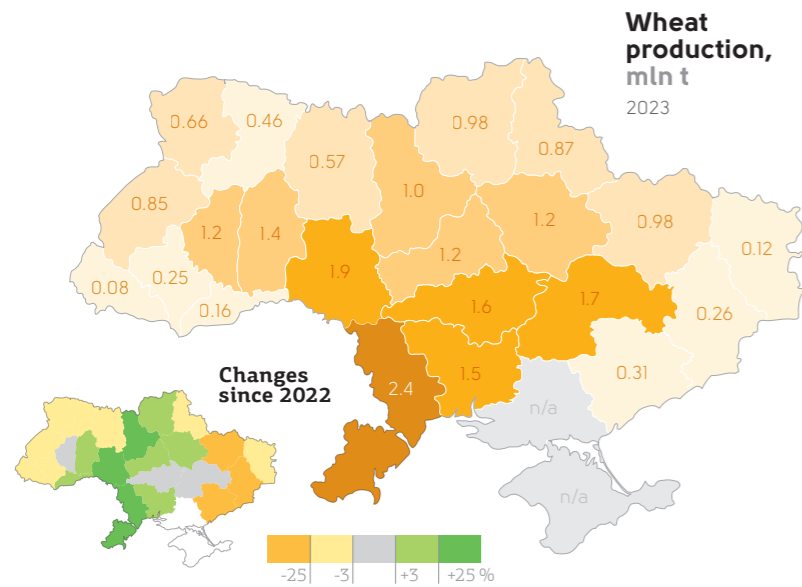
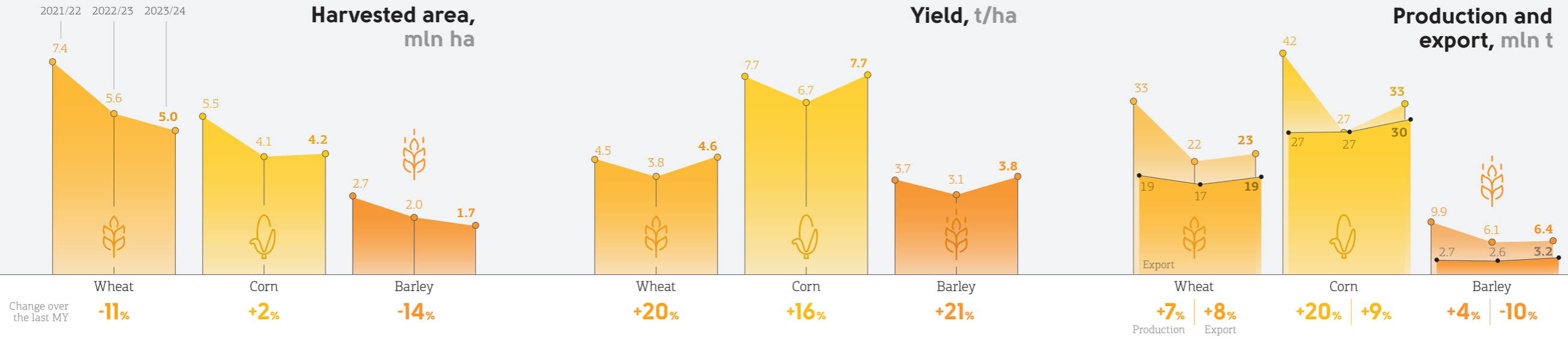


Structure of sown crops, mln ha



There is a reduction of the area under grain crops, except for wheat, with a shift toward oilseed crops. Among the key trends in crop cultivation is the increase in soybean planting areas for the second season in a row (+43% in 2024 compared to 2023).

The lack of stability and a clear understanding of the short-term future, low prices for commodity products and a shortage of personnel have forced farmers to postpone the purchase of seeds and plant protection products until the last moment.



TOP-5 export destinations from Ukraine in 2023/24 MY, USD mln



Wheat

955 Spain	291 Egypt	268 Indonesia	179 Turkey	167 Romania
-----------	-----------	---------------	------------	-------------



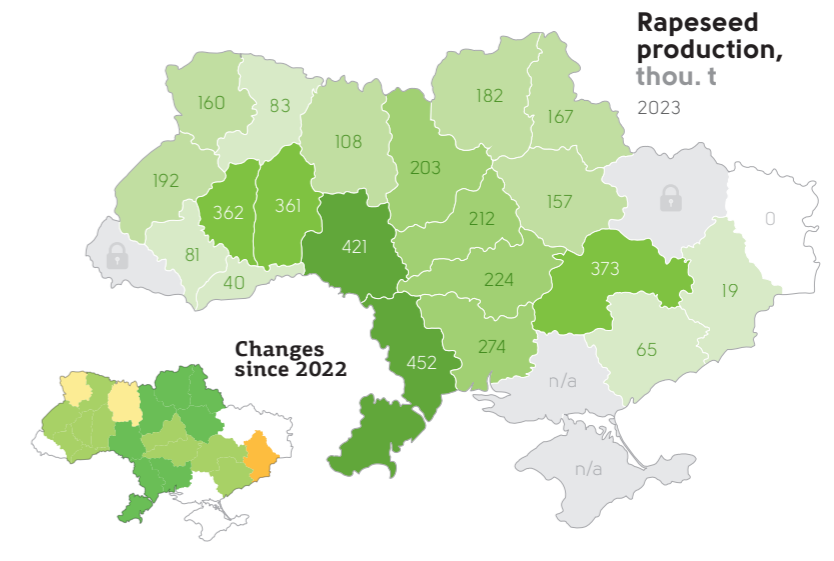
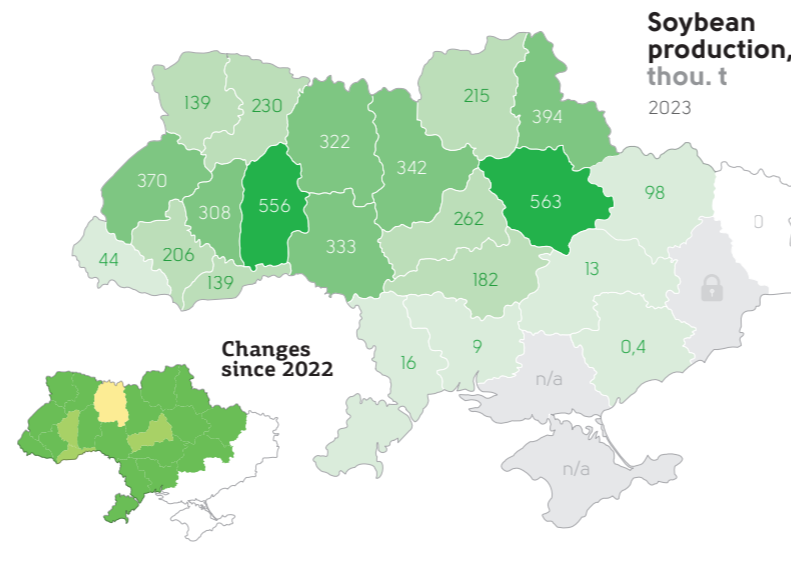
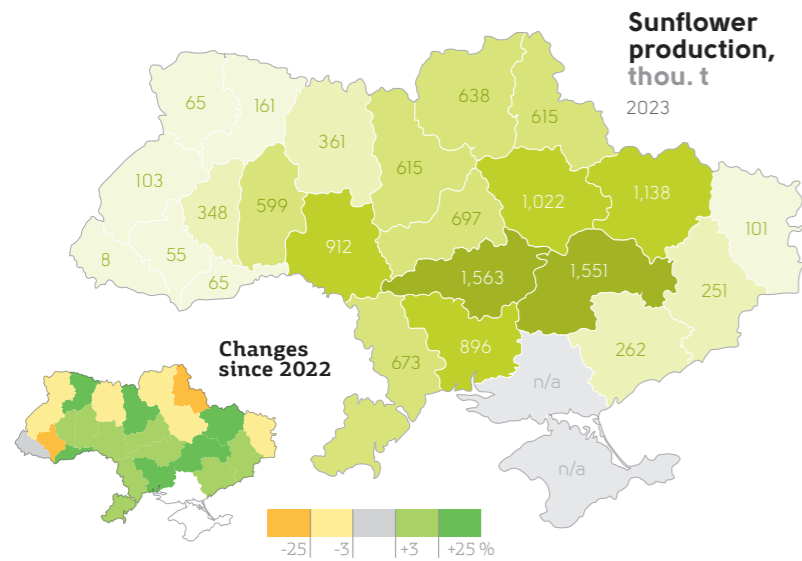
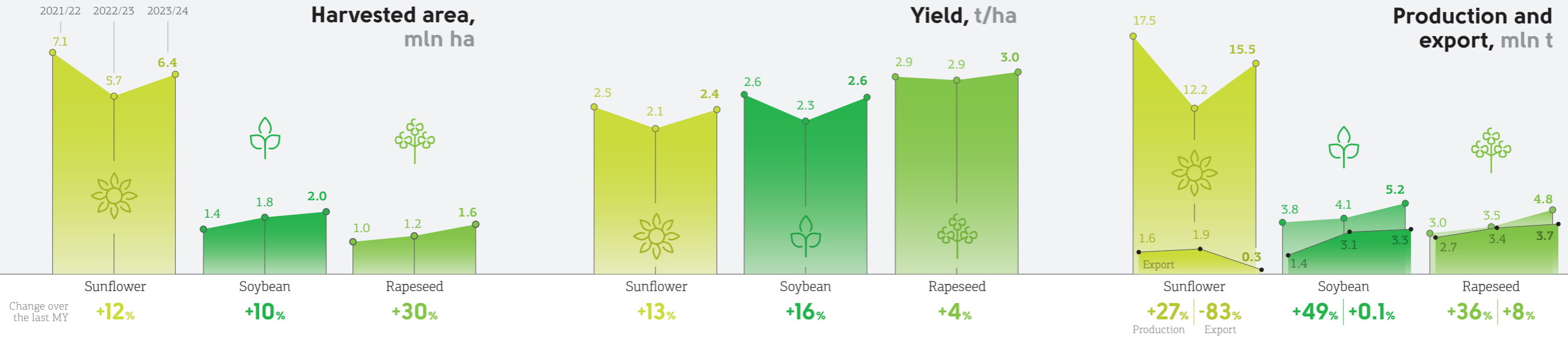
Corn

984 Spain	709 China	553 Egypt	449 Netherl.	399 Italy
-----------	-----------	-----------	--------------	-----------



Barley

111 China	65 Spain	35 Romania	33 Cyprus	20 Tunisia
-----------	----------	------------	-----------	------------

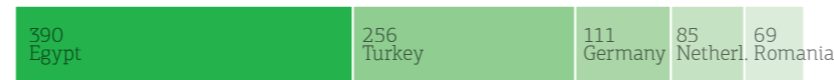


TOP-5 export destinations from Ukraine in 2023/24 MY, USD mln

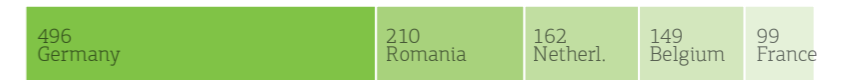
Sunflower



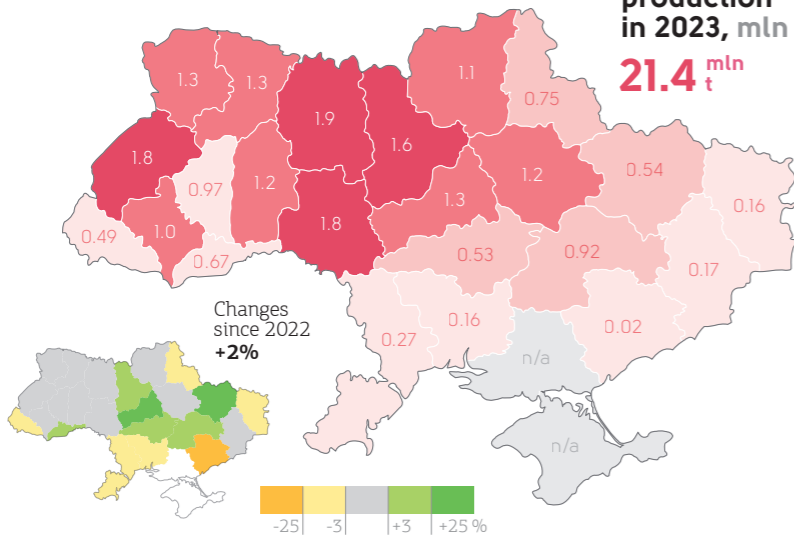
Soybean



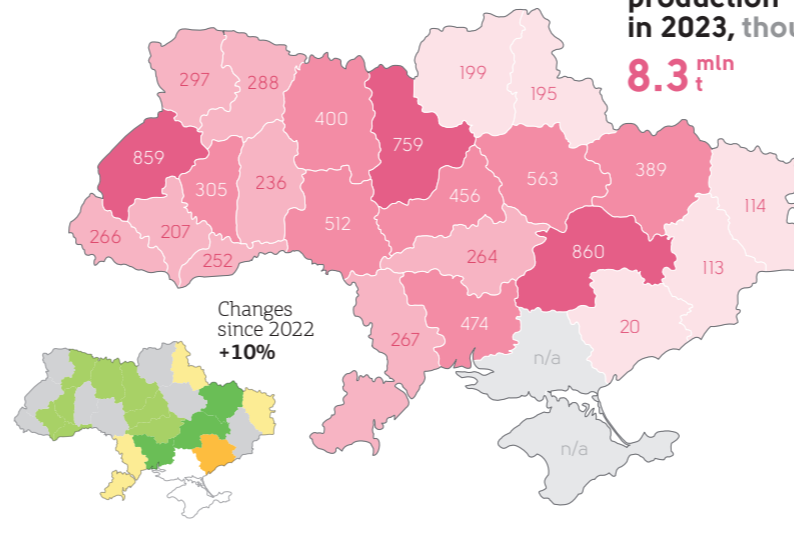
Rapeseed



Potato production in 2023, mln t
21.4 mln t



Vegetable production in 2023, thou. t
8.3 mln t

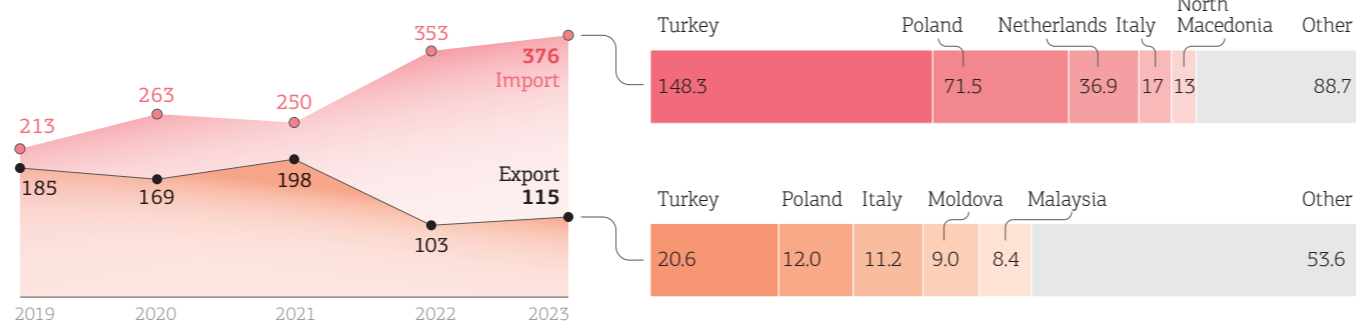


Vegetable export and import in 2023, USD mln

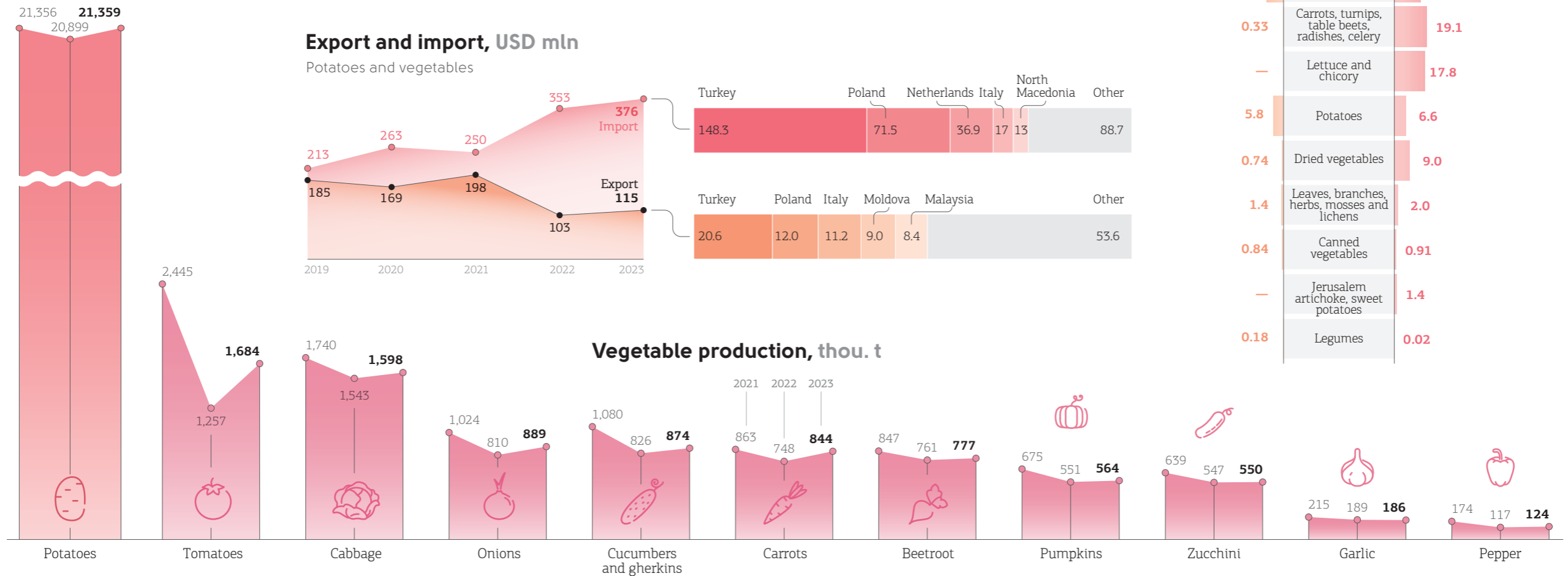
	Export	Import
	1.7	116.8
Tomatoes		
Dried leguminous vegetables	86.1	2.8
Onion and garlic	0.64	63.1
Other vegetables, fresh or chilled	5.0	56.8
Cucumbers, gherkins	2.5	34.0
Cabbage	0.05	29.6
Frozen vegetables	9.8	15.6
Carrots, turnips, table beets, radishes, celery	0.33	19.1
Lettuce and chicory	—	17.8
Potatoes	5.8	6.6
Dried vegetables	0.74	9.0
Leaves, branches, herbs, mosses and lichens	1.4	2.0
Canned vegetables	0.84	0.91
Jerusalem artichoke, sweet potatoes	—	1.4
Legumes	0.18	0.02

Export and import, USD mln

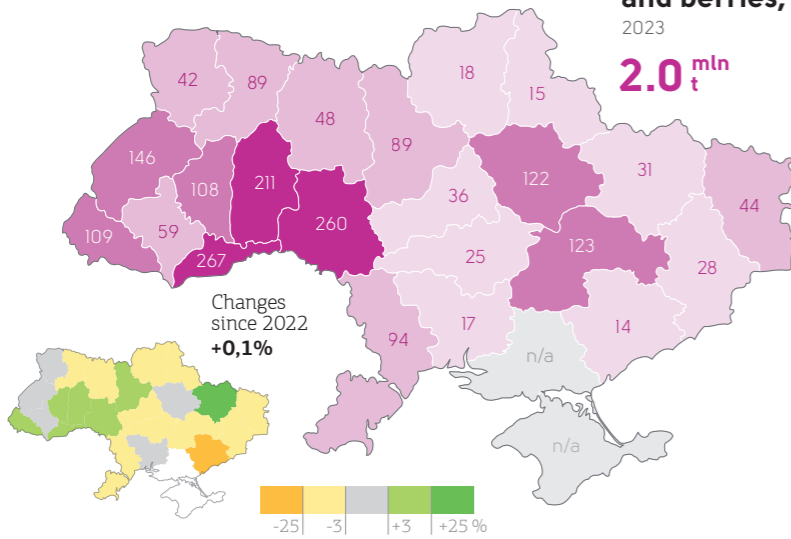
Potatoes and vegetables



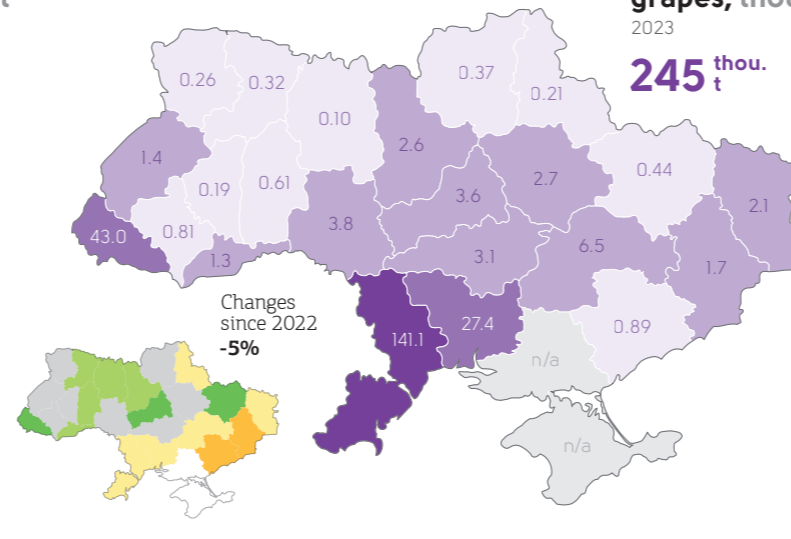
Vegetable production, thou. t



Production of fruits and berries, thou. t



Production of grapes, thou. t

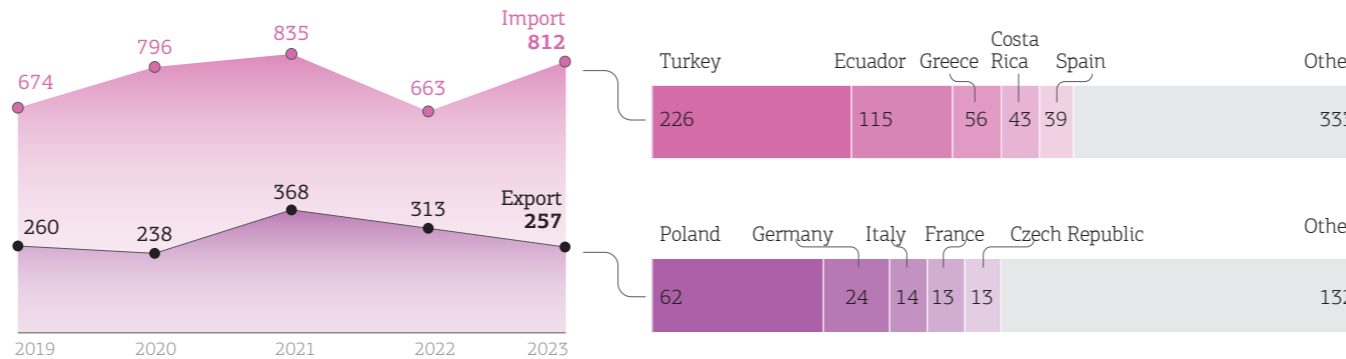


Export and import in 2023, USD mln

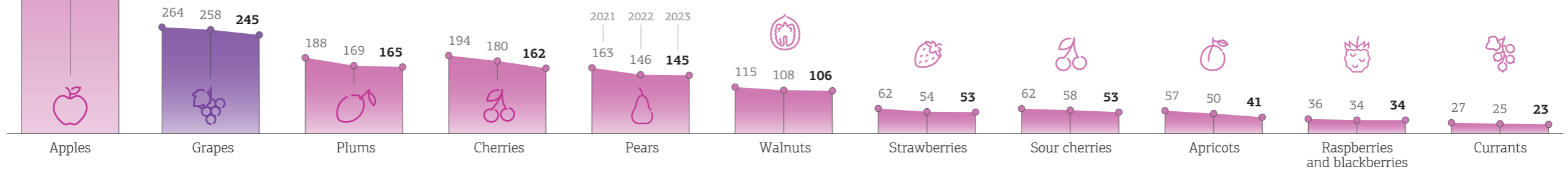
	Export	Import
Citrus fruits	1.78	275.8
Bananas and plantains	3.00	201.6
Fruits and nuts, raw or cooked, frozen	132.0	9.2
Other nuts	77.3	28.7
Other fruits, fresh	17.8	73.7
Dates, figs, pineapples, avocados, guavas, mangoes	0.76	64.0
Grapes	0.03	50.4
Apricots, cherries, peaches, plums	0.39	49.6
Apples, pears and quinces	18.1	12.1
Melons, watermelons and papayas	0.03	20.5
Coconuts, Brazil nuts, cashews	0.03	16.2
Dried fruits; mixtures of nuts	5.50	10.0
Citrus fruit, melon, watermelon peels	0.002	0.12
Canned fruits and nuts	—	0.04

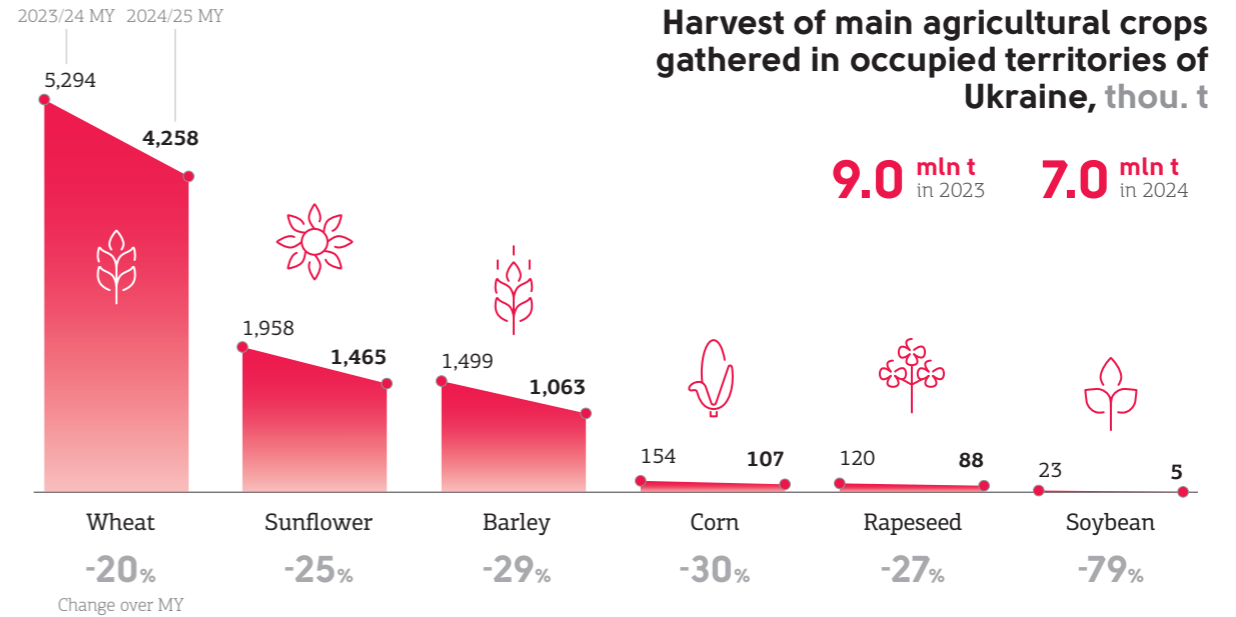
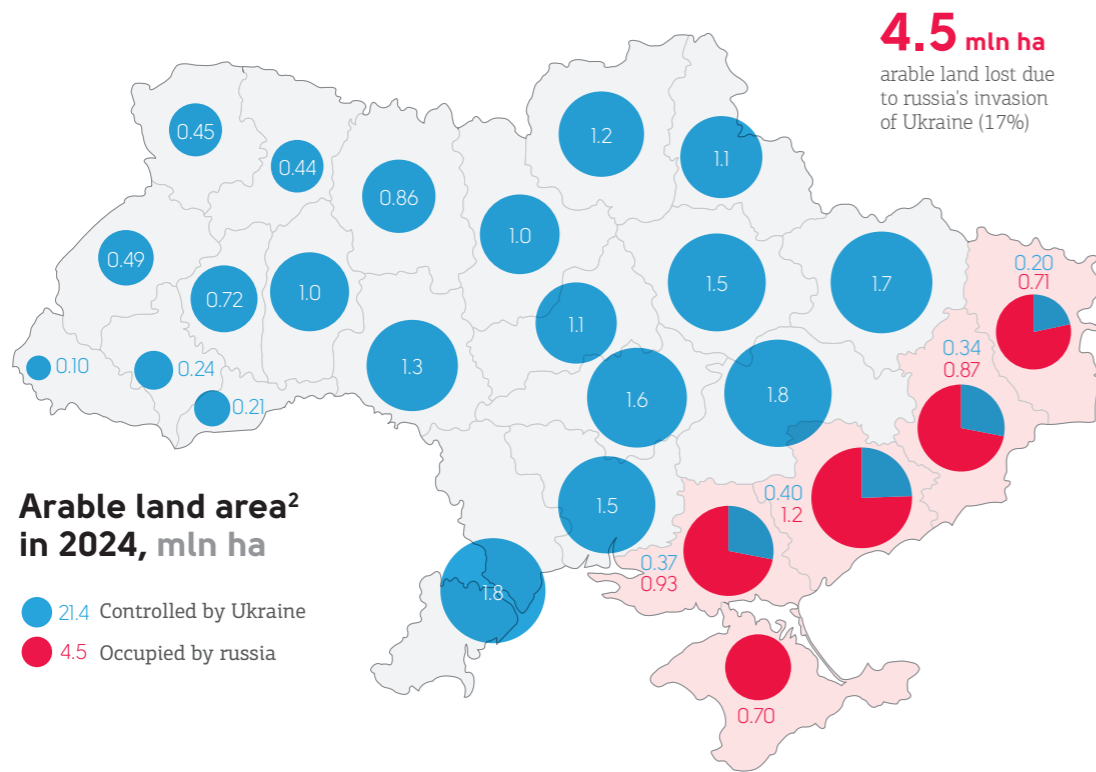
Export and import, USD mln

Fruits, berries, nuts and melons



Production of fruits, berries and nuts, thou. t



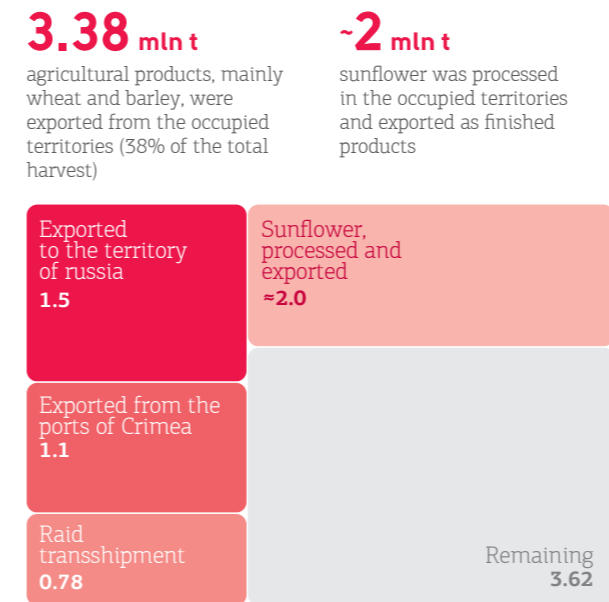


Loss of arable land in Ukraine², mln ha



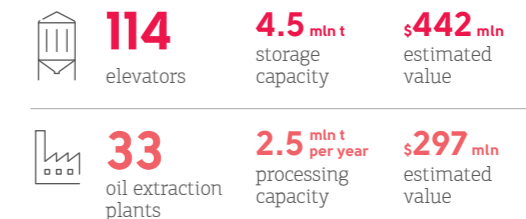
In 2021, Ukraine's arable land amounted to 24.9 mln ha, but in 2024 this area had decreased to 21.4 mln ha (by 3.5 mln ha). The sown area for grains, legumes, and oilseed crops decreased even more — by 5.1 mln ha: from 24.9 mln ha in 2021 to 19.8 mln ha in 2024. This indicates that **~1.6 mln ha of arable land in territories under Ukraine's control remain uncultivated** due to the ongoing war.

