

Russian-Ukrainian War: Economic Impact

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MAP OF UKRAINE AND KEY EVENTS AFTER OBTAINING THE INDEPENDENCE



Source: News agencies, Mapbox

● (1991) **Independence of Ukraine:** The Verkhovna Rada adopted an act of proclamation of independence of Ukraine.

● (1994) **Renunciation of nuclear weapons:** The memorandum between Ukraine, Russia, Great Britain and the United States on guarantees to Ukraine in connection with its acquisition of non-nuclear status was signed.

● (2004) **The Orange Revolution and Constitutional Reform:** Ukrainians started the