Documented export volumes of main crops in 2023, mln t¹



The russian authorities have imposed strict control over the agricultural sector of the temporarily occupied regions, forcing farmers to register with the occupation administration and sell their harvest at artificially low prices. A significant number of the farmers have left, while those who remain work under the threat of property confiscation and constant challenges due to shortages of machinery, water, and labor. Despite the occupiers' claims of record harvests, the actual yields are significantly lower than the pre-war ones, which is due to the destruction of infrastructure and the general degradation of the agricultural sector under occupation.

Infrastructure in the occupied territories (including Crimea)

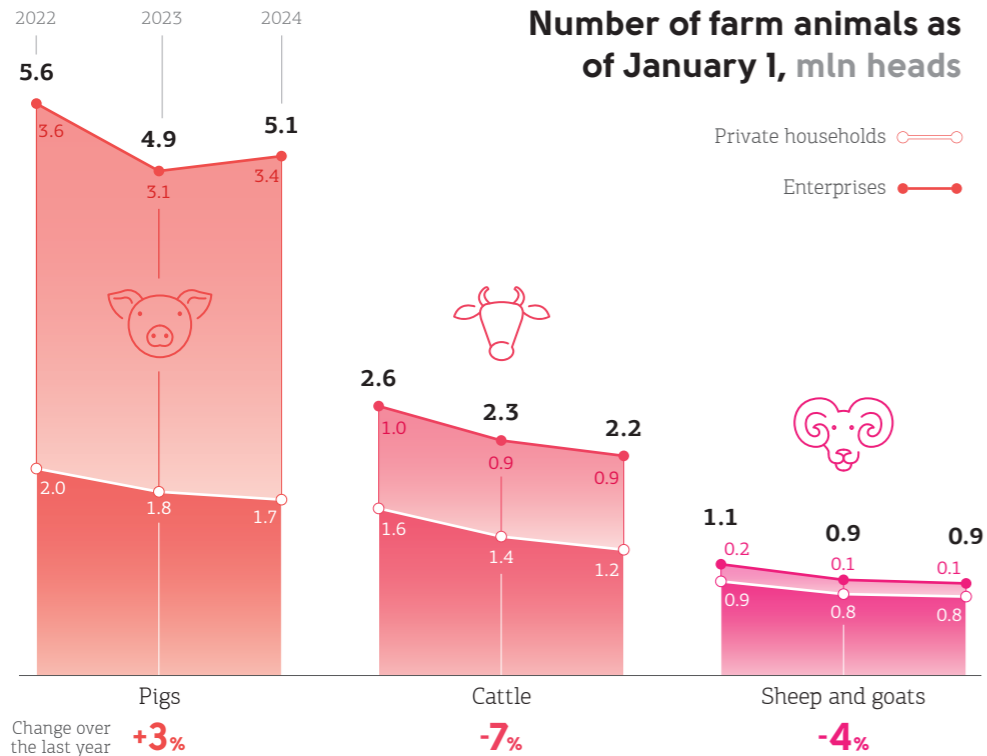
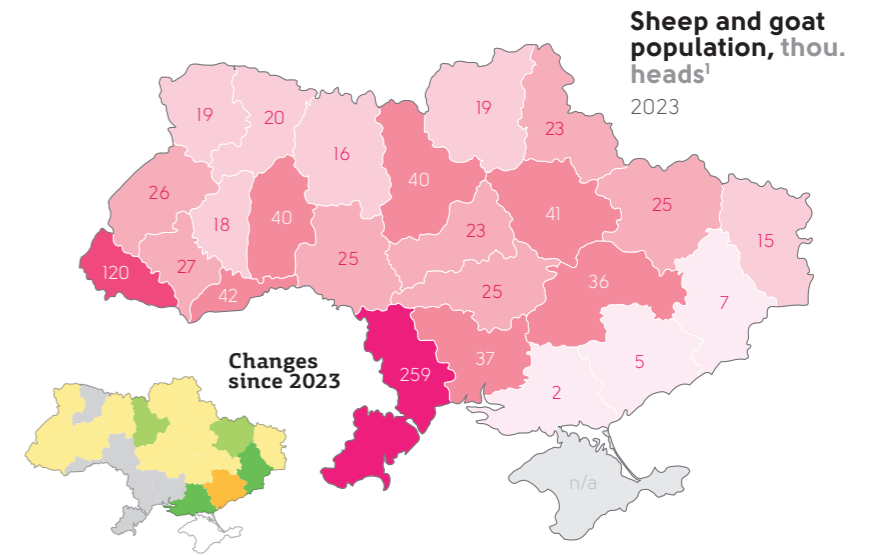
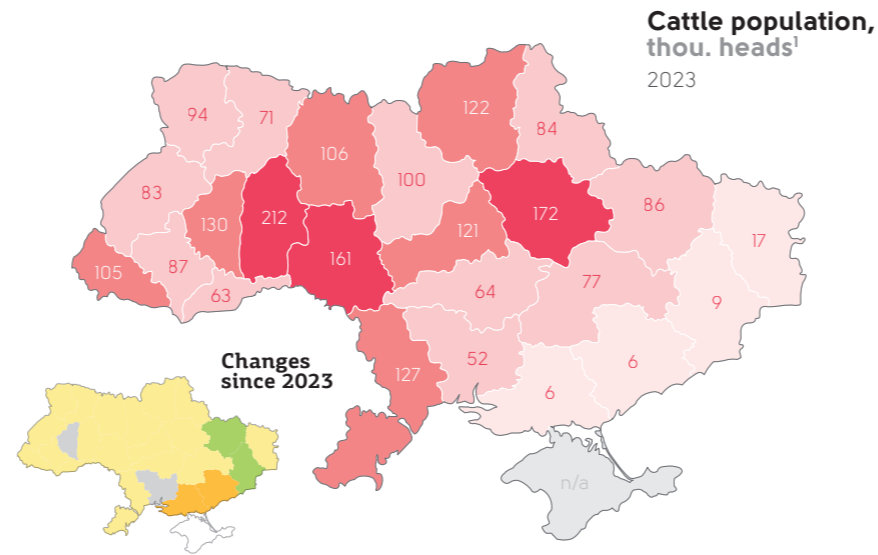
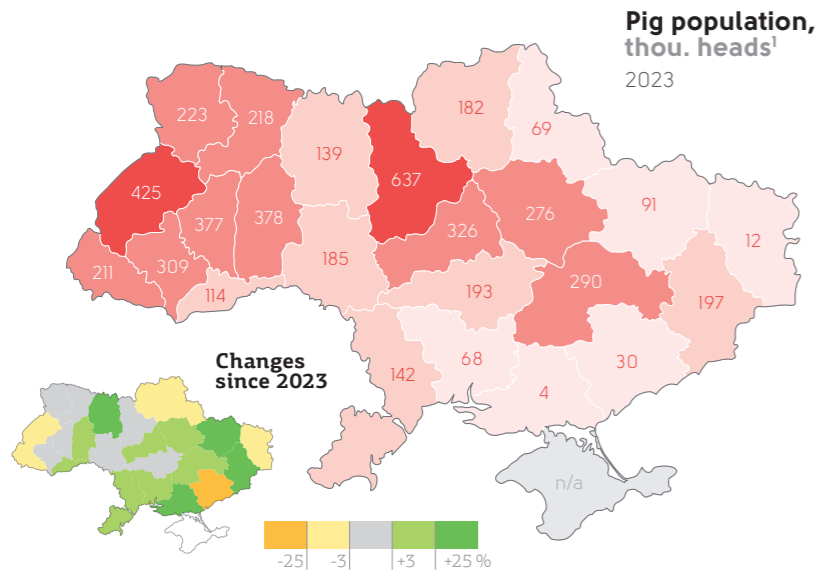


¹ Mainly grain flows were detected and oilseeds and oils were not taken into account

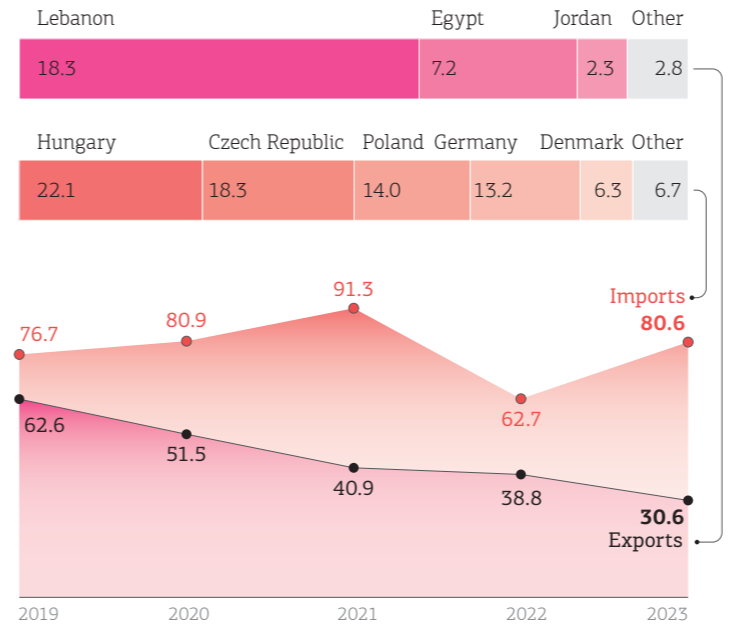
² Arable crops are included: the main crops are wheat, barley, corn, sunflower, rapeseed, soybeans; additional crops include millet, oats, buckwheat, peas, rye, etc.



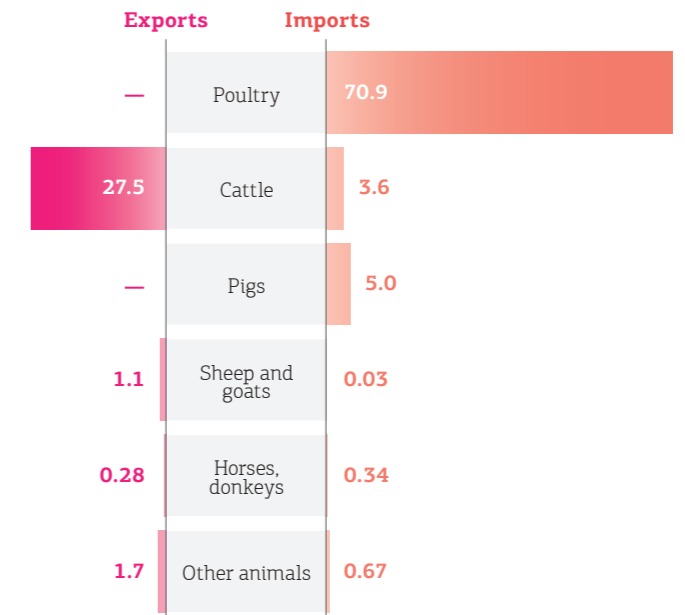
Livestock production



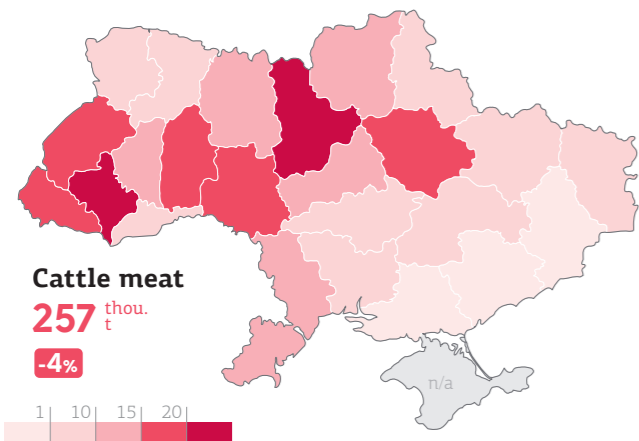
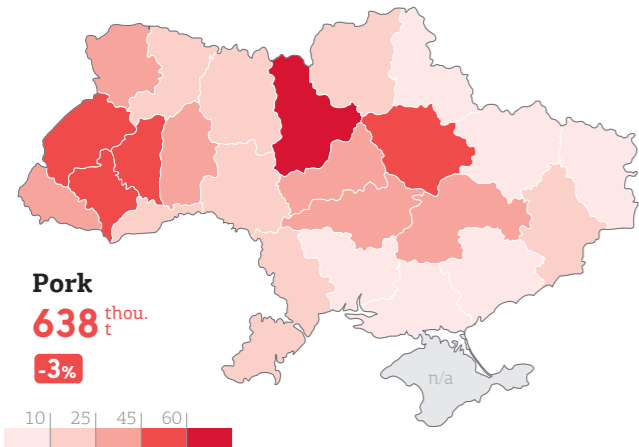
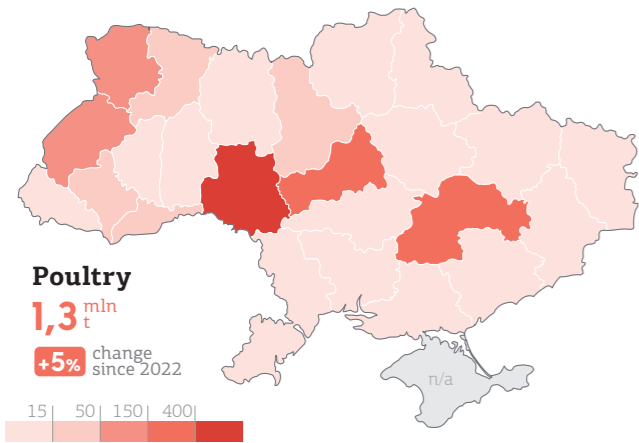
Export and import of farm animals, USD mln



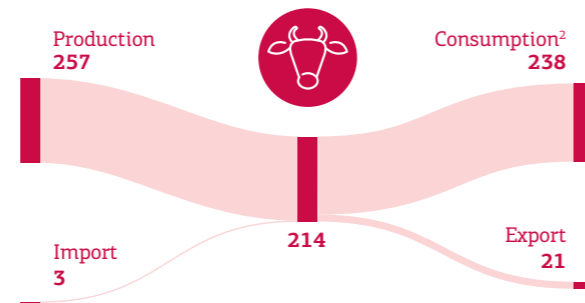
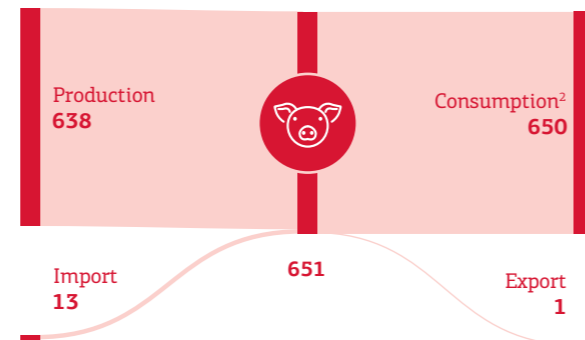
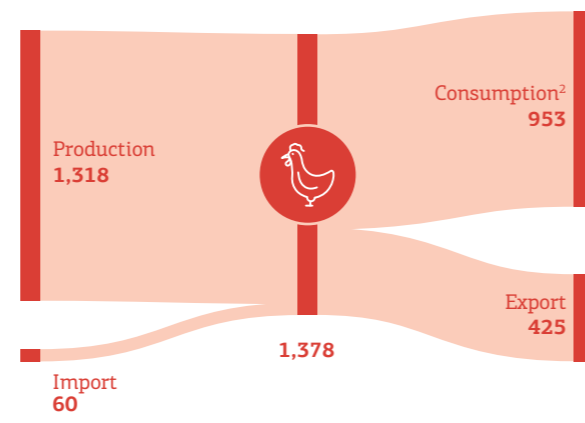
Top trade goods in 2023, USD mln



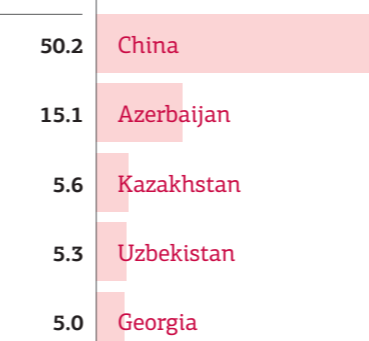
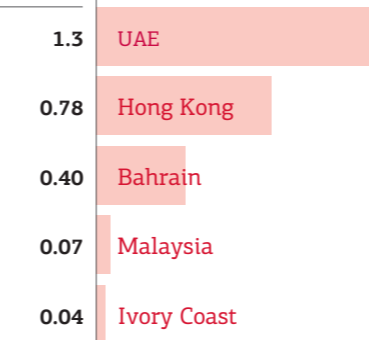
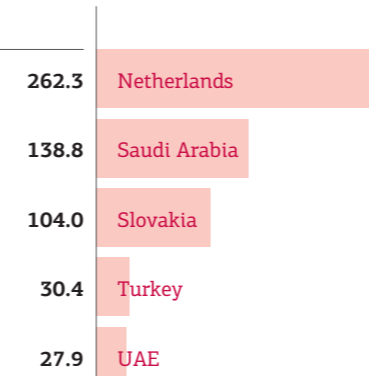
Meat production in 2023, thou. t¹



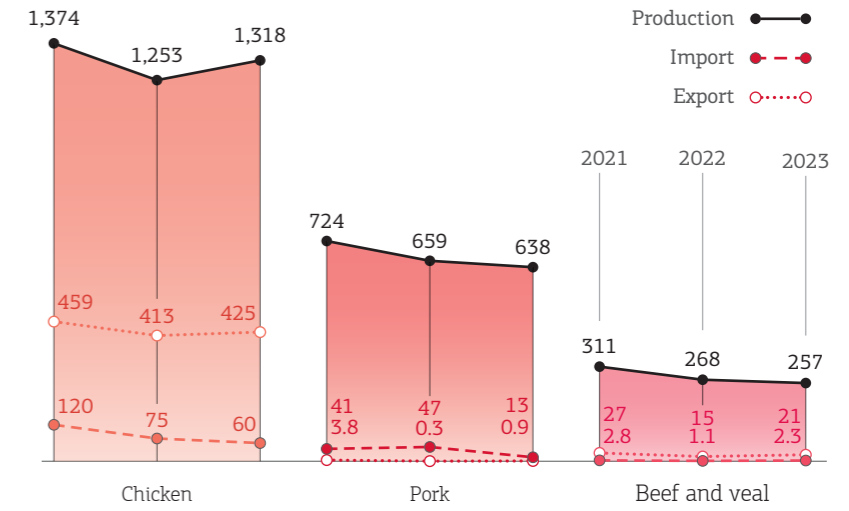
Balances of production and consumption in 2023, thou. t¹



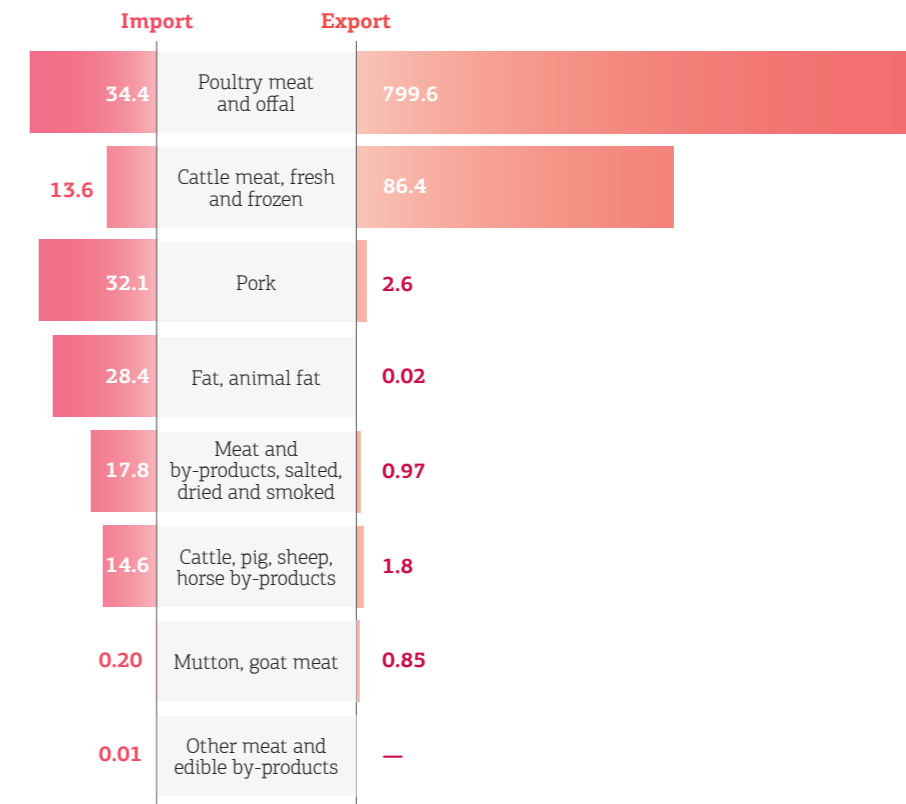
Top importing countries, USD mln



Meat production and trade, thou. t¹



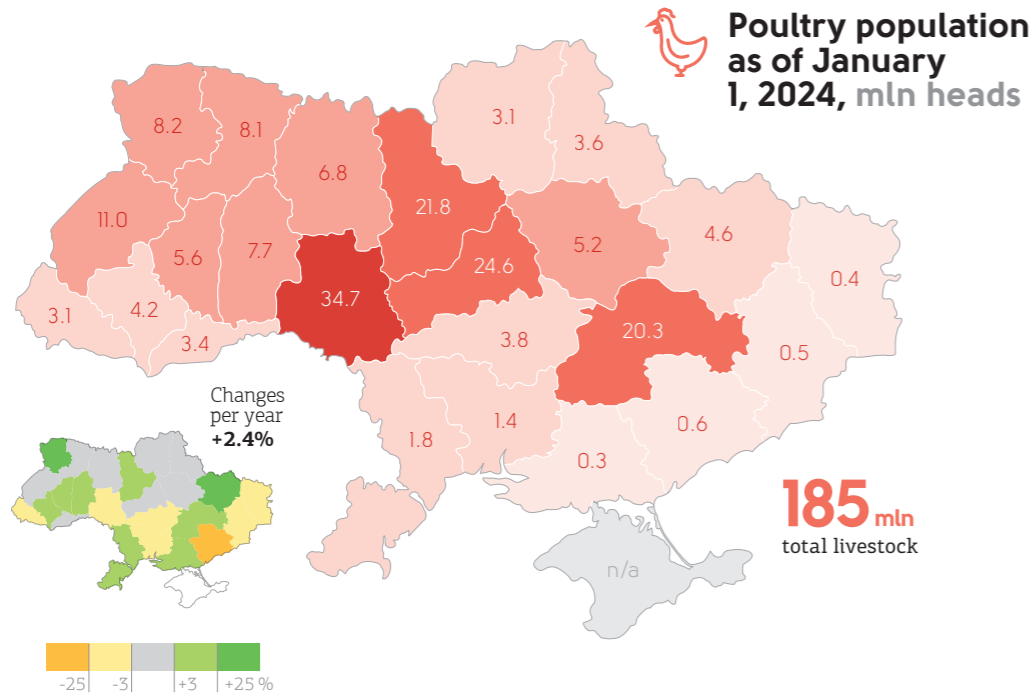
Top traded goods in 2023, USD mln



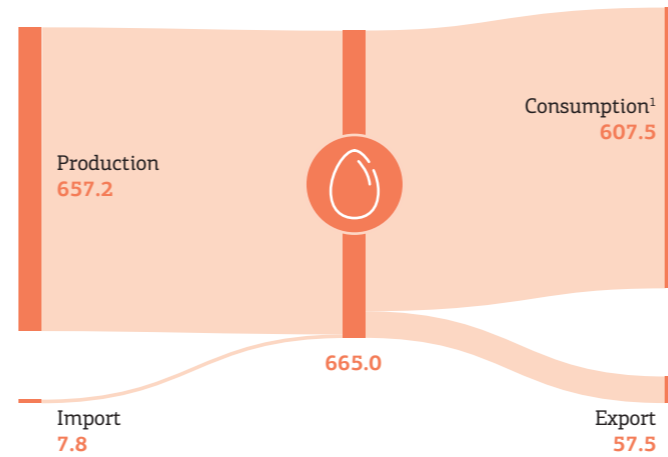
¹In slaughter weight

²Consumption includes domestic processing, residues and own consumption

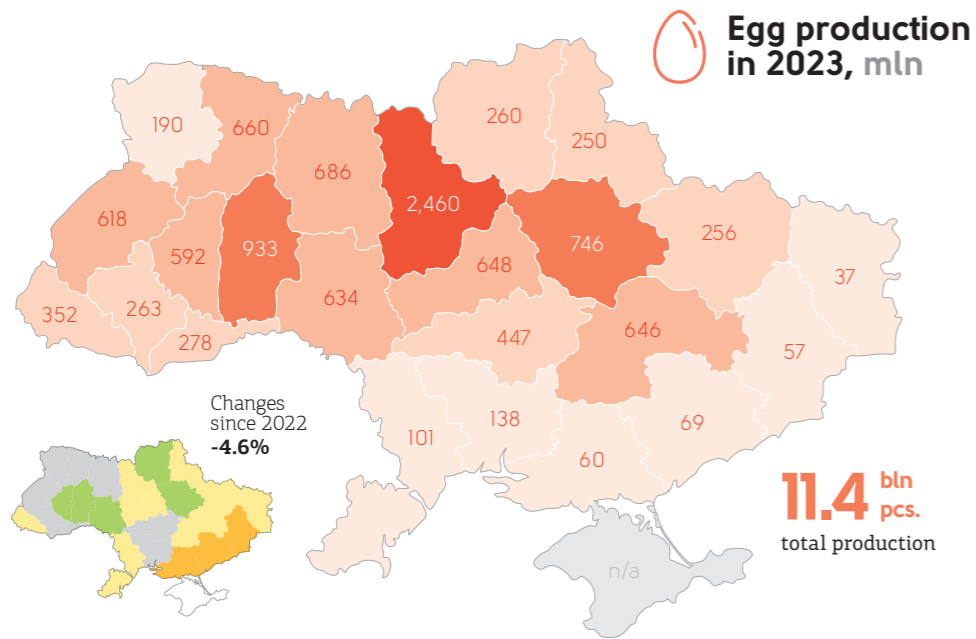
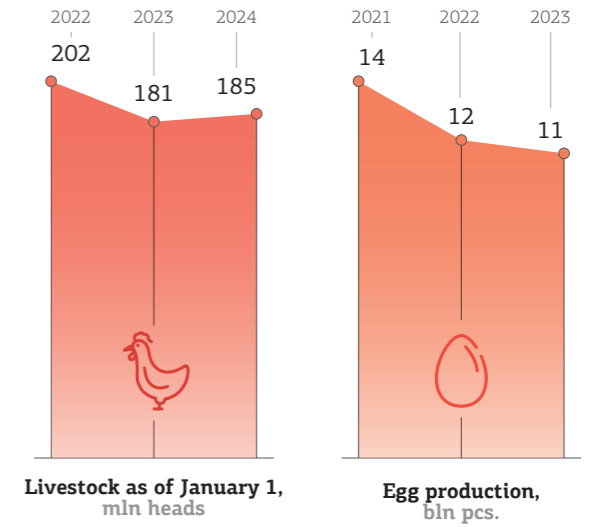
Sources: ukrstat.gov.ua, customs.gov.ua



Balances of production and consumption of eggs in 2023, thou. t

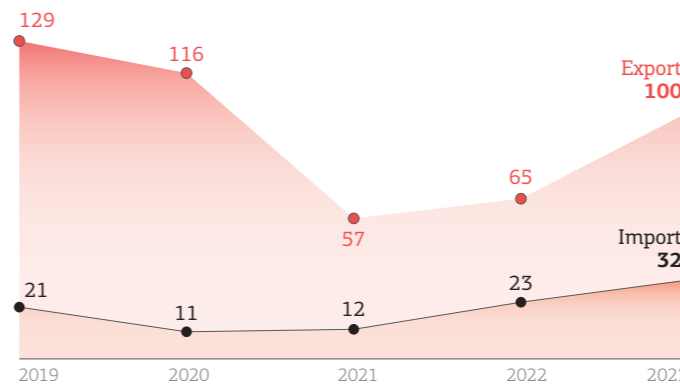


Poultry population and egg production



Trade in eggs and egg products and main partners in 2023, USD mln

Partner	Export	Import
Netherlands	14.6	3.8
Czech Republic	7.4	1.8
Germany	4.5	1.8
Poland	1.8	3.8
Other	3.8	1.8
Latvia	18.1	31.7
Italy	17.5	31.7
Singapore	11.7	31.7
Poland	11.0	31.7
Netherlands	10.2	31.7
Other	31.7	31.7



Top trade goods in 2023, USD mln

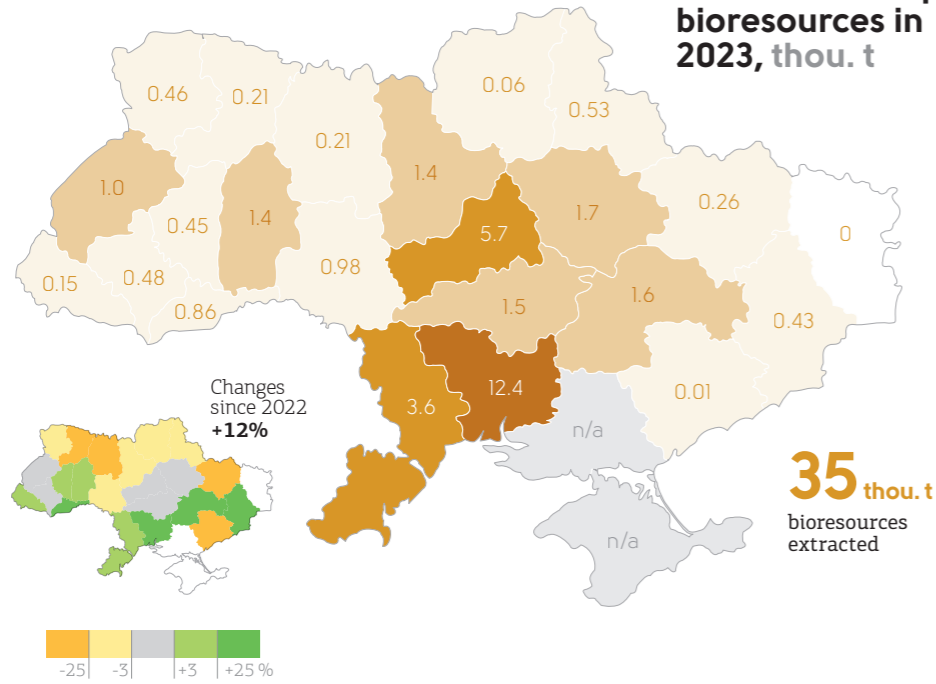
Category	Export (USD mln)	Import (USD mln)
Poultry eggs in shell	60.8	31.3
Poultry eggs without shell	39.3	0.66

The poultry industry in 2023 overcame the initial shocks and continues to gradually recover in 2024:

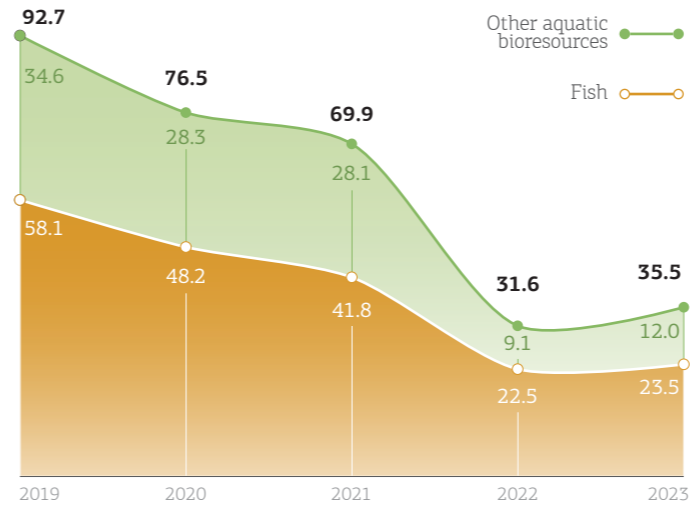
- Production facilities in central and western Ukraine remained outside the combat zone, which contributed to a rapid recovery.
- The restoration of traditional sales channels supported production growth.
- Grains and oilseeds remained relatively inexpensive, leading to lower feed prices.

In 2023, exports of chicken meat and eggs recovered to high volumes. While EU countries remained the main destination, Ukraine is gradually shifting focus to markets in the Middle East, Central Asia, and Africa.

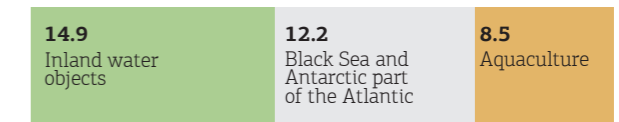
Extraction of aquatic bioresources in 2023, thou. t



Dynamics of extraction of aquatic bioresources, thou. t



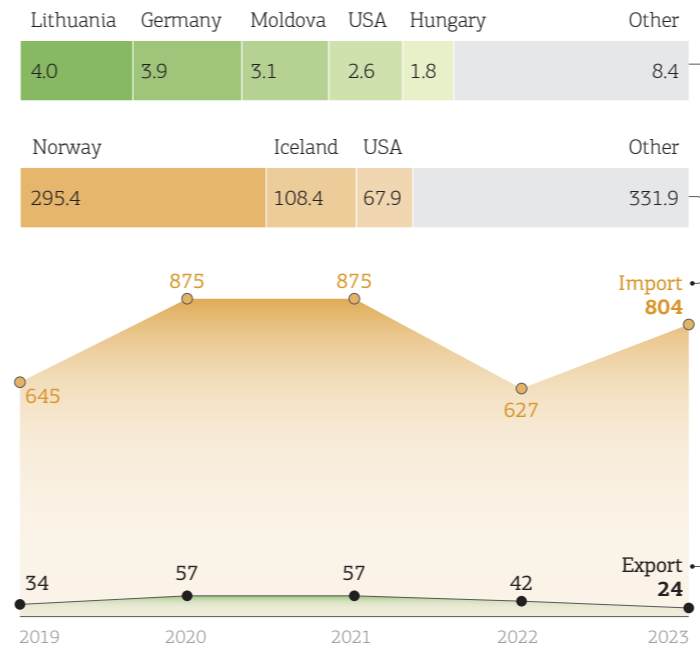
Places of extraction of aquatic bioresources in 2023, thou. t



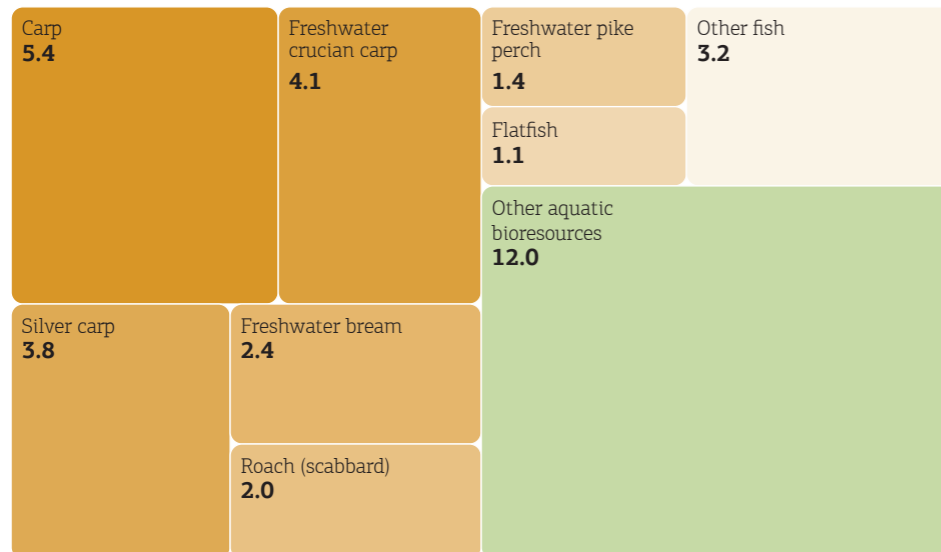
Fish and aquatic resources catch in 2023 increased by 12% compared to 2022, but remained significantly below pre-war levels due to the destruction of the Kakhovka Reservoir, loss of access to the Sea of Azov, and restricted navigation in the Black Sea.

As part of the industry's adaptation to EU legislation, reforms are being implemented aimed at deregulation and introduction of European standards. Notably, electronic auctions for commercial fishing were introduced for the first time through the "Prozorro.Sales" system.

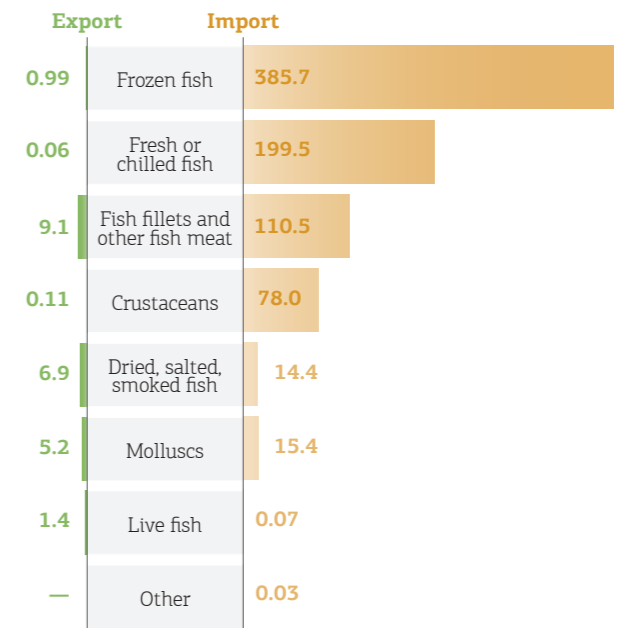
Trade in aquatic bioresources and main partners in 2023, USD mln



Extraction of biological resources by species in 2023, thou. t

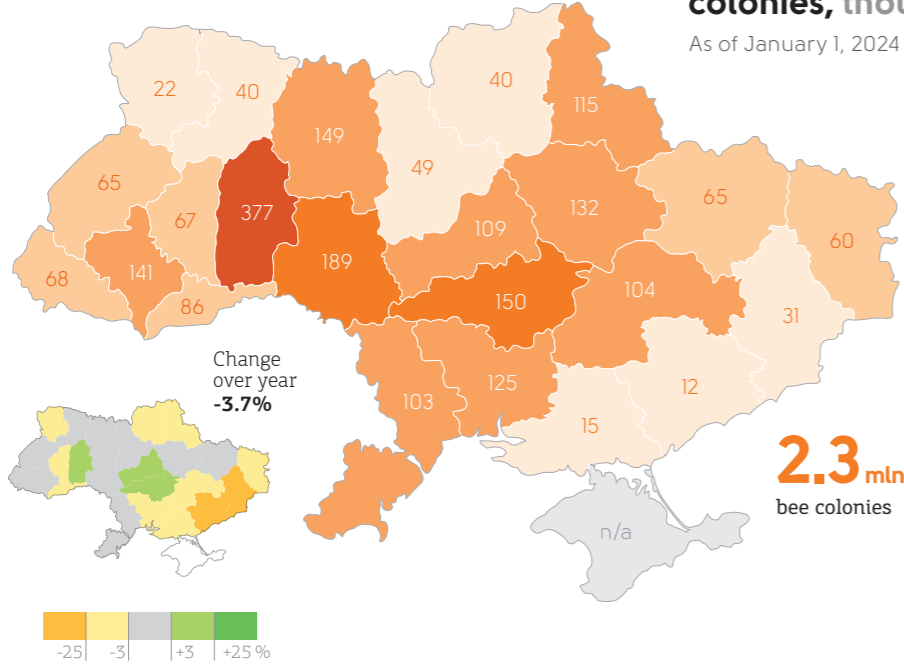


Top trade goods in 2023, USD mln

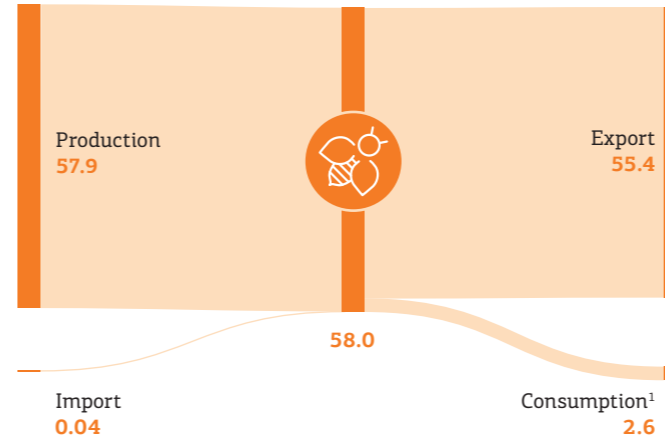


Number of bee colonies, thou.

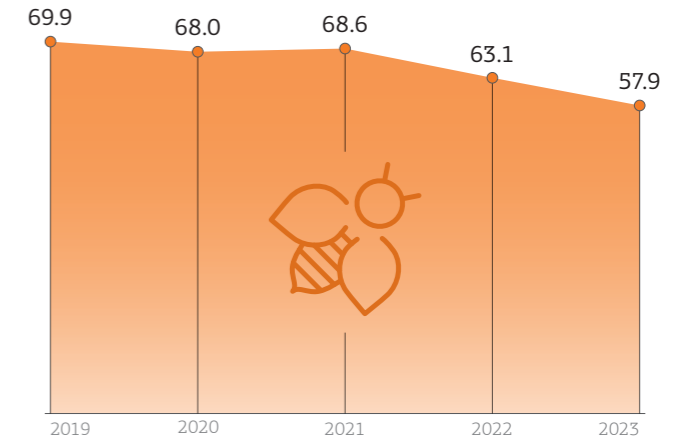
As of January 1, 2024



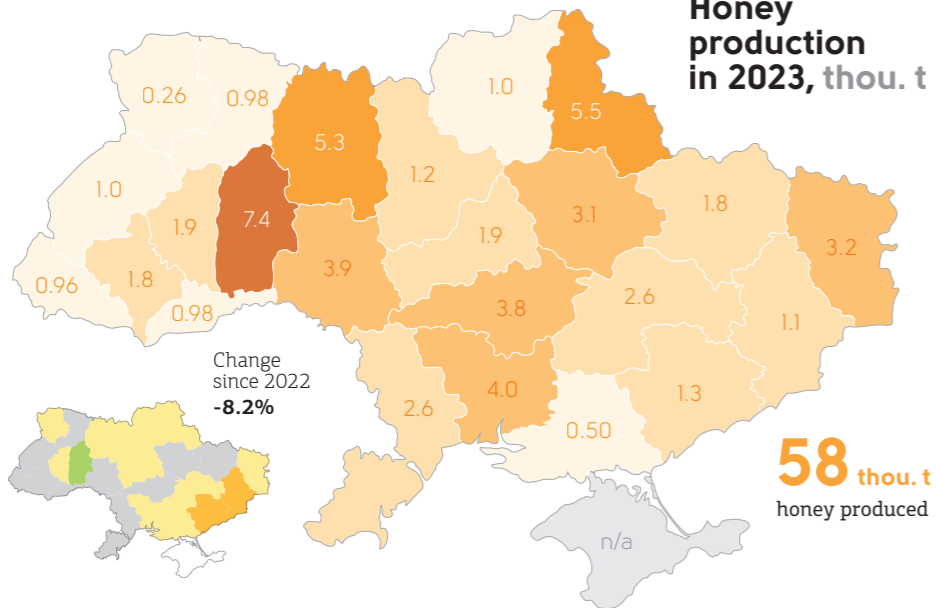
Balances of honey production and consumption, thou. t



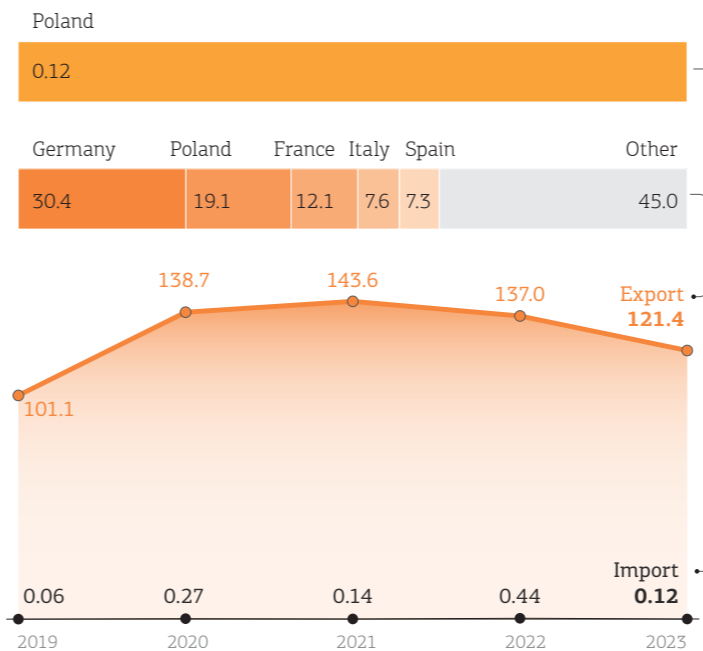
Honey production, thou. t



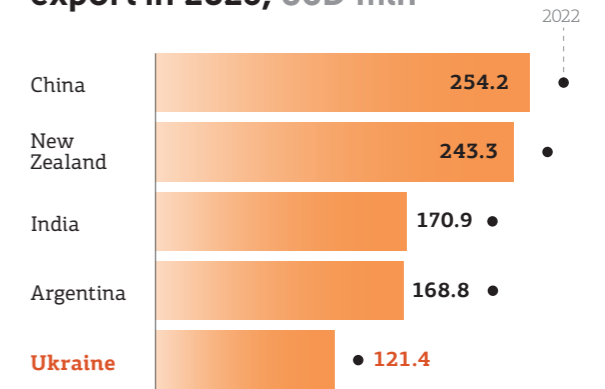
Honey production in 2023, thou. t



Honey trade and main partners in 2023, USD mln



Top 5 countries by honey export in 2023, USD mln



The Ukrainian honey market is undergoing a period of transformation, and beekeepers are actively looking for new income opportunities. Despite this, export figures remain high: in 2023, Ukraine exported over 55.4 thousand tons of honey, reaching the pre-war level. As of June 5, 2024, updated rules for duty-free trade came into effect, protecting the EU market from oversaturation. In particular, an annual honey quota of 44.4 thousand tons was established.



Processing industry

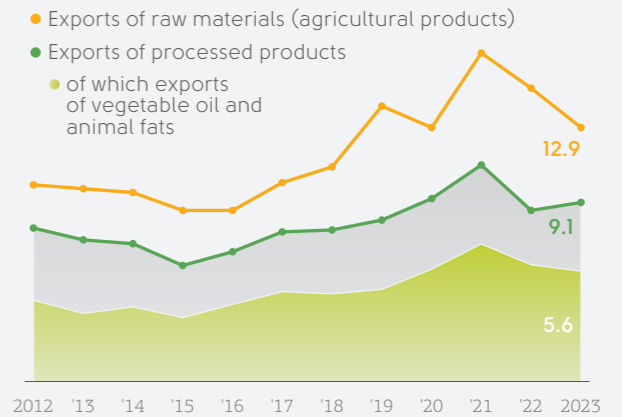
Production in 2023 (estimated)¹



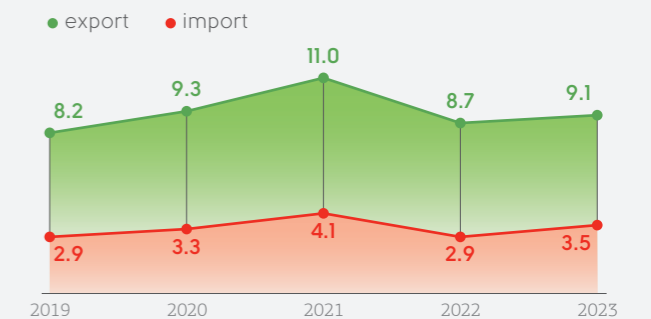
Despite the war and the blockade of maritime exports, Ukraine's processing industry continued to develop. In 2023, the main export commodity was sunflower oil (5.7 mln t), with exports increasing by 33%. Exports of wheat flour rose by 72%, sugar by 153%, and pasta by 33%.

Over the next 10 years, the Government plans to increase the share of processing in GDP to 20% and attract \$90 billion in investments. After the closure of traditional export routes, the EU has become the main market for Ukraine. However, exports to the EU are complicated by high tariffs on processed products, quota restrictions, and logistical challenges.

Export of processed products and raw materials from Ukraine, USD bln

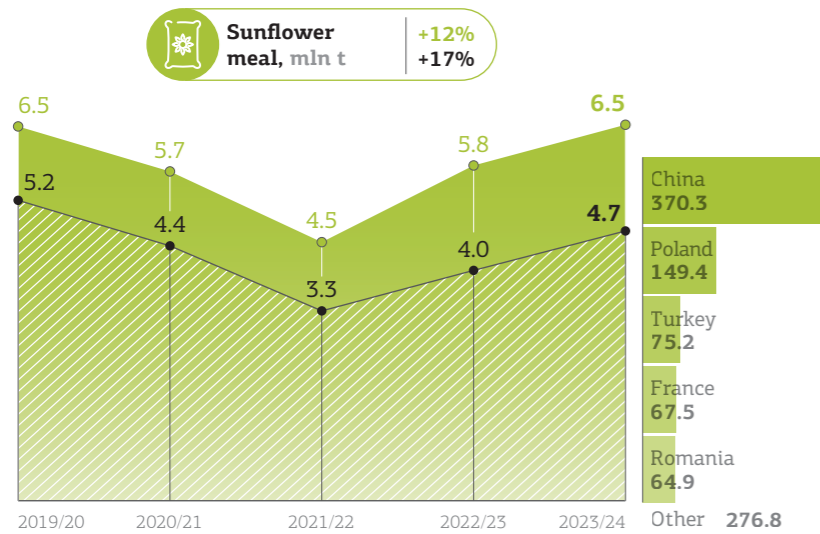
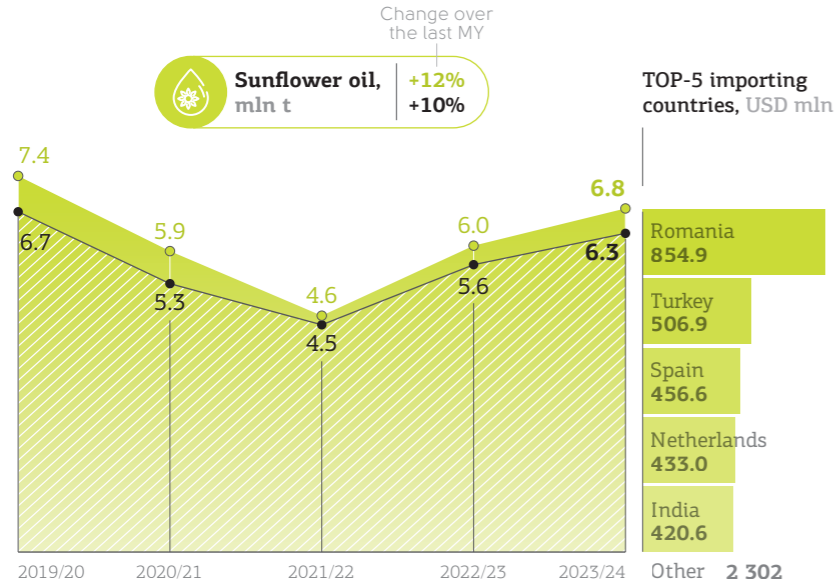


Balance of exports and imports of processed products, USD bln



Production and export of oils and meal

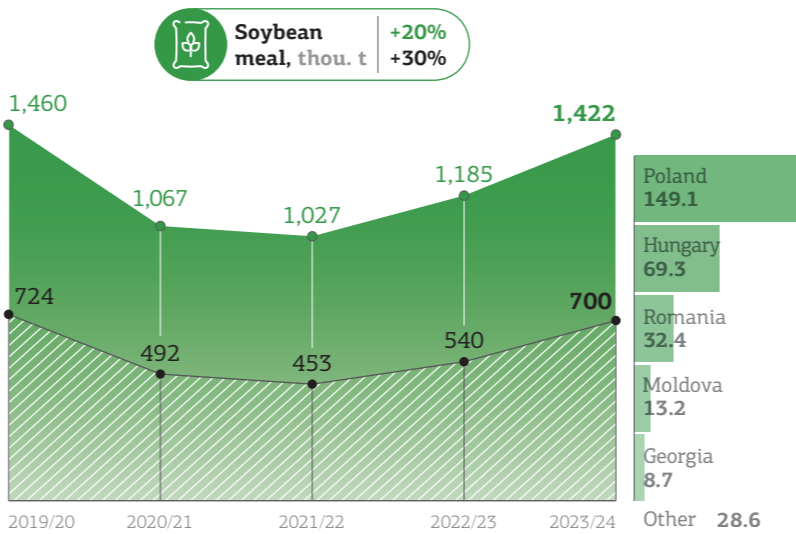
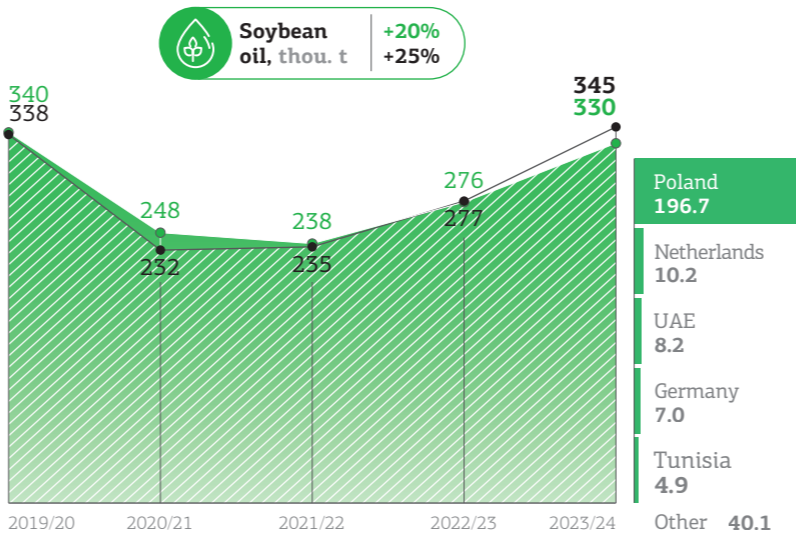
Due to increased harvests and the restoration of traditional export channels for oil, **enterprises significantly expanded the processing of sunflower seeds at domestic facilities.** During the 2023/24 marketing year, 15.7 million tons of seeds were processed, which is 1.7 million tons more than the previous year. The growth in demand for Ukrainian oil was facilitated by **competitive prices**, which attracted the interest of global importers, as well as **stable maritime shipments through the Ukrainian Corridor.**



Production Export

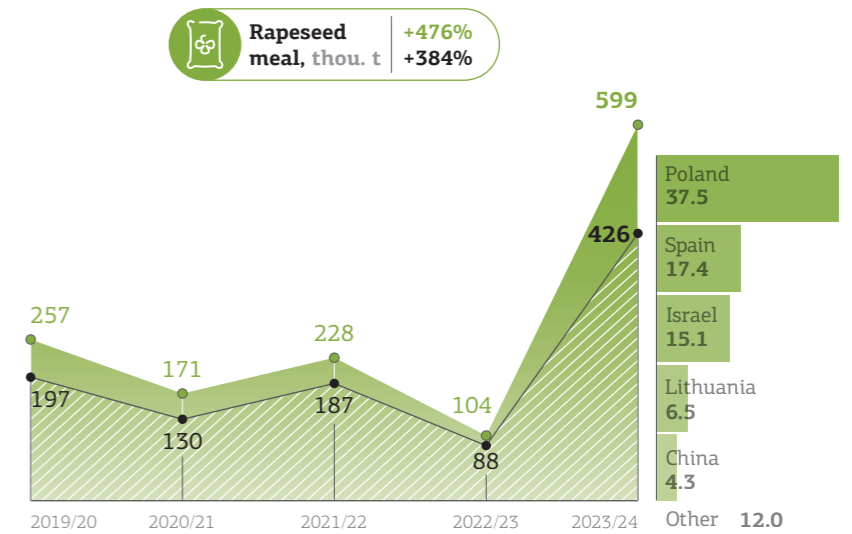
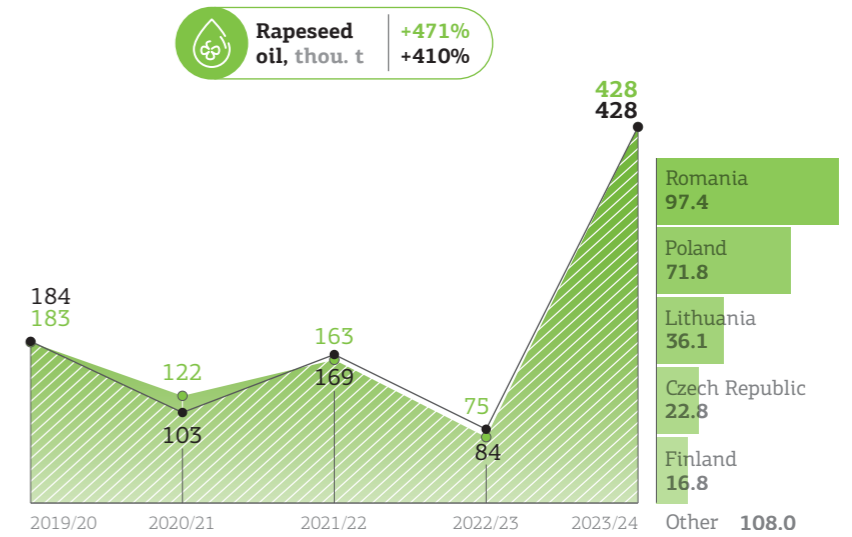
Ukraine continues to increase the production and export of soybean oil and meal. In the 2023/24 marketing year, soybean oil production increased by 20%. As a result, soybean processing volumes increased to 1.8 million tons (+20%), indicating **active development in the processing sector.**

The increase in soybean meal production allowed for a **30% rise in the export volumes of this product.**

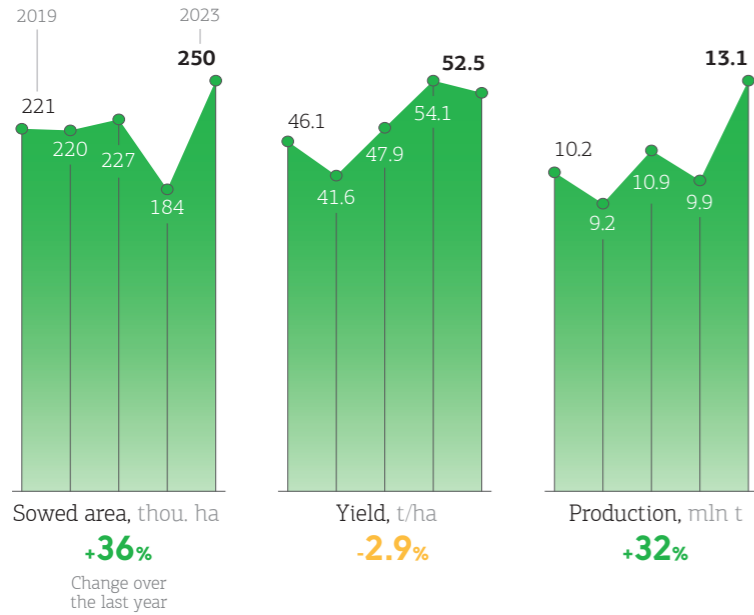


Rapeseed oil production **reached a historical maximum** of 428 thousand tons. For the first time, domestic processing of rapeseed reached 1 million tons, accounting for 22.3% of the harvest.

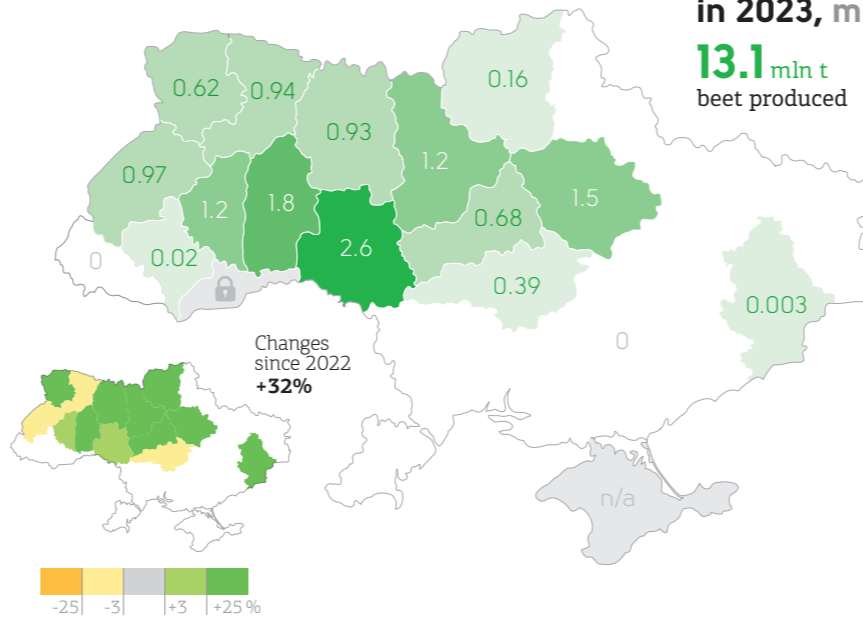
In the 2023/24 marketing year, **rapeseed oil exports increased by 410%**, reaching 428 thousand tons. This growth was driven by an increase in rapeseed harvests, high global demand, as well as favorable prices for Ukrainian products.



Sugar beet production



Production in 2023, mln t
13.1 mln t beet produced



2023/24 season

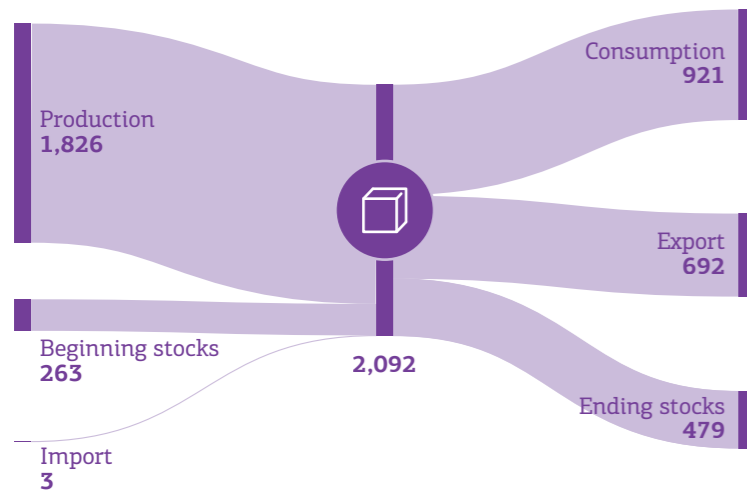
Ukraine achieved its highest sugar production since 2019/20 MY — 1.83 mln t. This season, 7 more factories were operating compared to the last year: three new enterprises in Kyiv region, two in Zhytomyr region, and one each in Khmelnytskyi and Ternopil regions. Among the key factors that contributed to the industry's development was duty-free trade with the EU, which allowed producers to significantly increase export volumes.

Memorandum of Understanding

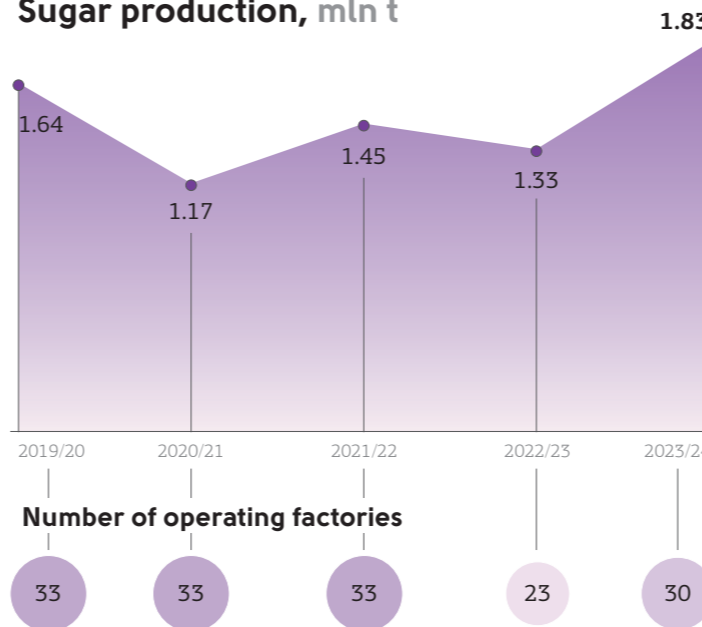
At the end of 2023, the Ministry of Agrarian Policy and Ukr sugar signed a Memorandum of Understanding, setting a quota for sugar exports in 2023/24 MY at 650 thousand tons. In 2024, the quota was increased to 750 thousand tons, of which 92% was used.

EU countries became the main market, where 77% of exported sugar is sent. Other important destinations are the Mediterranean and West African countries, which received the majority of Ukrainian sugar before 2022.

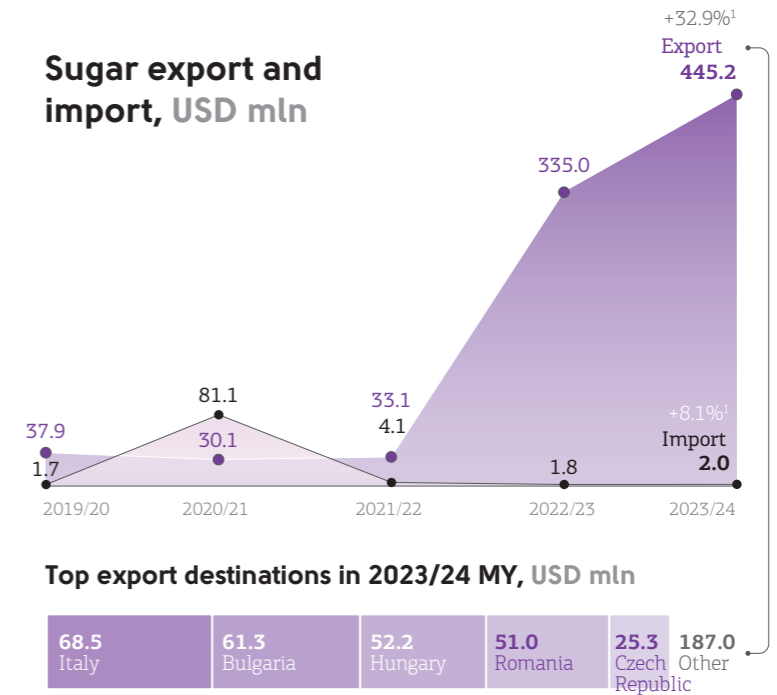
Balance of sugar production and consumption in 2023, thou. t



Sugar production, mln t



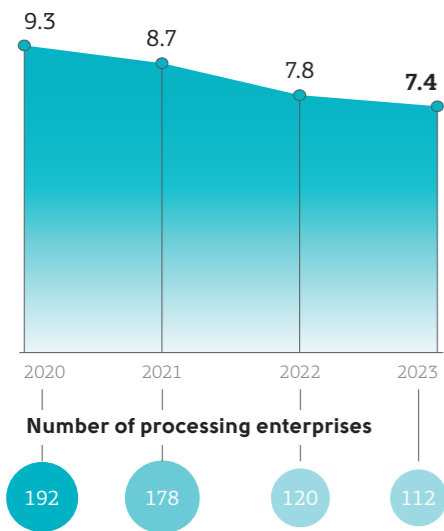
Sugar export and import, USD mln



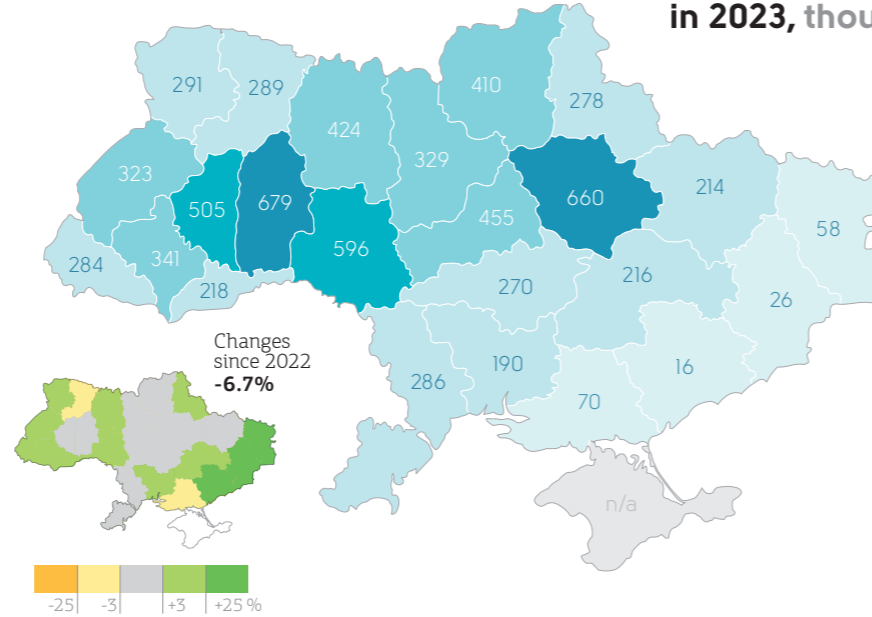
Top export destinations in 2023/24 MY, USD mln

68.5	61.3	52.2	51.0	25.3	187.0
Italy	Bulgaria	Hungary	Romania	Czech Republic	Other

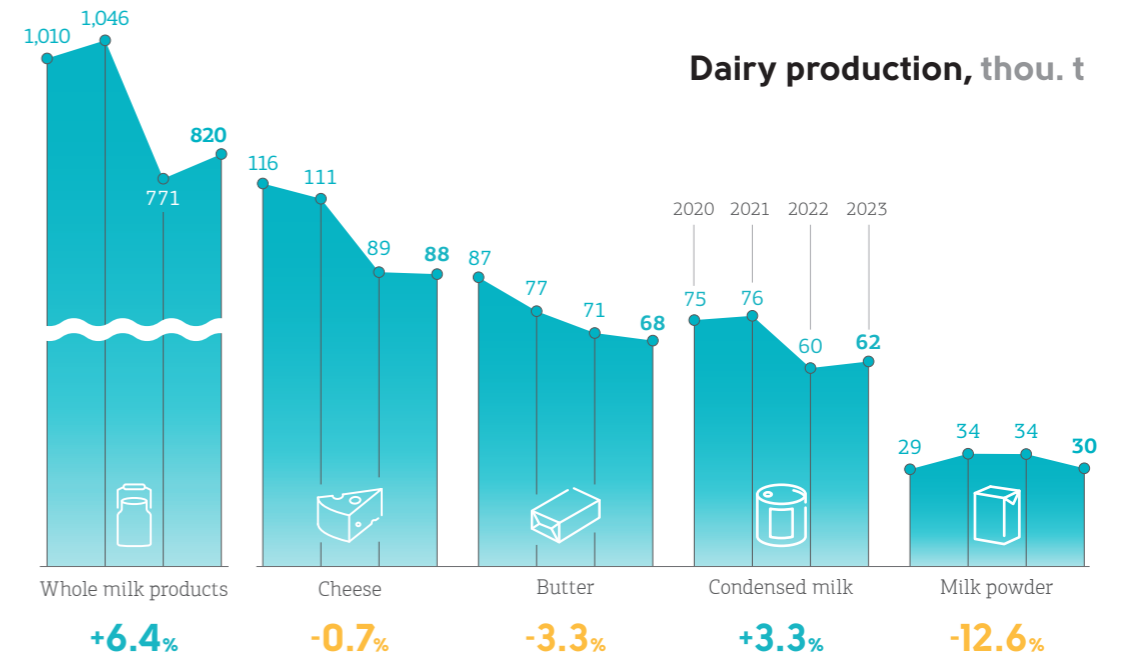
Milk production, mln t



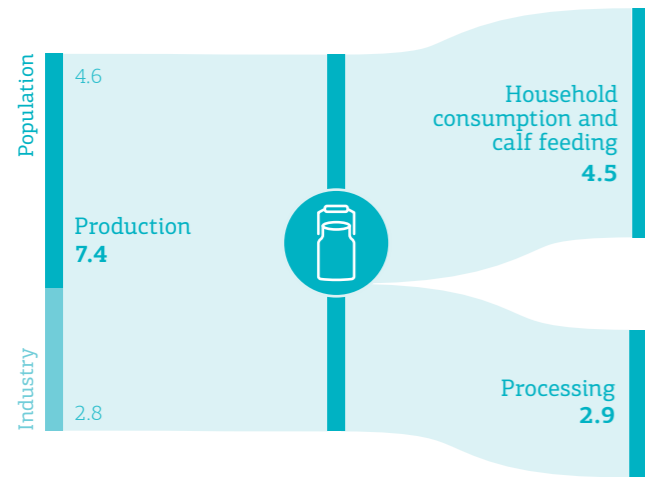
Milk production in 2023, thou. t



Dairy production, thou. t

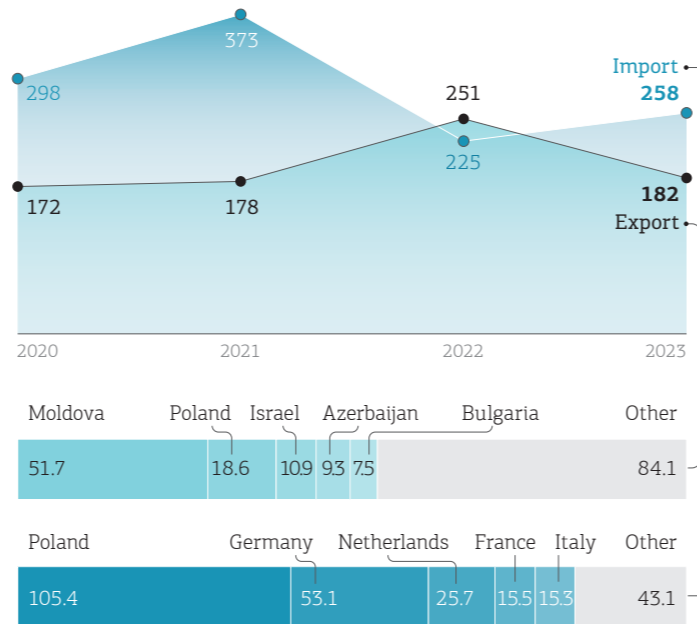


Balance of domestic milk supply in 2023, mln t

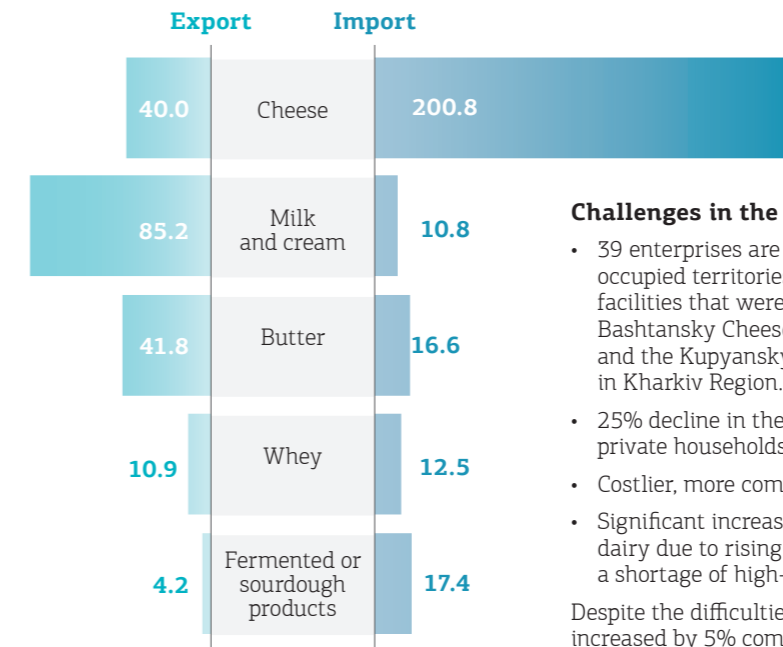


Almost all milk produced in households is used for own consumption. 89% of milk for processing comes from agricultural enterprises

Dairy trade and main partners in 2023, USD mln



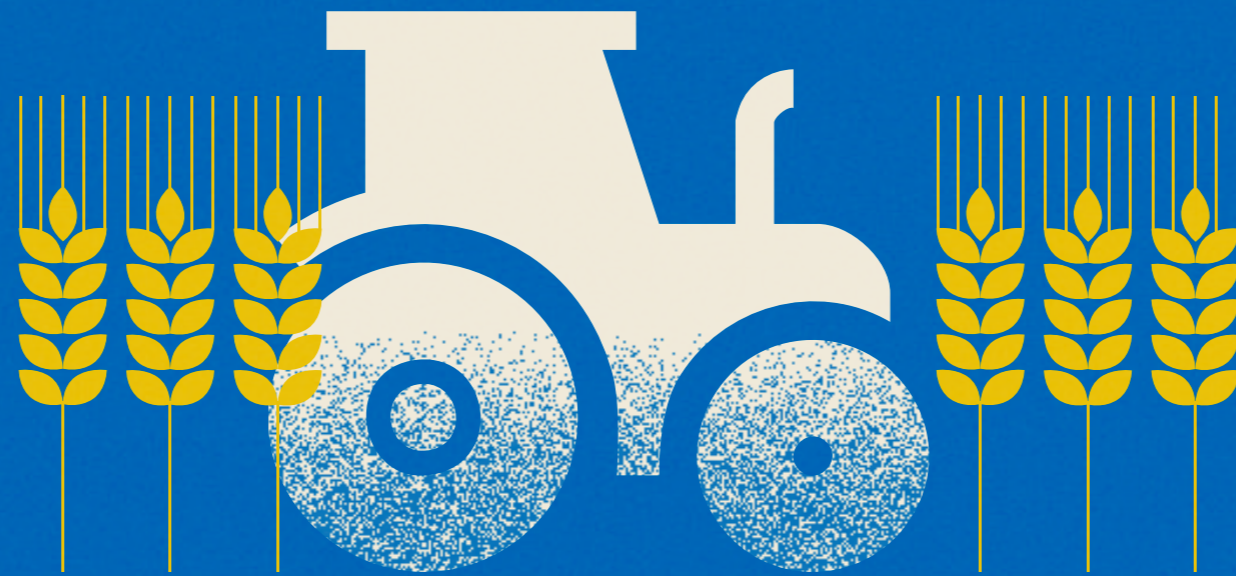
Top traded goods in 2023, USD mln



Challenges in the dairy sector:

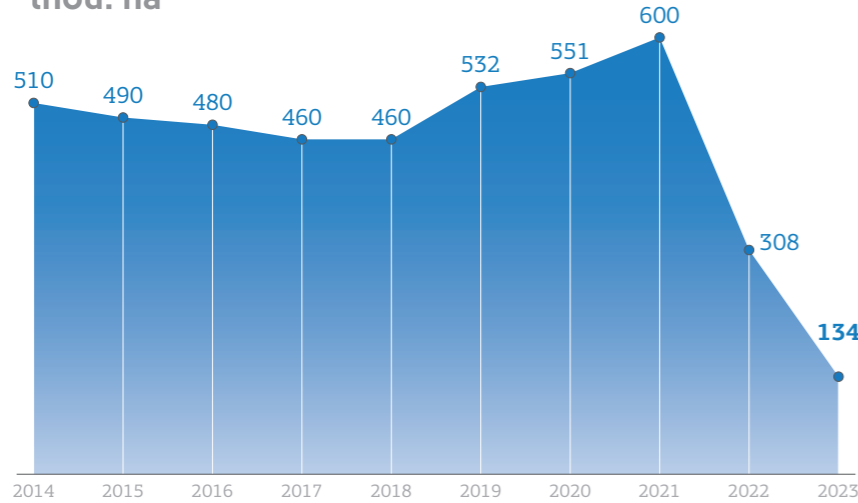
- 39 enterprises are located in the temporarily occupied territories, including two large facilities that were destroyed: the Bashtansky Cheese Plant in Mykolaiv Region and the Kupyansky Milk Processing Plant in Kharkiv Region.
- 25% decline in the cattle population among private households over the past two years.
- Costlier, more complex export logistics.
- Significant increase in production costs for dairy due to rising raw milk prices and a shortage of high-quality raw materials.

Despite the difficulties, annual milk processing increased by 5% compared to the previous year.



INFRASTRUCTURE

Area of irrigated land, thou. ha



80% of irrigation systems in Ukraine are outdated and need updating

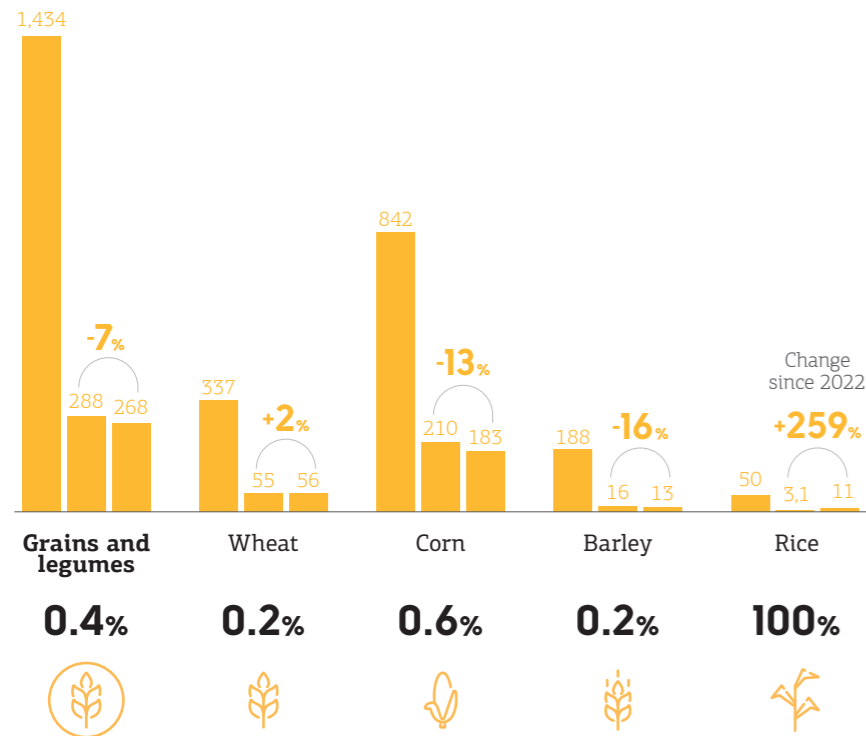
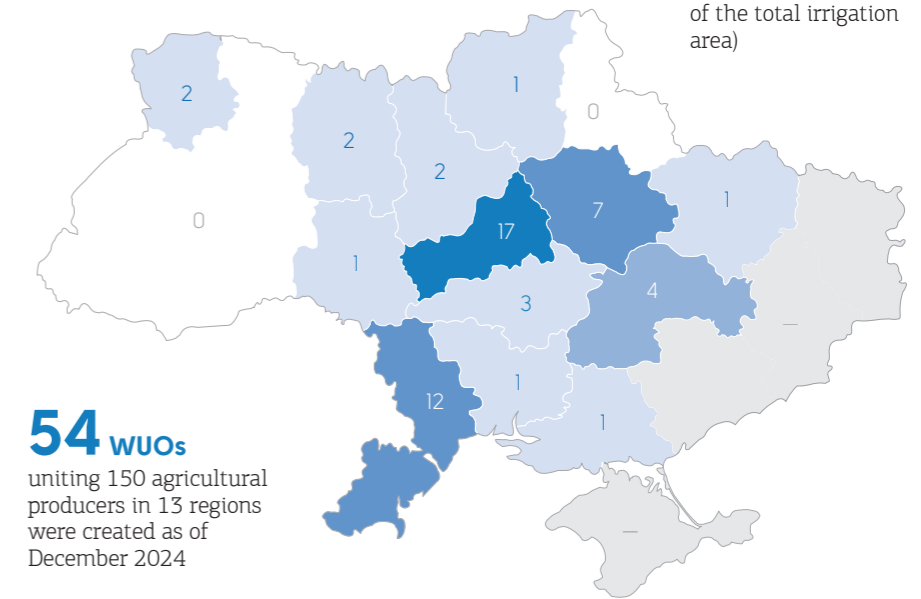
-78% loss of irrigation area since 2021 due to war

In 2023, the trend of reducing irrigated areas continued. In addition to the factors of occupation and active hostilities in the Kherson and Zaporizhzhia regions, the destruction of the Kakhovka Hydroelectric Power Plant (HPP) further exacerbated the situation, as the Kakhovka reservoir was the main source of fresh water for irrigation systems in southern Ukraine. Against this background, the area of irrigated land decreased by 78% compared to 2021. The largest decline was observed for grain and oilseed crops — down by 81% and 89%, respectively. The reduction in irrigated areas under vegetables and orchards was less significant.

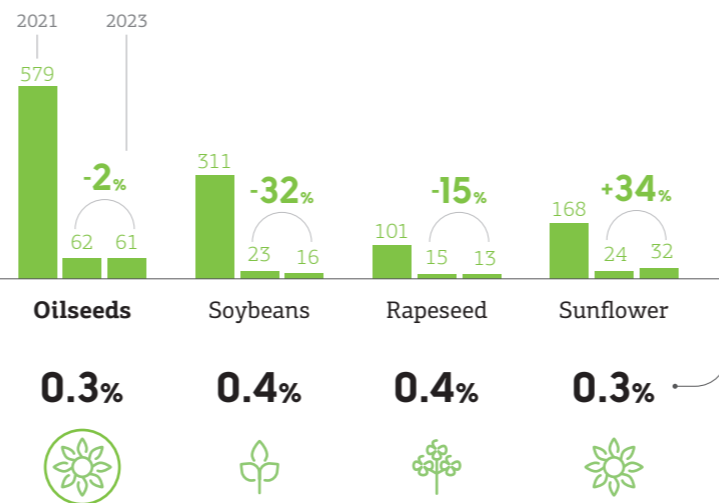
Water User Organizations (WUOs)

In 2023, for the first time, the engineering infrastructure facilities of the irrigation network were transferred to the ownership of water user organizations. These are non-profit organizations established by agricultural landowners to manage irrigation systems.

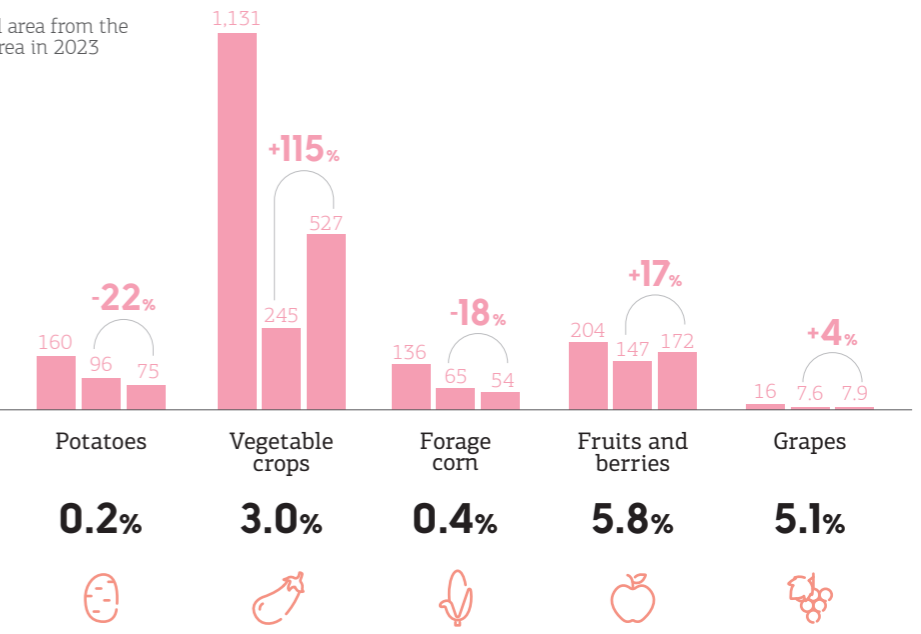
Number of WUOs



Production of agricultural crops on irrigated lands, thou. t



Share of irrigated area from the total harvested area in 2023

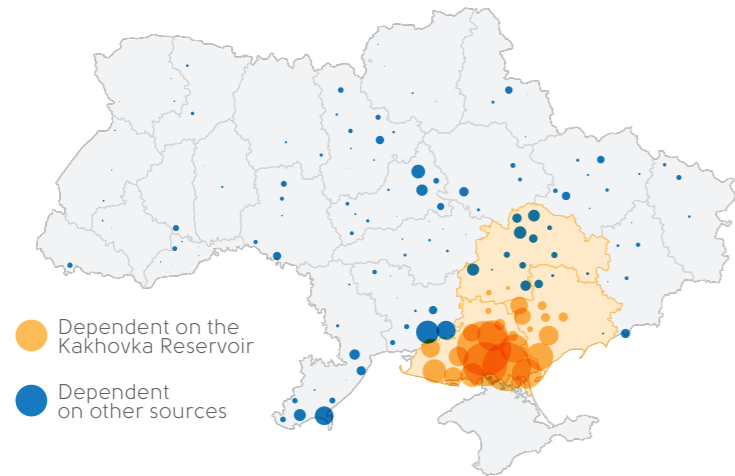


The destruction of irrigation systems began as early as 2022 — with the start of the full-scale war, through power outages and damage to pumping stations.

Particularly critical damage was inflicted on Ukraine's largest irrigation system, which was fed by the Kakhovka Main Canal. The occupiers systematically had been destroying its pumping station, and by November 2022, the station was flooded due to shelling, effectively halting the canal's operation even before the destruction of the Kakhovka HPP.

Irrigation area before the invasion

Average indicators for 2018–2021



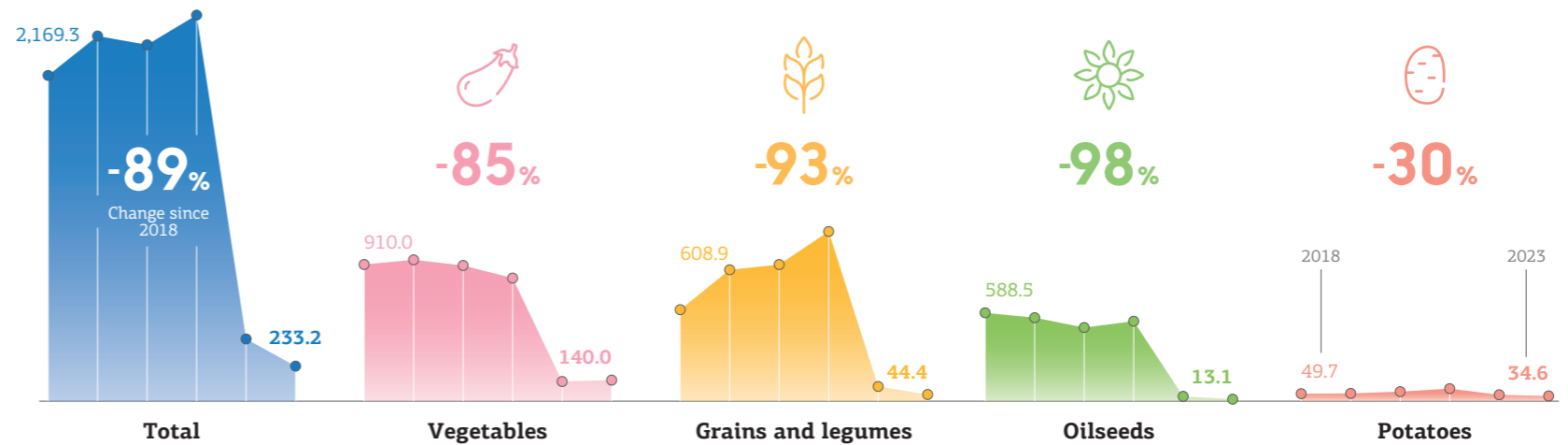
Initial losses 5 thou. ha crops flooded and destroyed \$5 bln immediate losses from the explosion

Long-term consequences +45% dry lands after the explosion of the HPP \$300 bln annual long-term losses from the cessation of irrigation

Impact on soil after the explosion **Upstream:** dehydration and salinization due to drying out of territories **Downstream:** leaching of the fertile soil layer, salinization and contamination with heavy metals and other pollutants

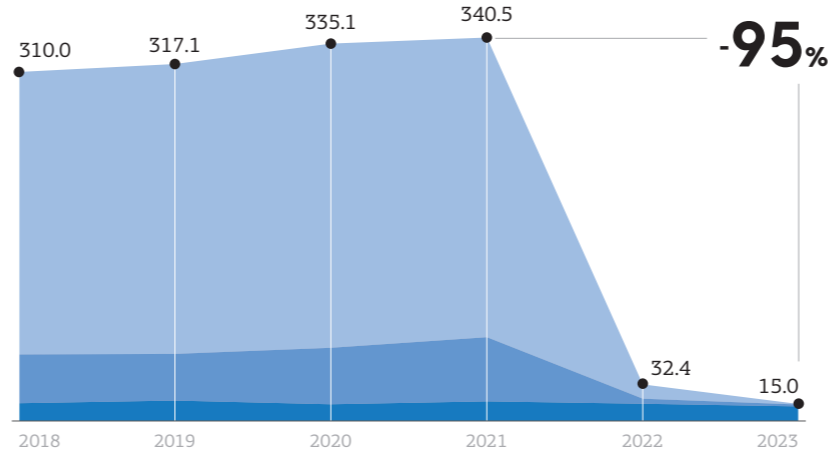
Production of agricultural crops on irrigated lands in 2018–2023, thou. t

Zaporizhzhya, Dnipropetrovsk and Kherson regions



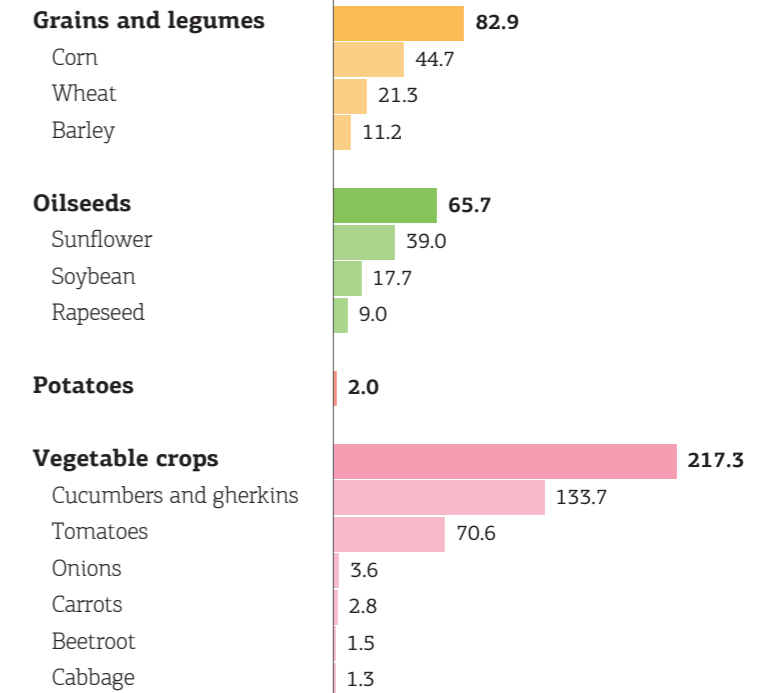
Changes in the irrigated area of the regions dependent on the Kakhovka Reservoir, thou. ha

● Dnipropetrovsk ● Zaporizhzhya ● Kherson



78% of irrigated areas of Ukraine depended on the Kakhovka reservoir. This is irrigation in Zaporizhia, Dnipropetrovsk and Kherson regions.

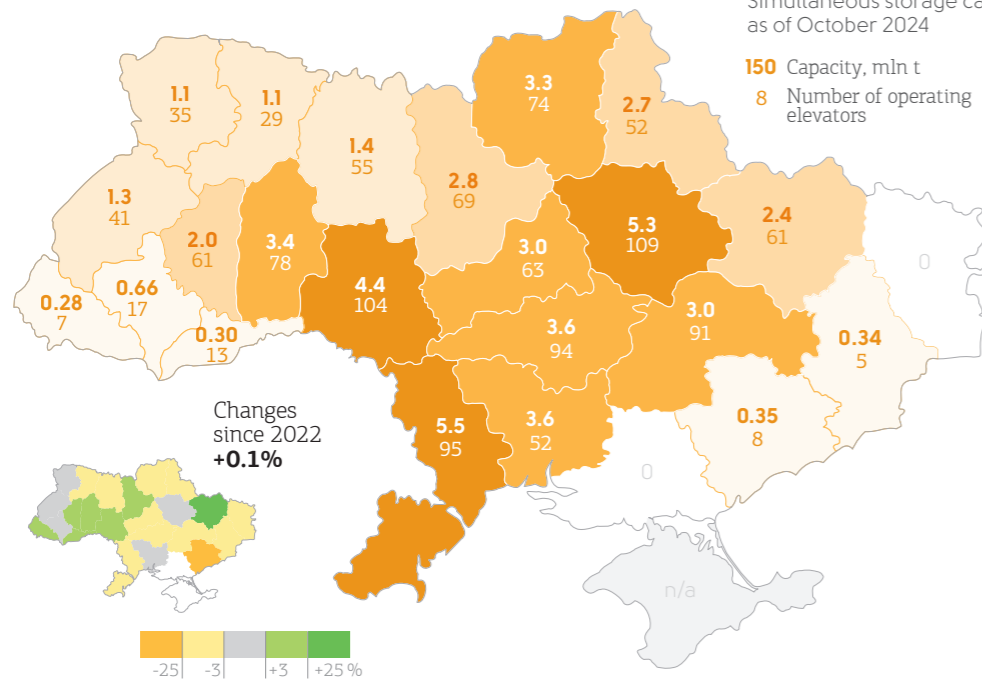
Losses due to the cessation of irrigation, USD mln per year



Elevator capacity, mln t

Simultaneous storage capacity as of October 2024

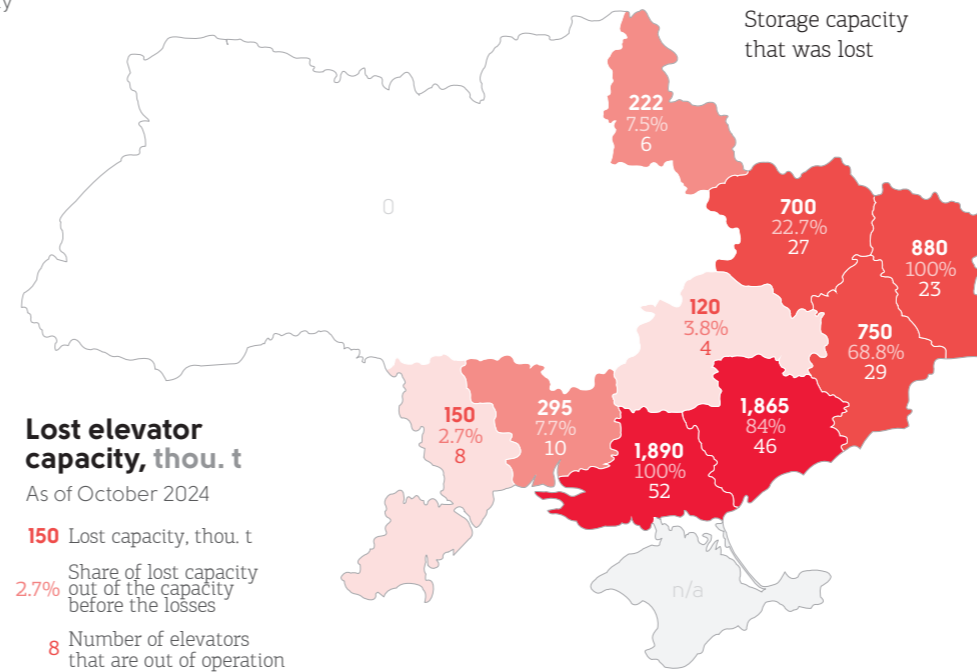
150 Capacity, mln t
8 Number of operating elevators



Changes since 2022
+0.1%

6.9 mln t

Storage capacity that was lost



Lost elevator capacity, thou. t

As of October 2024

150 Lost capacity, thou. t

2.7% Share of lost capacity out of the capacity before the losses

8 Number of elevators that are out of operation

Problems and challenges in the grain elevator industry:

Shortage of qualified personnel. Mobilization and population migration have led to a significant shortage of specialists such as dryer operators, laboratory technicians, mechanics, and electricians.

Increase of logistics costs. In the northern and eastern regions of Ukraine, logistics infrastructure has been partially destroyed, extending grain delivery time to ports by 3-4 days and raising transportation costs.

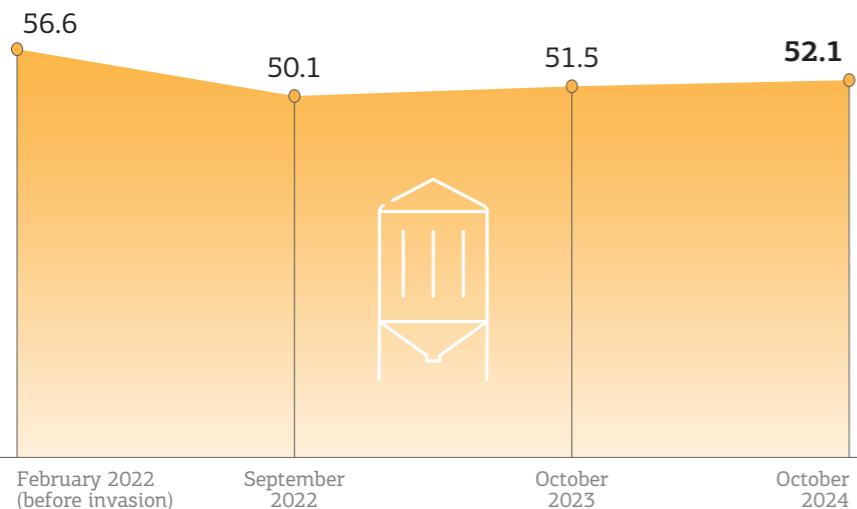
Energy risks. Electricity tariffs have doubled. At grain storage facilities, grain dryers are being converted to alternative fuel, enterprises are being equipped with generators in case of power outages, as they try to implement maximum operational autonomy.

Damage and destruction of equipment and facilities due to hostilities and missile strikes, which is particularly critical for elevator infrastructure in frontline regions.

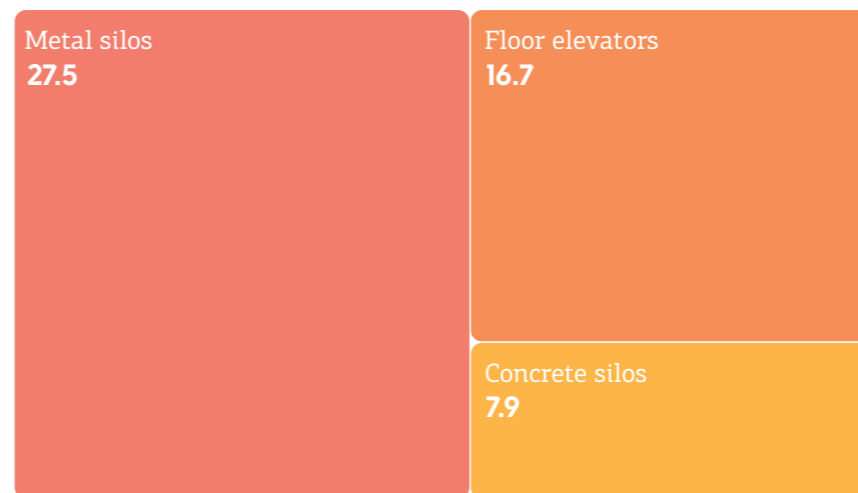
Problems with imported elevator equipment. The withdrawal of many American and Canadian grain elevator equipment manufacturers from the Ukrainian market has caused significant difficulties for elevators built before the full-scale invasion. The issue of spare parts and equipment maintenance is particularly acute.

Elevator capacity, mln t

Simultaneous storage capacity. Approximate data

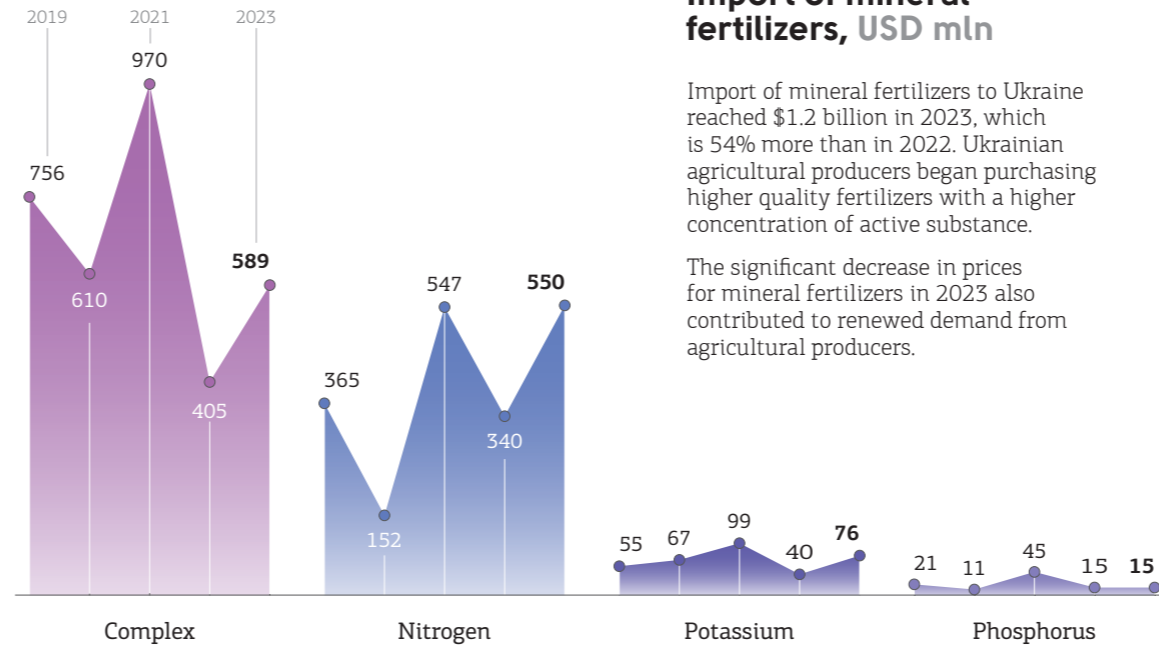
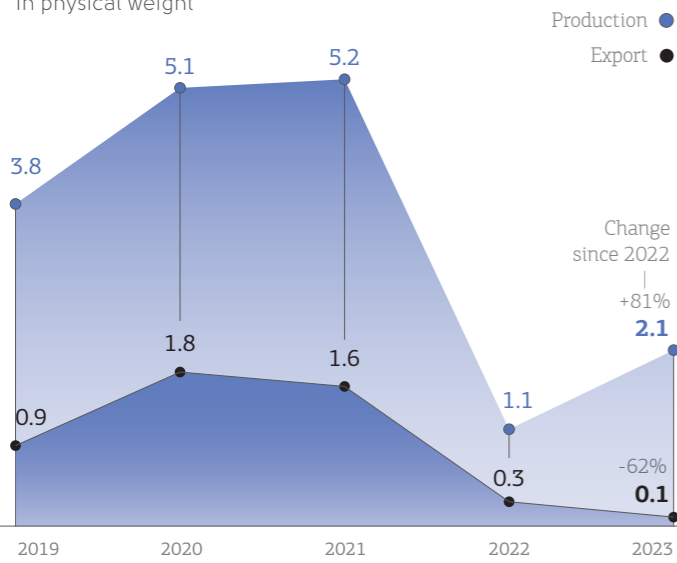


Elevators by type, mln t



Production and export of nitrogen fertilizers in Ukraine, mln t

In physical weight

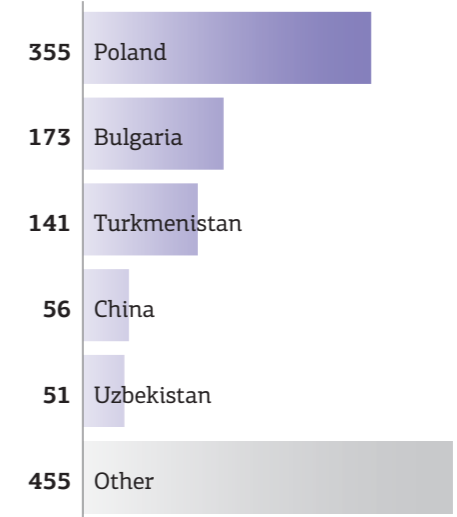


Import of mineral fertilizers, USD mln

Import of mineral fertilizers to Ukraine reached \$1.2 billion in 2023, which is 54% more than in 2022. Ukrainian agricultural producers began purchasing higher quality fertilizers with a higher concentration of active substance.

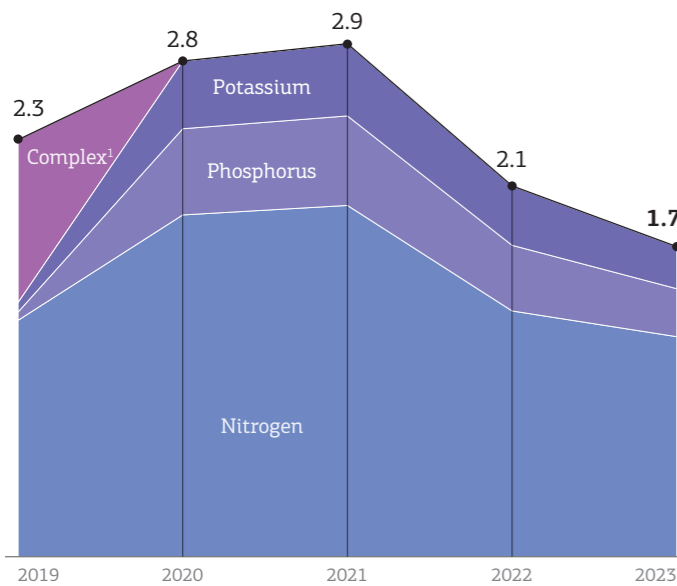
The significant decrease in prices for mineral fertilizers in 2023 also contributed to renewed demand from agricultural producers.

Top countries of mineral fertilizers import, USD mln

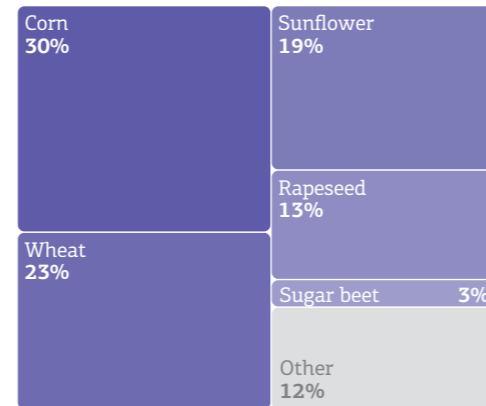


Volume of applied mineral fertilizers, mln t

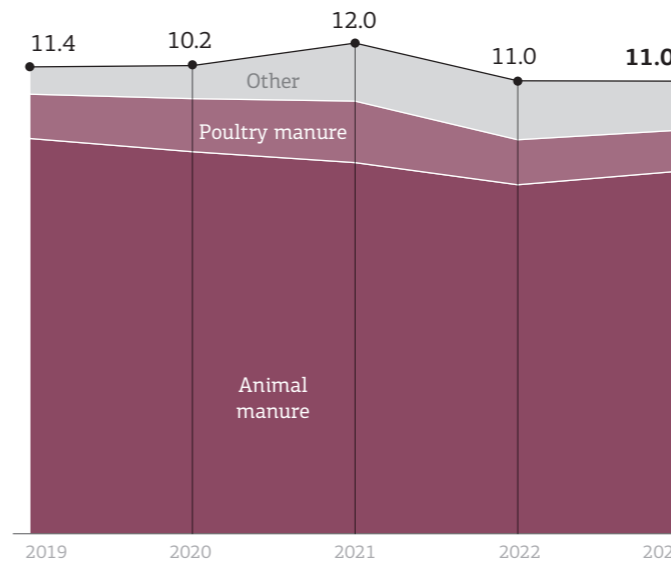
In active substance



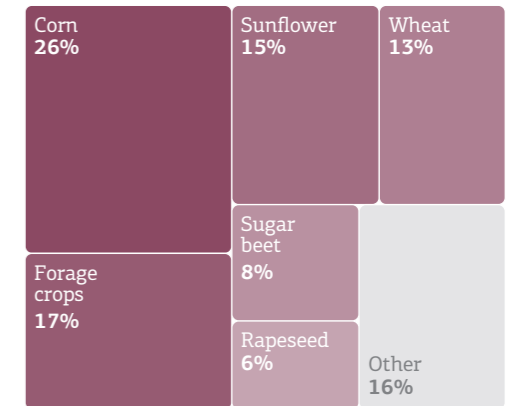
Application structure by crops in 2023



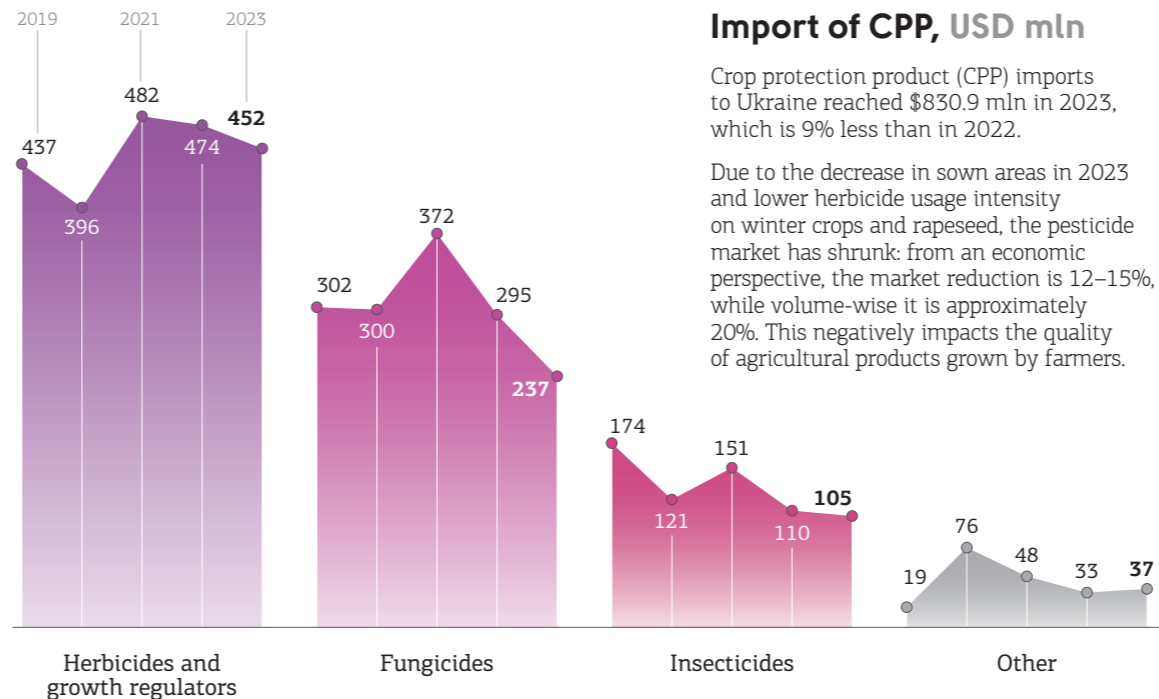
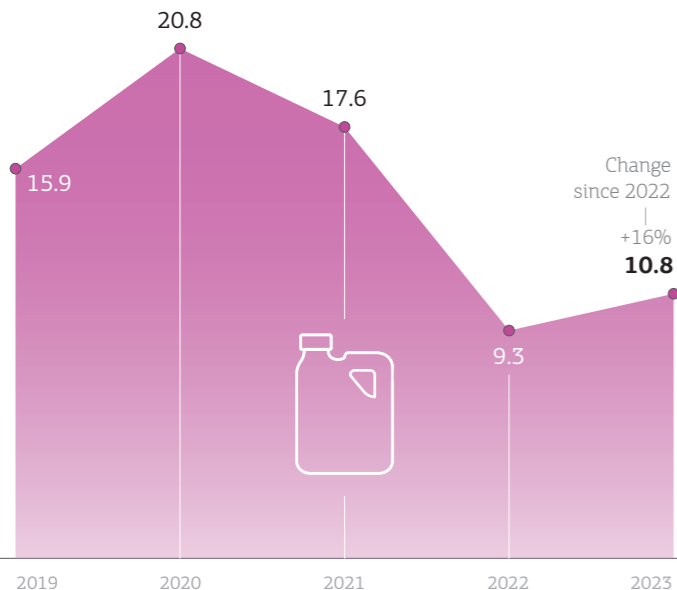
Volume of applied organic fertilizers, mln t



Application structure by crops in 2023



Export of CPP from Ukraine, USD mln

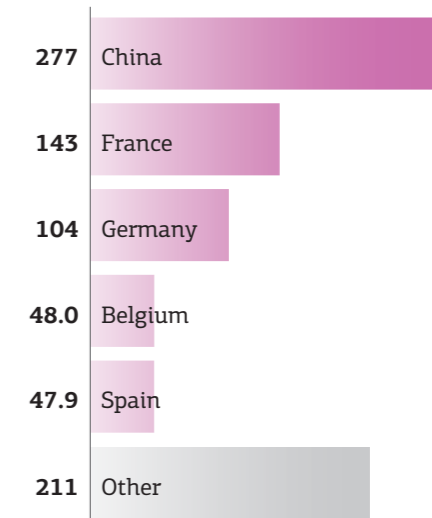


Import of CPP, USD mln

Crop protection product (CPP) imports to Ukraine reached \$830.9 mln in 2023, which is 9% less than in 2022.

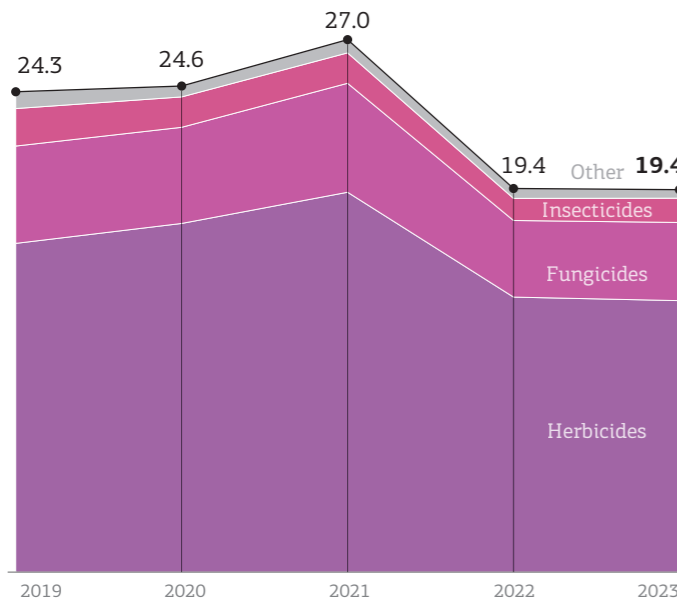
Due to the decrease in sown areas in 2023 and lower herbicide usage intensity on winter crops and rapeseed, the pesticide market has shrunk: from an economic perspective, the market reduction is 12–15%, while volume-wise it is approximately 20%. This negatively impacts the quality of agricultural products grown by farmers.

Top countries of CPP import, USD mln

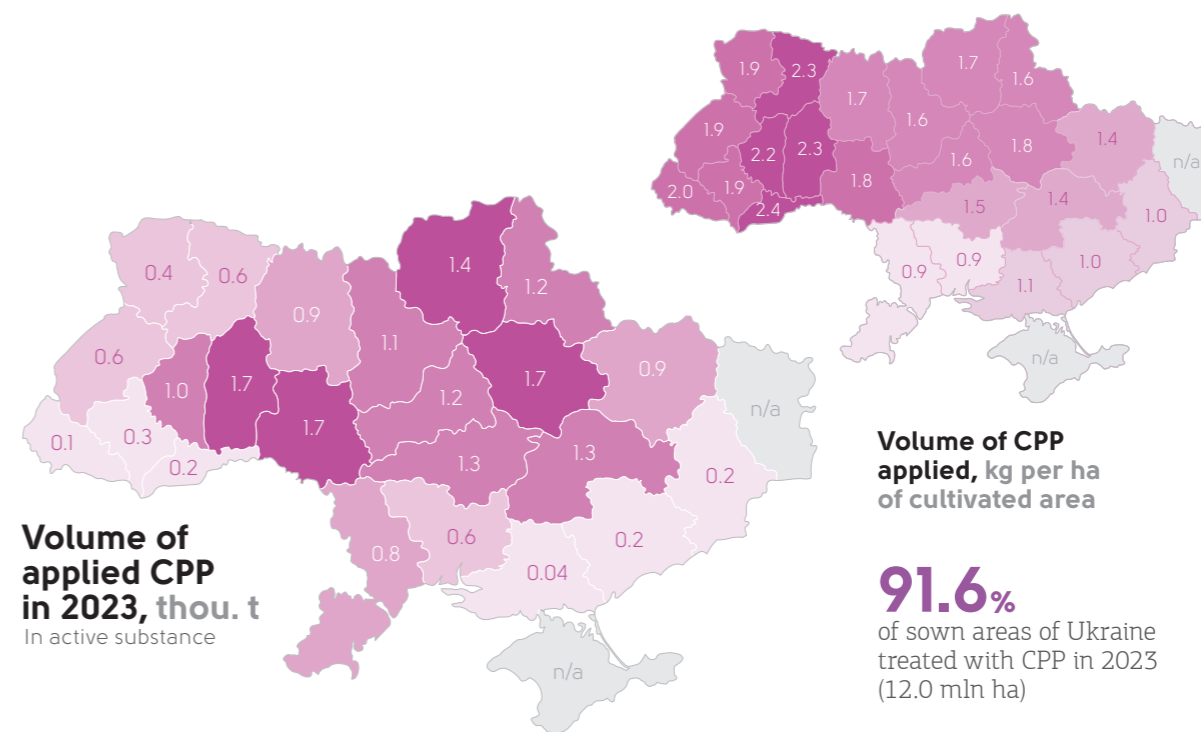
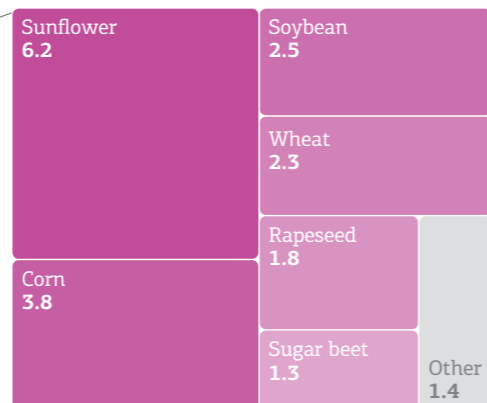


Volume of applied CPP, thou. t

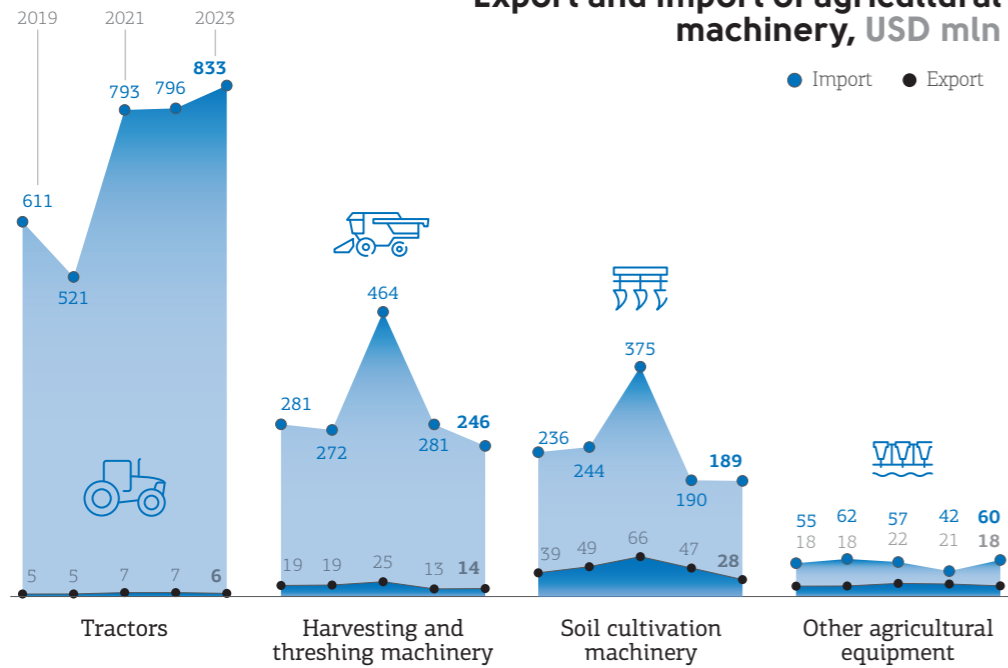
In active substance



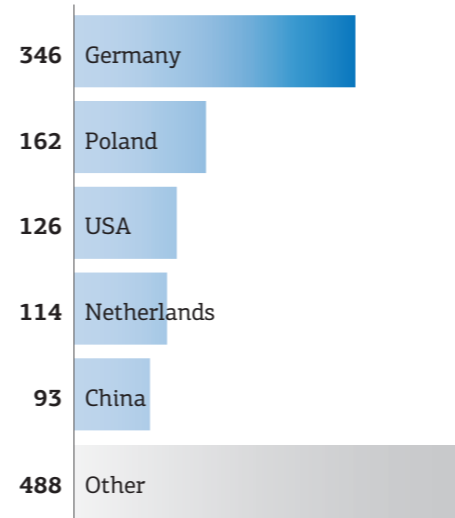
Application by crops in 2023, thou. t



Export and import of agricultural machinery, USD mln



Top countries of machinery import, USD mln



In 2023, demand for agricultural machinery in Ukraine remained weak, as farmers experienced low profits due to falling prices for agricultural products. However, in the second half of 2024, demand for machinery improved significantly. At the same time, import in tractor category and other agricultural equipment showed an increase — by 5% and 43%, respectively.

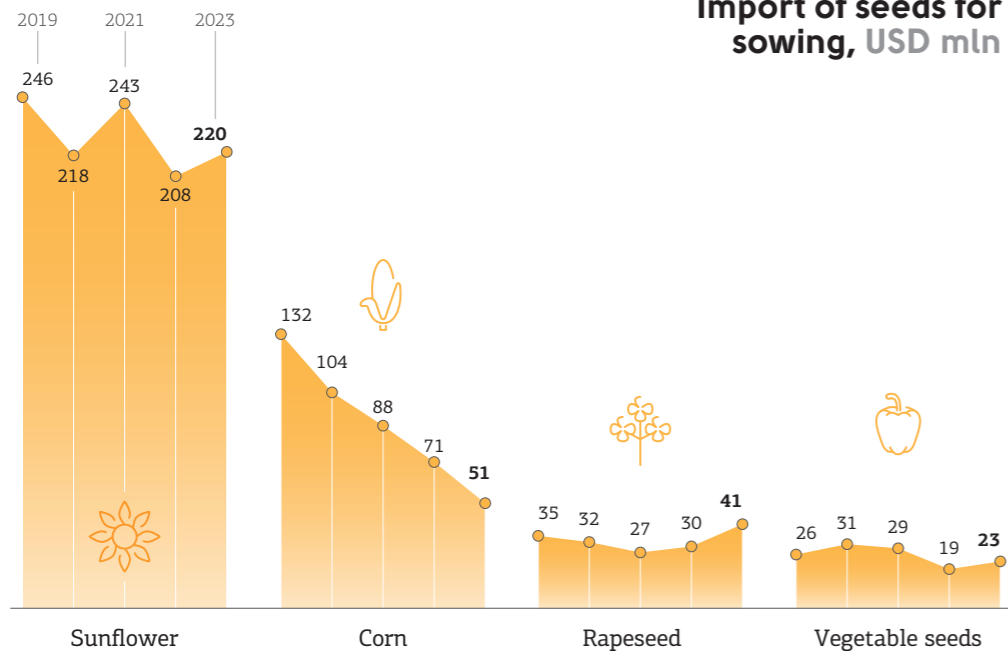
Compensation program for Ukrainian agricultural machinery and equipment

In 2024, the Ukrainian government restored the compensation program for farmers purchasing machinery and equipment of Ukrainian production. The program provides farmers with a 25% reimbursement of the cost of Ukrainian-made machinery and equipment.

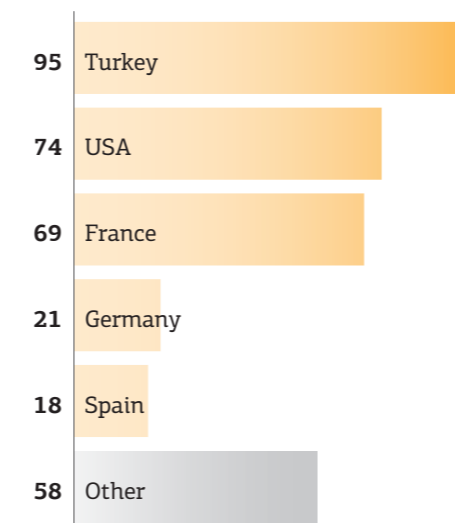
-25%
of agricultural machinery cost is compensated

11.8 thou.
units of equipment from 133 Ukrainian manufacturers included

Import of seeds for sowing, USD mln

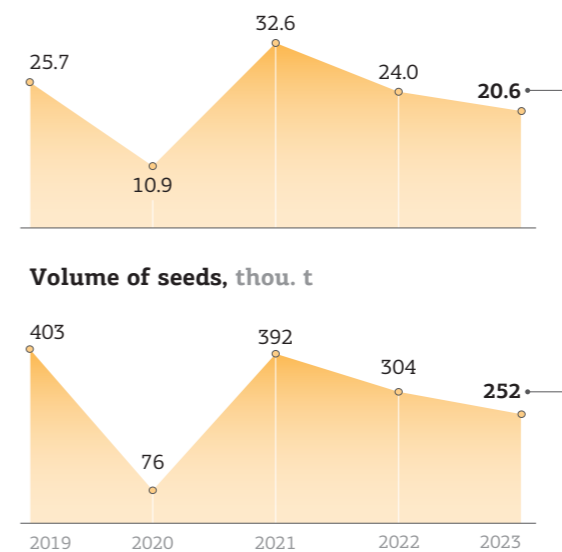


Top countries of seed import, USD mln



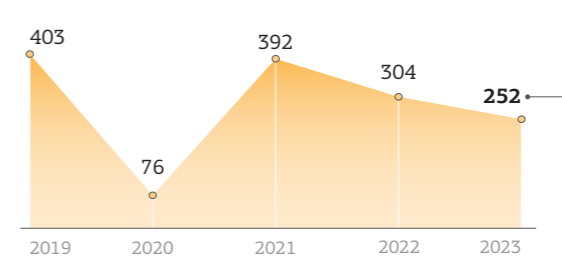
Seed certification for commercial and sowing quality

Number of certificates, thou. units



Corn	6.6
Wheat	3.3
Sunflower	4.0
Rapeseed	1.4
Soybean	1.0
Barley	1.0

Volume of seeds, thou. t



Wheat	78
Sunflower	24
Corn	69
Barley	22
Soybean	21
Rapeseed	5.2

BTU Biotech Company

The leader in biological products manufacturing for agriculture in Ukraine and the country's only representative in the global TOP-300 biological product manufacturers ranking.

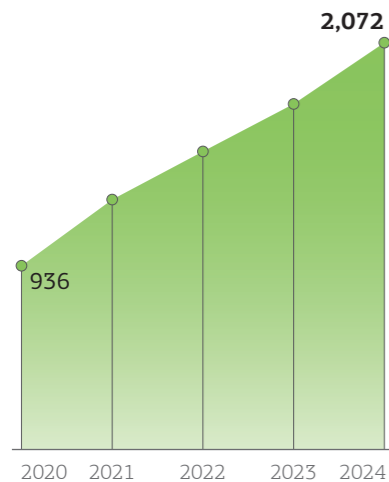
25 years on the market
20 countries in which BTU products are available
60 products
4.5 mln ha are treated with BTU products annually

Agricultural holdings using BTU products



36 agricultural holdings use BTU products (61%)

Number of farms using BTU products



Results of biologicals application

The risk of disease development is **reduced by 1.5–8 times** with the application of biological products

40–60 kg/ha of available phosphorus accumulates in the soil with the application of GROUNDFIX

The application of MICO FRIEND and ECOSTERN Trichoderma preparations can **reduce the potential denitrification activity by up to 10%**

The biological activity of the soil increases by 11–17% thanks to the application of ECOSTERN and MICO FRIEND

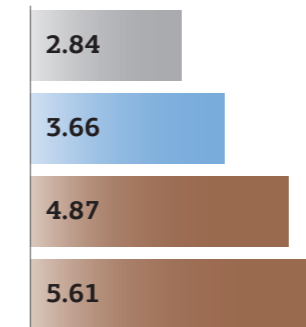
The potential denitrification activity decreases by 14%, and the biological activity of the soil increases by 35–45% with the application of GROUNDFIX and GROUNDFIX together with AZOTOFIT

Impact of BTU stubble destructors on soil biodiversity and soil activity

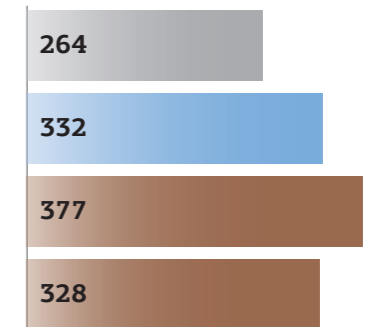
Results of the study using BIOTREX technology

Control
 Only UAN fertilizers
 ECOSTERN Bacterial + ECOSTERN Trichoderma + UAN
 ECOSTERN Classic + UAN

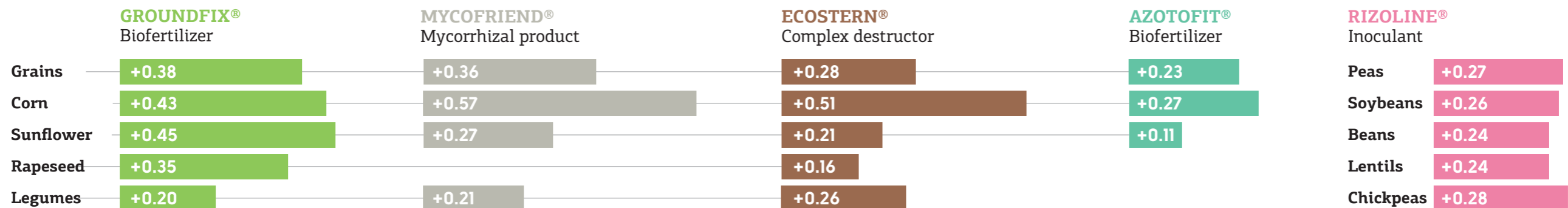
Index of ecophysiological diversity of soil



Microbial activity of soil, thou. points



Average yield increases, t/ha





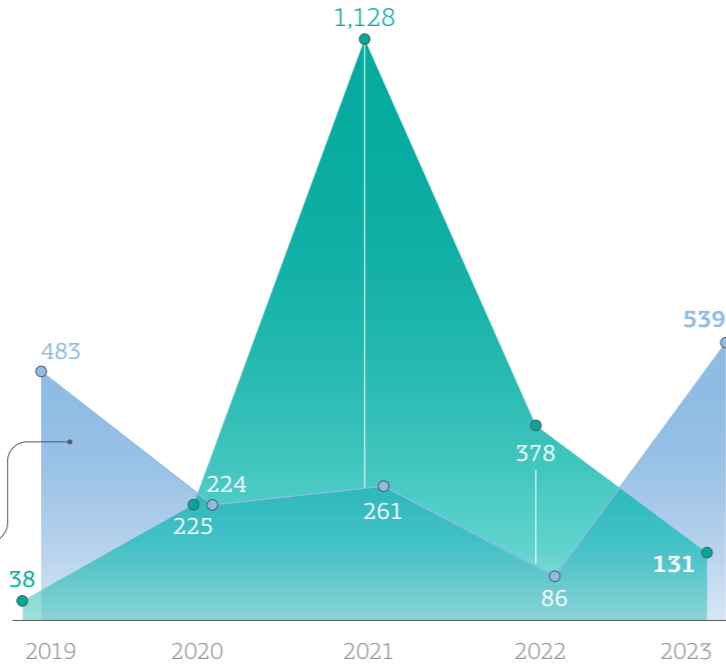
FINANCE

Direct investments in the agricultural sector of Ukraine, USD mln

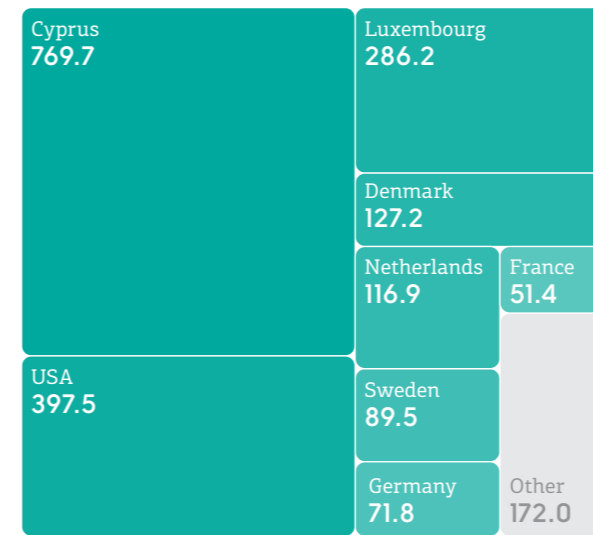
Investment flows

Volume of direct investment (equity capital) by non-residents in Ukraine and residents abroad

By types of economic activity, USD mln

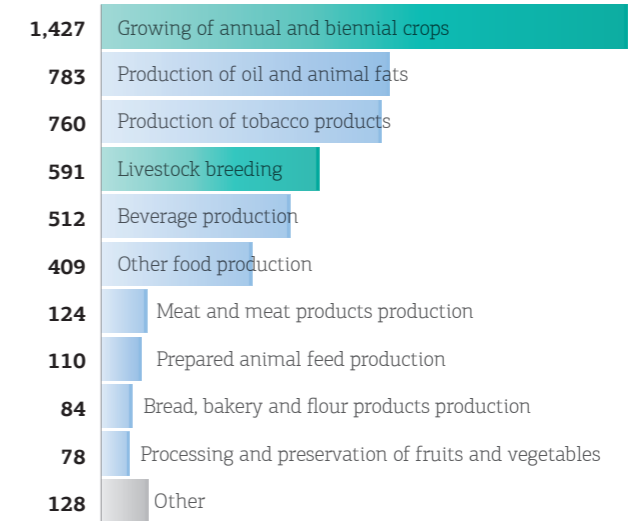


Countries of origin for direct investment in agriculture, USD mln



Balances as of December 31, 2023

Direct investments by types of activity, USD mln

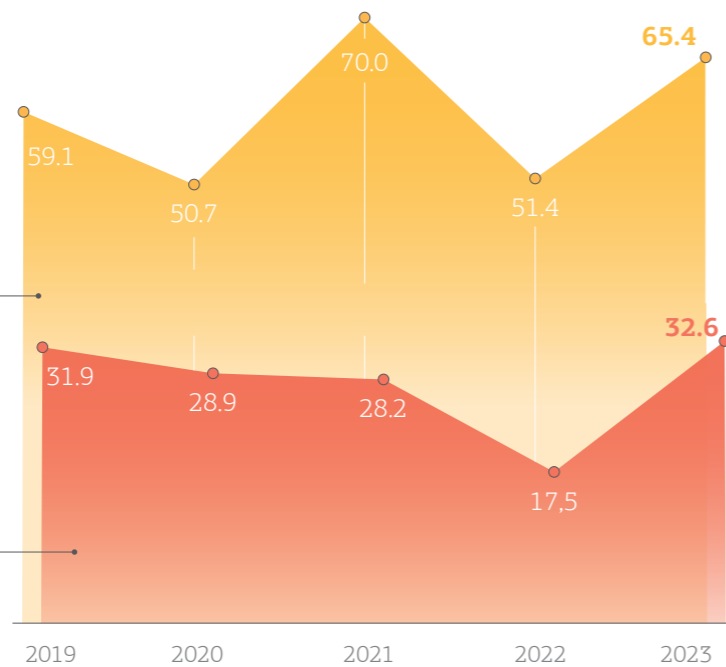
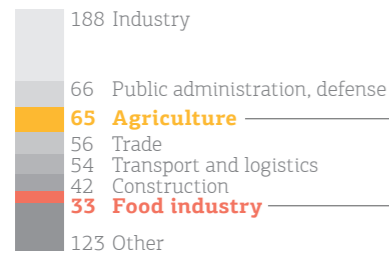


Balances as of December 31, 2023

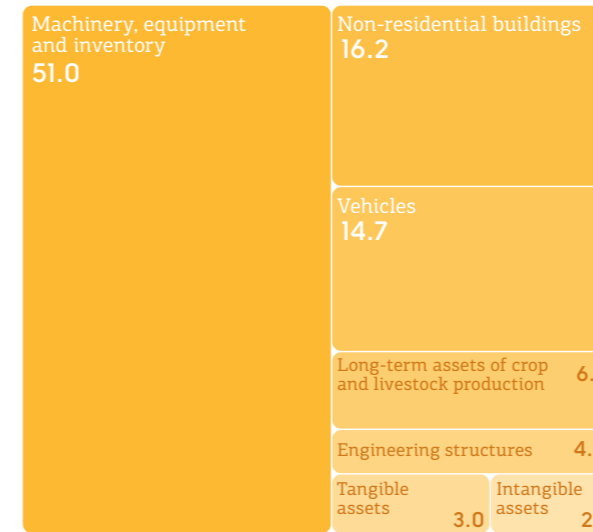
Capital Investments in the agricultural sector of Ukraine, UAH bln

Expenses for the acquisition of long-term assets: initial cost of buildings and structures, new machinery and equipment, intangible assets (patents, licenses, know-how, etc.)

By types of economic activity, UAH bln

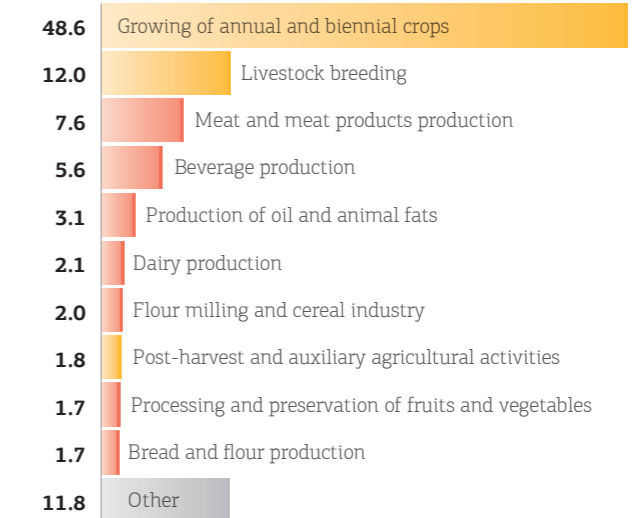


Capital investments in 2023 by type of assets, UAH bln



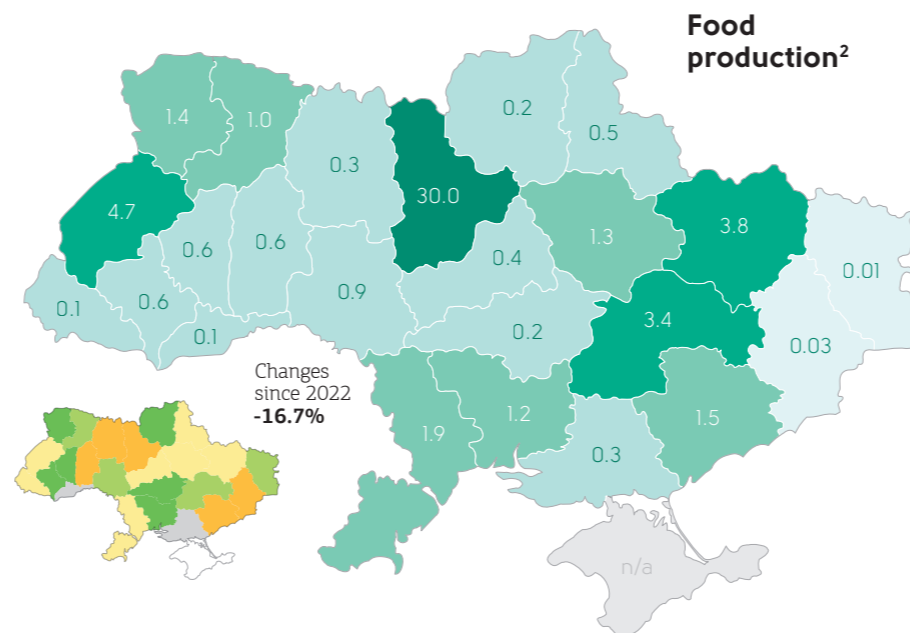
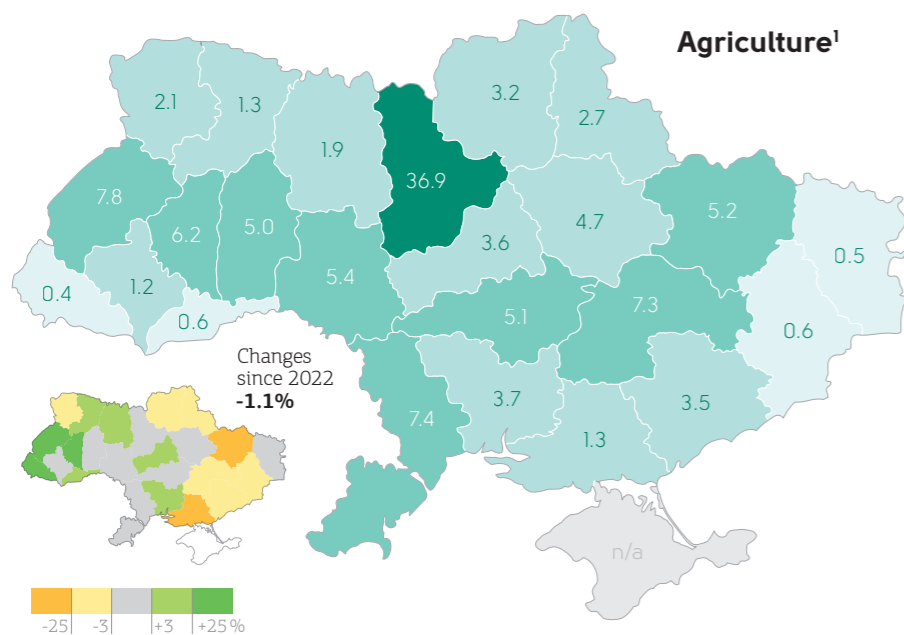
Agriculture and food industry

Capital investments by types of activity in 2023, UAH bln



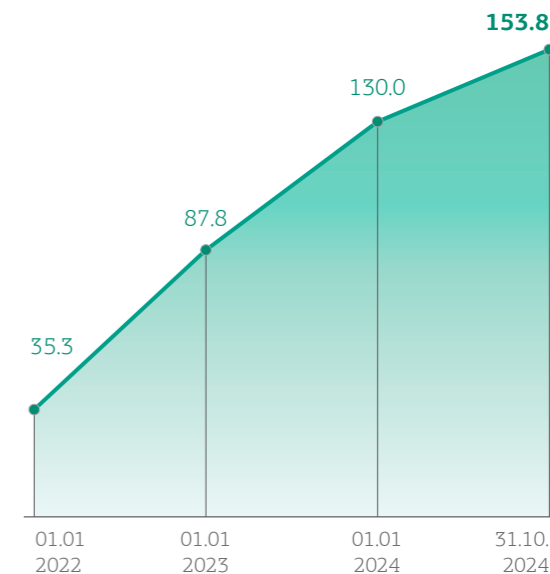
Credits granted by depository corporations to non-financial corporations, UAH bln

As of 31.12.2023

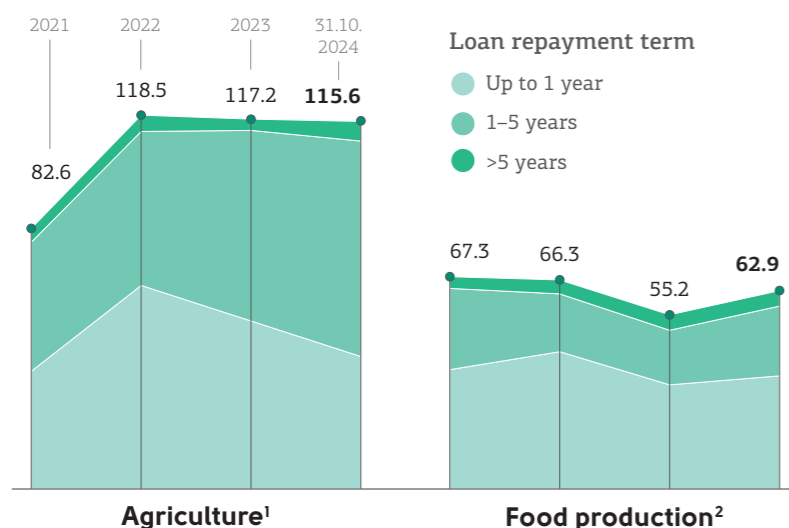


Credit portfolio of agricultural enterprises covered by the "5-7-9%" program, UAH bln

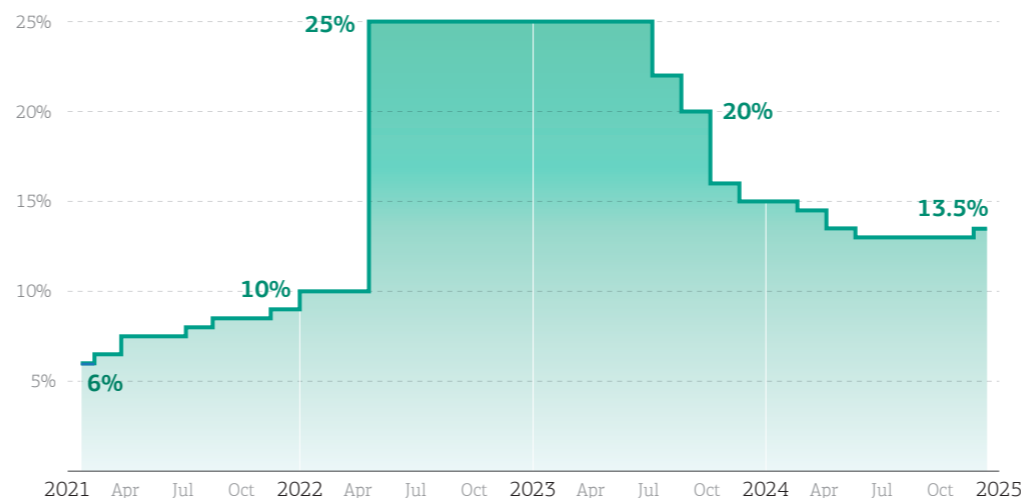
Accumulating chart



Crediting: balances at the end of the period, UAH bln



NBU key policy rate, %



Following the crediting growth in 2022, the credit portfolio stabilized in 2023-2024. There is an increased demand for investment financing with longer loan terms. The key policy rate has stabilized after several reductions.

Agricultural producers continue to actively use the "5-7-9" program with updated terms. The latest changes include higher compensation rates and the requirement to comply with environmental and social standards for agricultural producers and processors of agricultural products.

On the market, various risk-sharing programs are popular: programs implemented by banks in cooperation with international organizations such as the EBRD and IFC, as well as the state portfolio guarantee program and guarantees from The Partial Credit Guarantee Fund in Agriculture. Programs with the EBRD and USAID also help reduce reduce financing costs.

¹ The category includes agriculture, forestry and fish industry

² The category includes production of food, beverages and tobacco products

In 2023–2024, the agricultural support system in Ukraine largely **depends on international donors** due to constraints on the state budget. During wartime and economic difficulties, the government continues to support agriculture through various programs, however, the majority of funding comes from international organizations and funds.

Ukrainian farmers have wide access to various grant support programs through the State Agrarian Register. The main support programs include:

- Program "Affordable Loans 5-7-9%"
- Grant programs for horticulture and greenhouses
- Support for farms on irrigated lands
- Partial compensation for domestically manufactured agricultural machinery
- Humanitarian demining compensation programs

ARISE Project

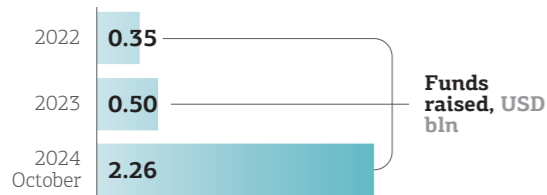
The Ukraine Agriculture Recovery Inclusive Support Emergency (ARISE) Project from the World Bank is aimed at supporting the recovery of agriculture in Ukraine. **Project components:**

- \$500 mln** Financing for the **Affordable Loans 5-7-9% Program**
- \$49.2 mln** Grant support for farming households cultivating 1 to 120 ha and/or keeping 3 to 100 cows
- \$0.8 mln** Project management: coordination and monitoring

Emergency response: funds can be redistributed in the event of an emergency caused by the russian invasion.

USAID Agriculture Growing Rural Opportunities Activity (AGRO)

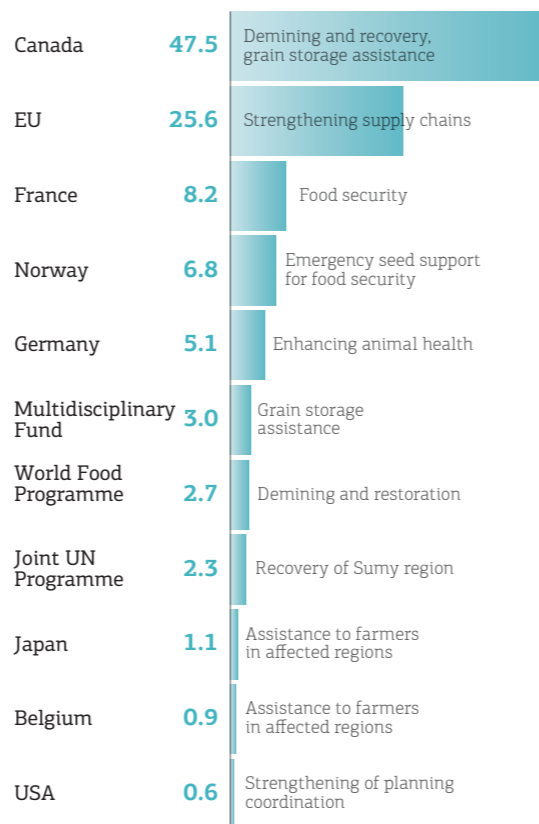
The USAID AGRO program helps rural communities **by supporting micro, small, and medium-sized agricultural enterprises.** The key goal is to maintain the economic activity of agricultural producers, restore sales channels, and ensure food security in the face of a full-scale invasion.



FAO projects in Ukraine

FAO programs are funded by contributions from donor countries, international organizations, private companies, and charitable foundations. FAO acts as a coordinator between donors, governments, and local communities, allowing resources to be effectively directed where they are needed most.

Current FAO projects in Ukraine, USD mln



State Agrarian Register

The State Agrarian Register (SAR) **is an online platform to support Ukrainian farmers.** It allows farmers to register their activities and access state support programs, preferential loans, grants and other assistance.

SAR is integrated with other government systems to ensure transparency and efficient program administration, enabling farmers to track the progress of their applications in real time.



Affordable loans 5-7-9%

Conditions for farmers in 2024

- Interest rates:** from 5% to 15% per annum, depending on the type of business and credit purpose. For enterprises in high-risk war zones, the rates are reduced to 1–3%.
- Maximum amount:** up to 150 mln UAH.
- Change of condition:** starting from December 1, 2024, the World Bank introduces a new condition for providing credits under the 5-7-9% program, under which funding will be provided **only after the bank conducts an environmental and social assessment of the clients.**

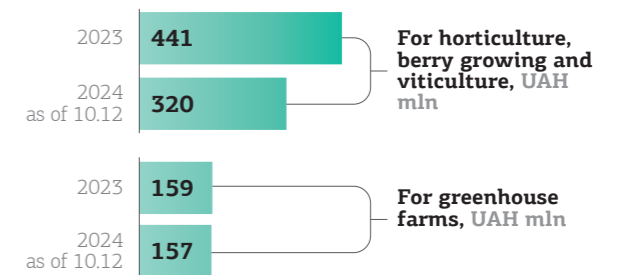


Grants from eRobota for the development of horticulture, berry growing, viticulture, and greenhouse farming

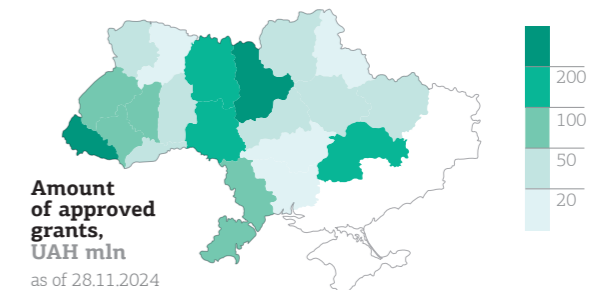
Grant size: up to 70% of the project cost, but not more than 10 mln UAH. The participant himself finances 30% (own or borrowed funds).

Employment conditions:

- Orchards:** 5–10 permanent and 125–425 seasonal workers depending on the plantations
- Greenhouses:** 4 permanent and 10 seasonal workers per hectare



From the beginning of the program to 10.12.2024: **\$1.18 bln** in grant funds disbursed and **254** farms received grants





Sustainable agriculture

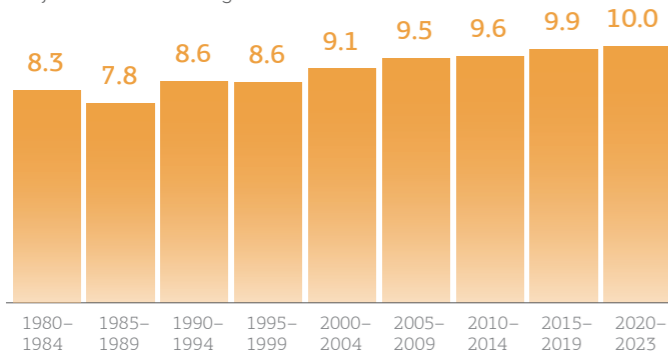
Climate change in Ukraine

The climate in Ukraine is changing rapidly, each decade becoming warmer than the previous one. The average annual temperature has increased from 7.8 °C to almost 10 °C in recent decades. This leads to an increase in the number of days with high temperatures, **causing droughts and reduced crop yields.**

The rise in temperature has partial advantages, such as a reduced risk of crops freezing and the possibility of two harvests per year in some regions. **However, the negative consequences are more significant:** over the past decade, annual precipitation has decreased by 3%, which significantly reduces soil moisture reserves and worsens the condition of crops.

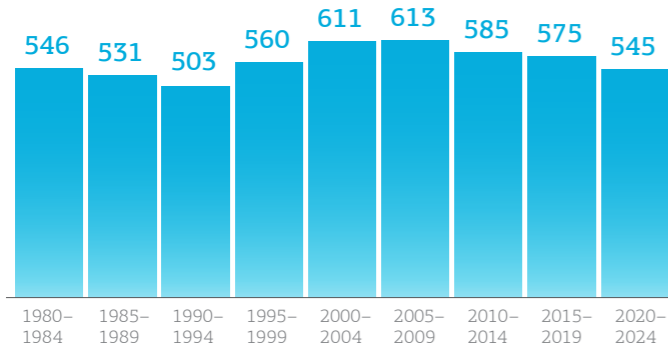
Average annual air temperature in Ukraine, °C

5-year annual average



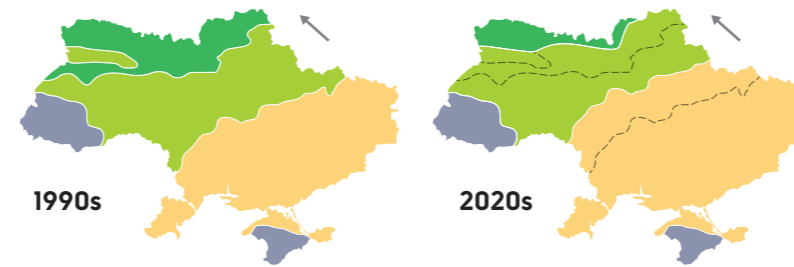
Amount of precipitation in Ukraine, mm

5-year annual average

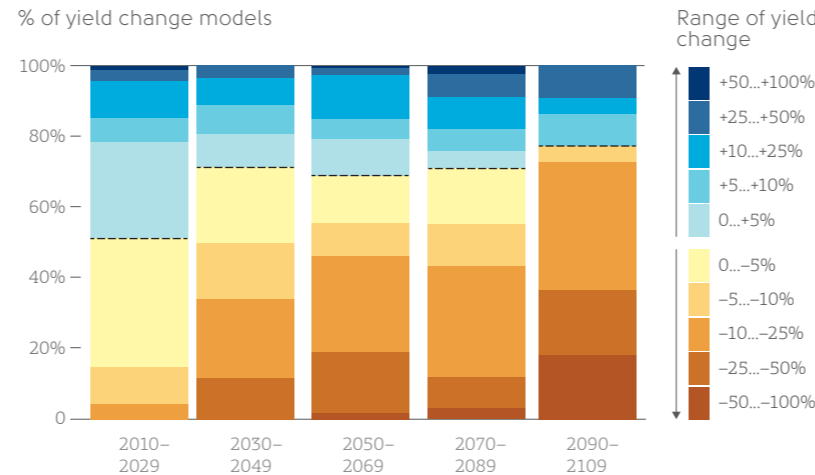


Shift of natural zones

Mountains Mixed forests Forest steppe Steppe



Forecast of yield changes according to different models



The chart shows the projected changes in crop yields in the 21st century compared to the end of the 20th century for tropical and temperate regions under different emission and adaptation scenarios.

The forecasts indicate **a significant decline in yields if temperatures rise by 2°C or more**, especially without adaptation, although some regions may benefit.

For the period 2030–2049, most forecasts predict a noticeable decrease in yields.

After 2050, the risks continue to grow and depend on the level of warming. Yield variability is also expected to increase in many regions.

The impact of the war on the climate

Russia's war in Ukraine causes significant environmental damage and affects the global climate by emitting significant amounts of greenhouse gases into the atmosphere. Most of the emissions come from Ukraine, while a third come from beyond its borders, demonstrating the global scale of the war's climate impact.

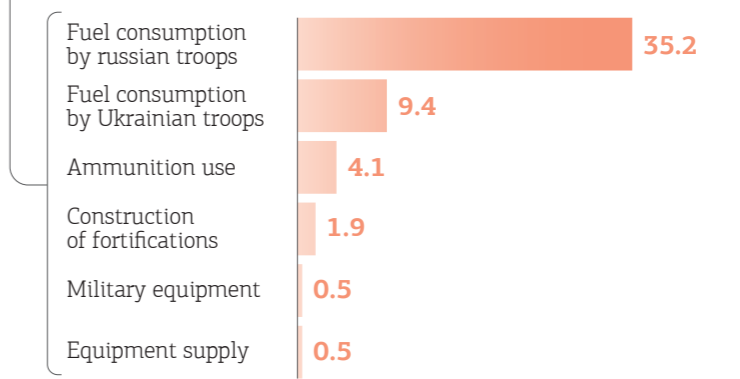
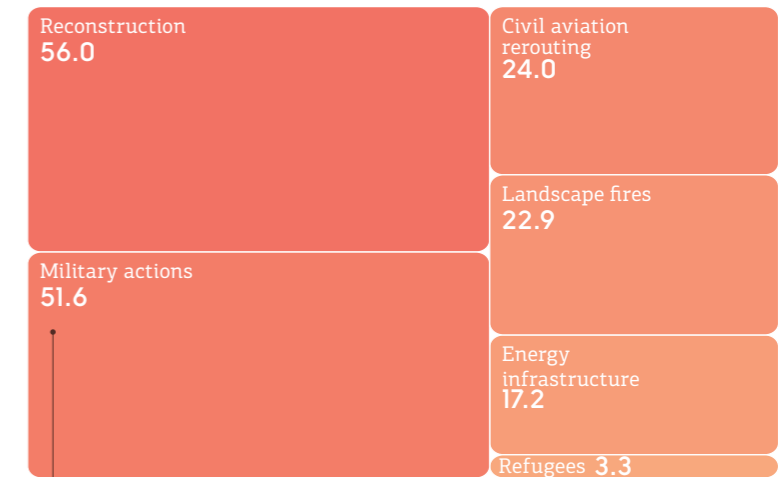
341 mln t
of CO₂ equivalent —
total emissions of
Ukraine for 2023

175 mln t
global greenhouse gas
emissions caused by 2
years of full-scale war

>32 USD bln
climate damage from
hostilities caused
by Russia (\$185 per ton
of CO₂ emissions)

Greenhouse gas emissions caused by war, mln t CO₂e

For 2 years of full-scale war



What is sustainable agriculture

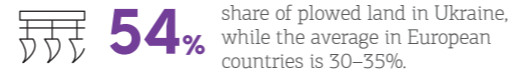
Sustainable agriculture is an approach to agriculture aimed at **achieving a balance between food production, environmental protection, and social well-being.**

For Ukrainian farmers, implementing sustainable practices is crucial for preserving black soil, adapting to climate change, and maintaining export potential to EU countries.

Traditional farming	Sustainable agriculture
Maximizing profits and yields at any cost	Balanced combination of economic, environmental and social objectives
Deep plowing, frequent mechanical tillage	Minimum tillage, preservation of soil structure: precision agriculture, no-till, strip-till, etc.
Monoculture crops	Crop rotation , crop diversification, polyculture
Intensive irrigation with excessive water use	Rational water management , moisture conservation, drip irrigation and natural reservoirs
Wide use of chemical pesticides for pest control	Integrated pest management , use of natural enemies and biological methods
Use of synthetic fertilizers , sometimes excessive	Optimization of fertilizer application and management of nutrient residues. Use of organic fertilizers , compost, green manure
Industrial methods of livestock grazing with restricted movement	Free grazing, natural conditions , herd optimization, multi-species integration, rotational grazing and manure management
Short-term economic effect, exhaustion of resources	Long-term sustainability of production, preservation of soil fertility and biodiversity

Problems of implementing sustainable agriculture in Ukraine

1. Land resource degradation
Monoculture farming, heavy machinery and crop rotation violations cause soil exhaustion, reduced fertility and loss of biodiversity.



2. Environmental pollution
Irrational use of pesticides and fertilizers leads to pollution of groundwater and surface water with nitrates. This poses a threat to public health, especially in rural communities, and can cause problems with access to safe drinking water.

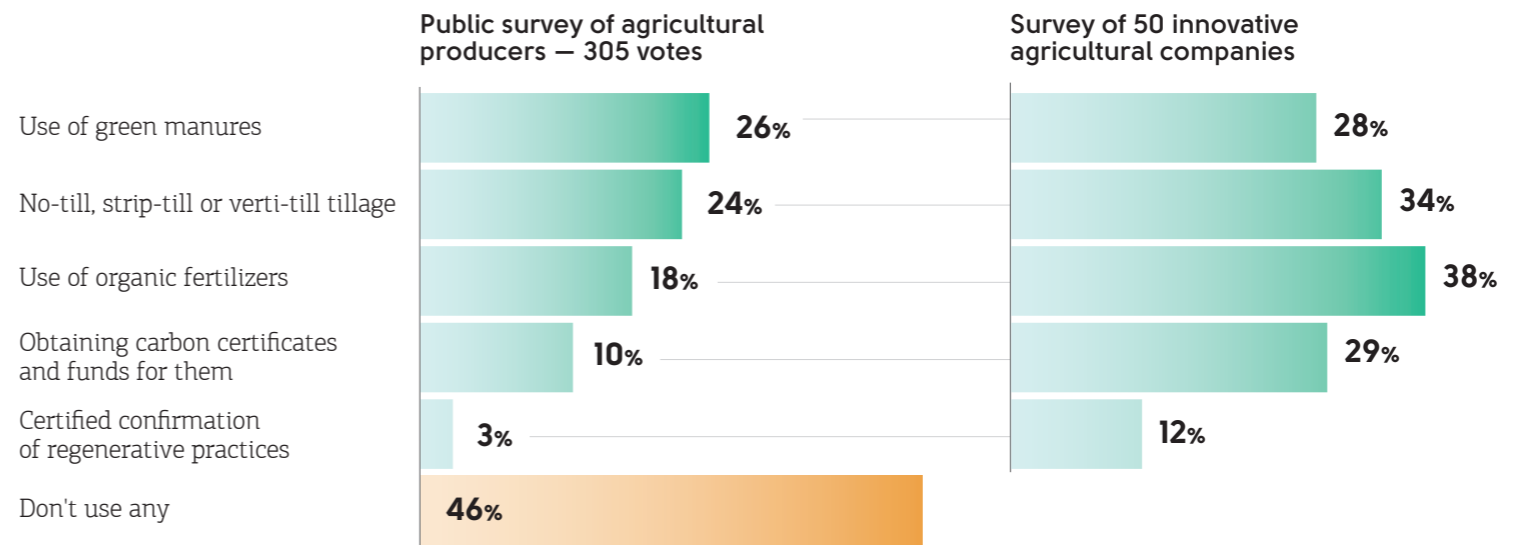


3. Lack of agricultural waste management infrastructure
Crop waste is mostly burned, and animal remains are dumped or stored in inappropriate areas. This leads to soil degradation, water and air pollution. In conditions of mineral fertilizer shortage, organic fertilizers from agricultural waste could become an effective alternative.

4. Climate challenges
In the context of climate change, agriculture requires two parallel transformations: first, reducing its own contribution to climate change by improving energy efficiency and reducing greenhouse gas emissions, and second, adapting to new climatic conditions to ensure stable food production.



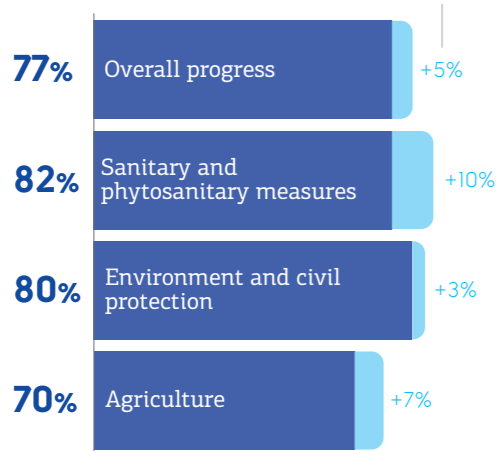
Use of sustainable agriculture technologies in Ukraine



EU Association Agreement

- Ukraine signed an Association Agreement with the EU, requires **meeting a number of requirements for the agricultural sector**. Annex XXXVIII contains 57 EU acts (19 directives, 37 regulations) for regulating agriculture in Ukraine.
- At the time of obtaining candidate status, **most acts regarding quality and marketing standards for agricultural products were implemented**.
- However, **acts related to the common market organization were not implemented**, in particular:
 - protection of agricultural producers from unfair practices;
 - rules for financing and supporting farmers through the EU Common Agricultural Policy (CAP);
 - regulation of pesticide, fertilizer, and genetically modified product use;
 - monitoring, accounting and promotion of agricultural products on EU markets.

EU Association Agreement implementation progress



EU Regulation on Autonomous Trade Measures (ATMs)

- In effect since June 2022, extended until June 2025.
- The regulation allows **duty-free access for all Ukrainian goods**, including agricultural products, to the EU market.
- In case of negative impact on the EU market, **protective mechanisms may be introduced**.
- In 2023, some EU countries, including Poland, Hungary and others, **introduced temporary restrictions on agricultural imports** due to farmers' protests.
- "Solidarity corridors" for Ukrainian product export remain operational but create local market tension in the EU.

The EU Common Agricultural Policy (CAP)

- This is a set of laws and regulations that define rules for EU farmers and **affects partner countries, including Ukraine**.
- New goals are set every 5 years, and the current period **focuses on climate practices**.
- Ukraine's potential EU membership may influence CAP funds and subsidies**. Ukraine could receive a significant portion of subsidies, which would change the process of fund allocation for EU countries.
- The compliance of the Ukrainian agricultural sector with the CAP environmental standards will **determine the future export of agricultural products to the EU**.

Paris Climate Agreement. Scope 3

- The Paris Agreement, signed by 195 countries, **commits to reduce greenhouse gas emissions**.
- The EU aims to achieve net zero by 2050**, which means eliminating not only direct emissions but also emissions associated with imported goods through supply chains (Scope 3).
- For the agricultural sector, this involves managing emissions** arising from production, transportation and processing of products.
- The EU already considering these aspects in its import regulations**. Ukrainian farmers must meet EU environmental standards.

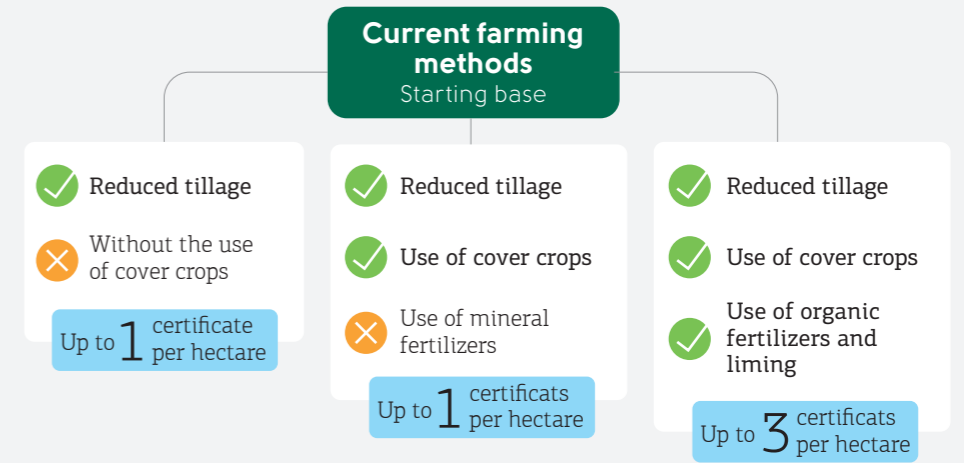
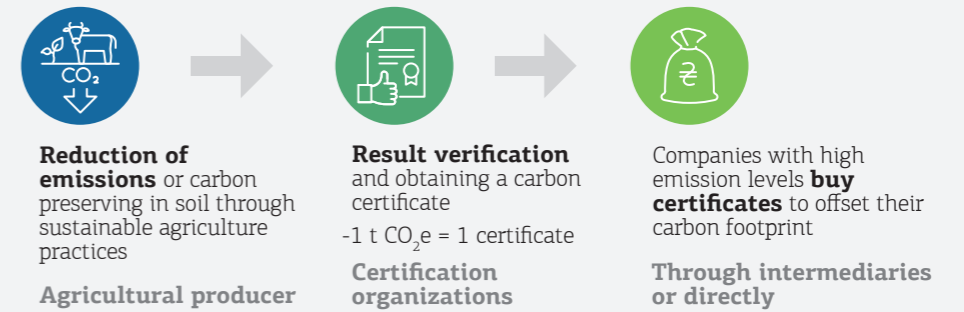
EU Green Deal. Farm to Fork Strategy

- The European Green Deal is **EU program to achieve Paris Climate Agreement goals**, which provides for a transition to sustainable development through a set of measures across various economic sectors.
- The Farm to Fork Strategy** is part of this agreement, focused on creating a sustainable food chain from producer to consumer. The main goals are:
 - Reducing pesticide use by 50% by 2030;
 - Increasing organic land area by 25% by 2030;
 - reducing nutrient losses by 50%.

What are carbon credits?

This is a market mechanism to fight climate change that allows agricultural producers to **receive financial rewards for implementing environmentally sustainable practices**. Farmers can obtain carbon credits if their activities **contribute to reducing emissions or preserving carbon in the soil**.

To do this, their projects must be verified according to international standards. Farmers can sell the obtained certificates on the voluntary carbon market, receiving additional income for their efforts towards environmental sustainability.



There are several companies operating on the Ukrainian market that help agricultural producers obtain and sell carbon credits. They issue credits based on the ISO 14064-2:2019 standard and, in parallel, working on obtaining specialized agricultural certification, particularly under the Verra standard, which is currently the most authoritative.

Volume of transactions in the voluntary agricultural carbon market in 2023

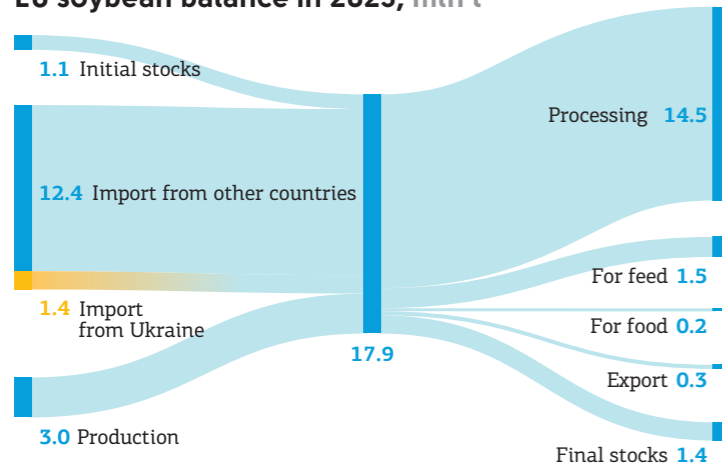
30,6 USD mln **4,7 mln t CO₂e**

Soya – a EU integration crop

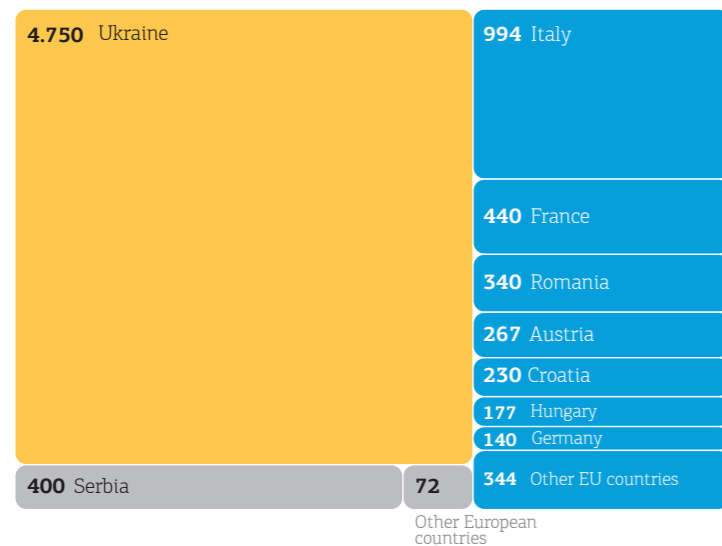
Ukraine has the greatest potential in Europe for increasing soybean production — both in terms of volume and sustainability.

Therefore, **Ukraine can significantly reduce the EU's dependence on imported soya** and processed products, and take its rightful place in the European value chain.

EU soybean balance in 2023, mln t



Soybean production in selected European countries in 2023, thou. t



EU Deforestation Regulation (EUDR)

The EUDR regulation requires **verification of no deforestation** in the production of certain goods imported to the EU, including soybeans, soya meal and oil.

EUDR compliance requirements:

- 01 Geolocation of all fields** where the product was grown
- 02 Confirmation of no deforestation** after 2020
- 03 Traceability of each batch of product** to the field
- 04 Confirmation of legality of production**

Overview of upcoming EU regulations

EU Sustainability Reporting (CSRD)

Companies must report **their CO₂ footprint** along the supply chain

From 2025 for companies not covered by the NFRD From 2026 for companies outside the EU

EU Supply Chain Act (CSDDD)

Companies must ensure due diligence to identify, prevent, reduce and **eliminate negative impacts on human rights and the environment.**

From 2027

Protein Partnership Programme

A Donau Soja Programme to increase sustainable non-GM soya production in Europe for Europe.

The agricultural producer receives:

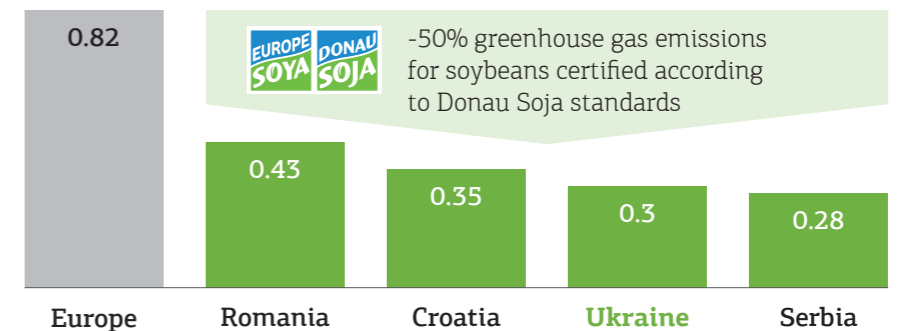
- Coverage of certification costs under Donau Soja standards, including GMO and pesticide residue analyses
- Certified production according to EU rules — front-runners of EU integration
- Verification on deforestation and conversion-free status based on the satellite image analyses
- Promoting of Ukrainian producers — participants of the Protein Partnership Programme, as producers of "climate-friendly soybeans" in Europe

EUDR and Donau Soja

The requirements of Donau Soja standards are stricter than those of EUDR. Therefore, our partners in Ukraine can provide documents that help to meet EUDR requirements:

- Geolocation of soybean fields** in the Donau Soja IT traceability system
- Confirmation of legality** via the inspection checklists
- Deforestation-free and conversion-free verification based on satellite image analysis** (cut-off date 2008)

Scope 3 emissions reduction, kg CO₂e / kg soybeans

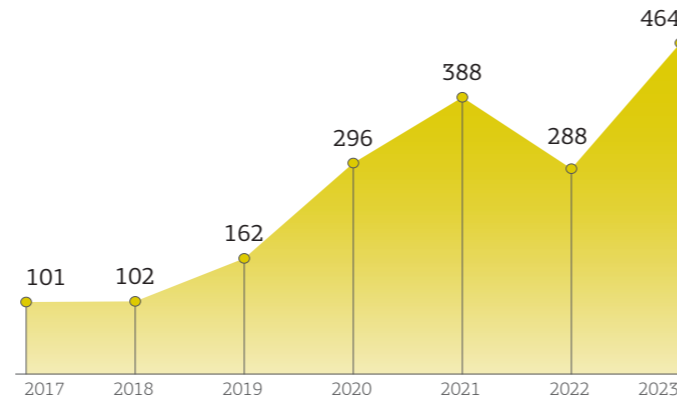


Biomass

Biomass is any substance of plant or animal origin that can be used as an energy source. **Biomass can be burned to generate thermal energy, or converted into biogas, biomethane, liquid fuels** (such as bioethanol) or solid fuels (briquettes, pellets).

Ukraine has 500,000 hectares of land that needs restoration. Growing energy crops on these lands **could annually replace up to 2.7 billion m³ of natural gas** and restore soil fertility. As of the beginning of 2024, only 6,500 hectares of low-productivity land are used for such crops.

Electricity production from biomass, mln kWh

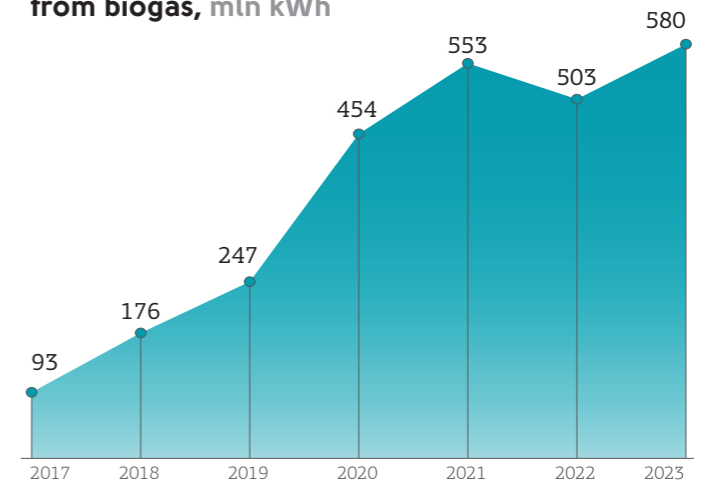


Biogas and biomethane

Biogas is a gas mixture formed during anaerobic fermentation of organic materials. It contains methane and carbon dioxide and is suitable for electricity generation and heating. Compared to biomass, electricity production from biogas **requires more complex technologies, but more efficiently converts organic waste into useful energy**. It can be stored and transported like conventional natural gas.

Biomethane is a purified version of biogas with methane content over 95%, **suitable for use in gas networks** and as transport fuel.

Electricity production from biogas, mln kWh



110 MW
Sunflower husks

67 MW
Wood

178 MW
capacity of TPPs/CHPs on biomass

-15%
in 2023

34%
capacities utilized

24
facilities / installations

135 MW
installed capacity

49%
capacities utilized

68
facilities / installations

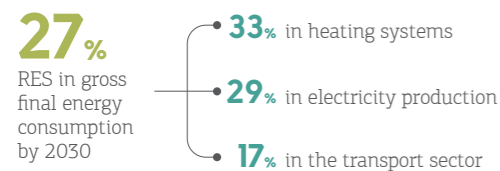
43
of them received a green tariff

Bioenergy development in Ukraine



National Renewable Energy Action Plan until 2030

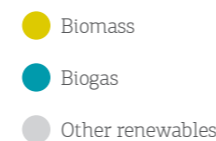
The National Plan sets ambitious goals for 2030:



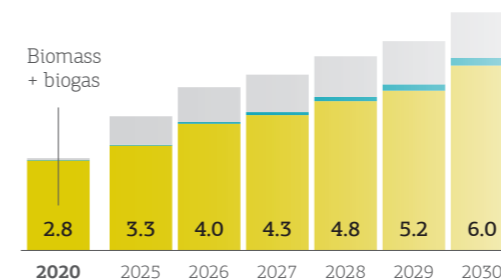
The European Commission plans to produce 35 billion m³ of biomethane annually by 2030. **Ukraine can provide up to 20% of this demand.**

The country's bioenergy potential is 21.8 billion m³ per year, which is almost equal to gas consumption in 2023 (21.4 billion m³).

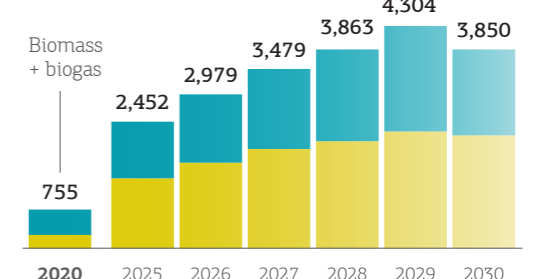
Energy consumption to achieve targets by 2030



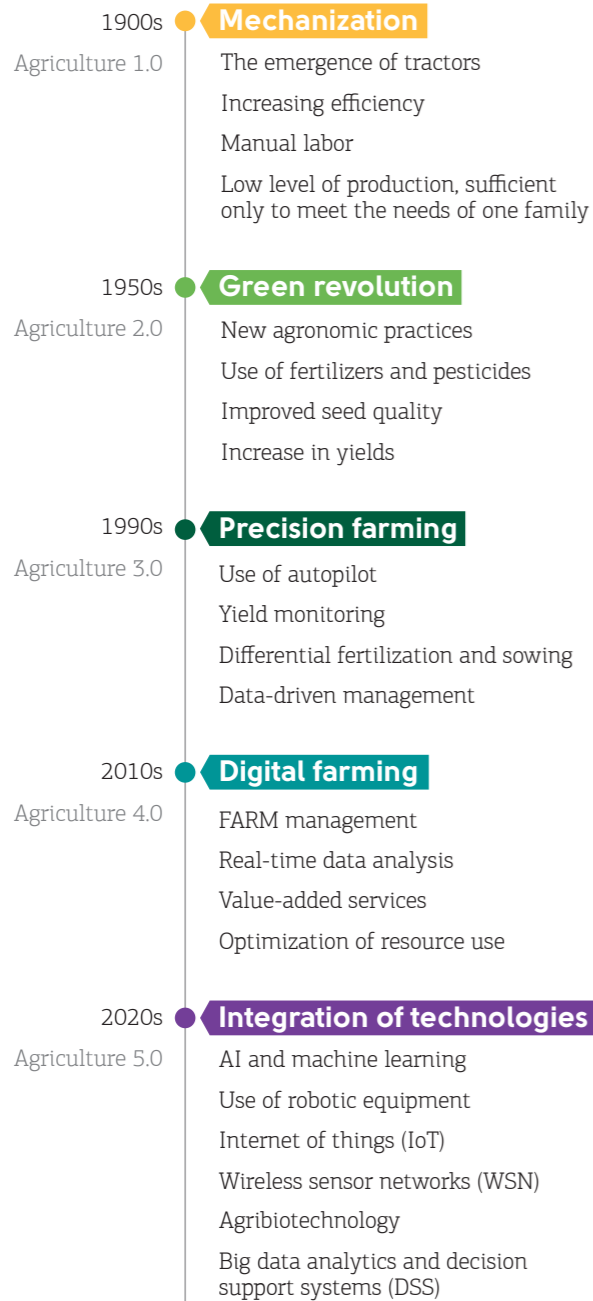
Heating systems, mln t of oil equivalent



Electricity production, GWh

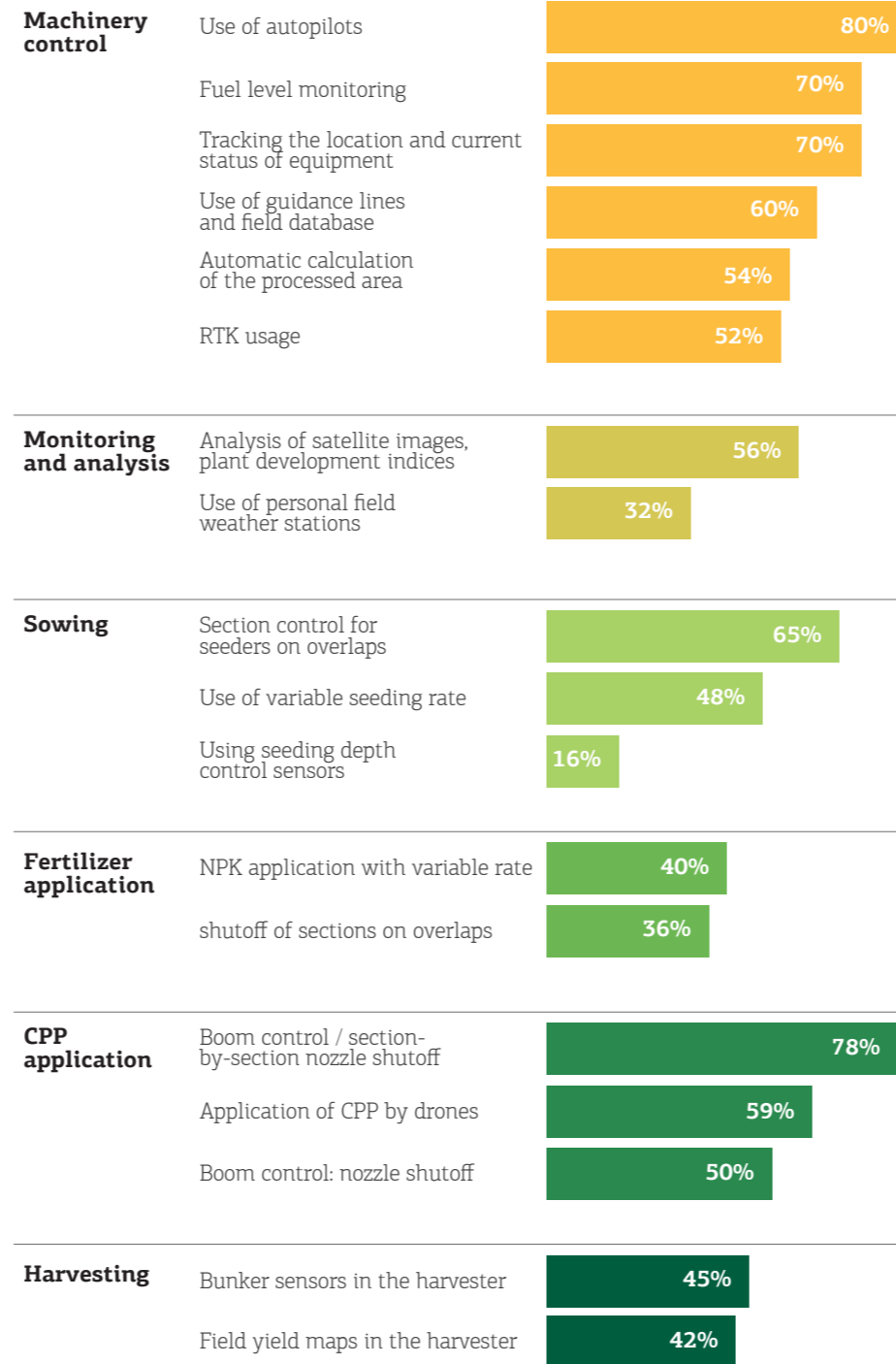


Stages of global agri-sector development

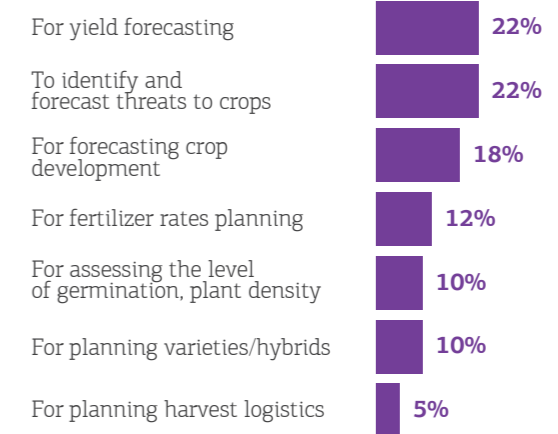


In Ukraine, precision farming combines with digital technologies and integration of technologies is already underway.

Use of technologies in agriculture¹



Use of artificial intelligence¹



¹ The data was collected based on a survey of 50 agricultural enterprises in Ukraine, among which 4 questionnaires were conducted. The survey is not representative. Companies included in the targeted survey represent all segments of agribusiness — from micro, small and medium enterprises to large agricultural holdings

80%

level of application of digital technologies in innovative companies¹

3.1 mln ha

were cultivated using agricultural drones in 2021–2023 in Ukraine

As of 2021, Ukraine's AgTech sector comprised approximately 70 startups operating in various areas: land bank management, precision agriculture, drone usage, and other innovative solutions. In recent years, the number of startups has likely increased, reflecting the dynamic development of the industry even amid the challenges of war.

Support ecosystem: The Ukrainian AgTech ecosystem is supported by business accelerators and venture capital funds that facilitate the adoption of innovations.

Innovation development priority: AgTech is one of the key sectors within the framework of the Global Innovation Vision of Ukraine 2030.

SOURCES AND METHODOLOGY

Abbreviations
on the pages

State institutions of Ukraine

uspa.gov.ua	Ukrainian Sea Ports Authority
customs.gov.ua	State Customs Service of Ukraine
ukrstat.gov.ua	State Statistics Service of Ukraine
dsns.gov.ua	State Emergency Service of Ukraine
darg.gov.ua	State Fisheries Agency of Ukraine
dar.gov.ua	State Agrarian Register
land.gov.ua	State Service of Ukraine for Geodesy, Cartography and Cadastre
landbank.spfu.gov.ua	Land bank
kmu.gov.ua	Cabinet of Ministers of Ukraine
minagro.gov.ua	Ministry of Agrarian Policy and Food of Ukraine
mfa.gov.ua	Ministry of Foreign Affairs of Ukraine
nas.gov.ua	National Academy of Sciences of Ukraine
demine.gov.ua	National Mine Action Platform
bank.gov.ua	National Bank of Ukraine
bdf.gov.ua	Business Development Fund of Ukraine

Ukrainian organizations and media

uabio.org	Bioenergy Association of Ukraine
infoindustria.com.ua	Information and Analytical Agency Infoindustry
kse.ua	Kyiv School of Economics
ukrsugar.com	National Association of Sugar Producers of Ukraine
uadairy.com	Union of Dairy Enterprises of Ukraine
ecoaction.org.ua	Center for Environmental Initiatives "Ecodia"
ces.org.ua	Center for Economic Strategy
cgo-sreznevskyi.kyiv.ua	Boris Sresnevsky Central Geophysical Observatory
—	Aggeek
—	carboncreditukraine.com
—	DeepStateMAP
—	Latifundist Media (Latifundist.com, Elevatorist.com, AgroPolit.com)
—	Truth Hounds

International and foreign organizations

—	Ecosystem Marketplace
FAO	Food and Agriculture Organization of the UN
USDA	Foreign Agricultural Service of US Department of Agriculture
—	Initiative on GHG accounting of war
IPCC	Intergovernmental Panel on Climate Change
Trade Map	International Trade Centre's Trade Map
—	Project Expedite Justice
USAID AGRO	U.S. Agency for International Development. Agriculture Resilience Initiative — Ukraine
OCHA HDX	United Nations Office for the Coordination of Humanitarian Affairs. Humanitarian Data Exchange
World Bank	World Bank Group

Publications and documents

Author	
Project Expedite Justice Truth Hounds	Study of the Destruction of the Kakhovka Dam and Its Impacts on Ecosystems, Agrarians, Other Civilians, and International Justice
kse.ua	Agricultural War Damages, Losses, and Needs Review (February 2024)
kmu.gov.ua	Report on Implementation of the Association Agreement Between Ukraine and the EU for 2023
kmu.gov.ua	National Renewable Energy Action Plan until 2030
ecoaction.org.ua	Sustainable recovery and development for agriculture: a standpoint
Aggeek	Digital Agro 2024
IPCC	Climate Change 2014: Synthesis Report
Initiative on GHG accounting of war	Climate Damage Caused By Russia's War In Ukraine (24.02.2022–23.02 2024)
Ecosystem Marketplace	State of the Voluntary Carbon Market 2024
Government of Ukraine World Bank EU UN	Ukraine Third Rapid Damage And Needs Assessment RDNA3 (Feb 2022 – Dec 2023)




Methodology

The 11th issue of the annual infographic guide "Agribusiness of Ukraine 2023/24 MY" **highlights the impact of the war on key agricultural sector indicators and analyzes the main trends** observed in the industry during the third year of the full-scale invasion.

The data for this study was collected and prepared in 2024, reflecting the results of the 2023 calendar year and the 2023/24 marketing year (MY). It should be noted that **the data may vary due to differences in the calculation methodologies used by various organizations.**

The comparison period was selected to include the pre-invasion year (2021), allowing for an assessment of the war's impact on industry indicators. For individual indicators, such as export dynamics and GDP, a longer analysis period was used. **This provides a more complete and representative picture of changes and trends in the agricultural sector within the context of long-term structural processes.**

Legend on the maps:

-  Data are not published in order to comply with the requirements of the Law of Ukraine
-  n/a No data available due to lack of access to the temporarily occupied territories, combat zones, etc.
-  A value cannot exist for a certain reason. For example, a government program cannot operate in the temporarily occupied territories

Authors

TOP
LEAD Visual
content
solutions



Part of Fortior Capital

TOP LEAD

Marina.budnik@toplead.com.ua
toplead.com.ua

Planning

Latifundist.com

Dyachenko@latifundistmedia.com

Production, planning and design

Supported by



Crédit Agricole Bank

Kyiv, 01024,
42/4 Yevhena Chykalenko St.,
0 (800) 30-55-55

credit-agricole.ua

Thank you for
your expert
support

Yevhen Savchuk
Natalia Porvina
Igor Gurzhiy
Andrii Bilenkyi



Download
online version

Disclaimer

This report is designed exclusively to inform users. We have made every effort to ensure the accuracy of the information contained in this report. Despite the fact that this information has been carefully prepared by experts, it can only be used to get a general idea of the subject discussed.

Do not use the information contained in the report as professional advice on a particular issue or to make a professional judgment. The data was collected and prepared for publication in 2024 based on the results of the 2023/24 MY and the 2023–2024 calendar years.

Terms of use

All exceptional property and non-property rights for this report pertain to TOP LEAD LLC and Latifundist Media LLC. Non-compliance with this report terms of use will entail liability according to the Ukrainian legislation. Parts of this report may be reprinted with a direct hyperlink to agribusinessinukraine.com webpage, containing the report. The use and publishing of a complete digital version of this report on third-party sites is strictly prohibited.

Detailed terms of use are available at:
<https://agribusinessinukraine.com/terms-of-use/>

Media partners

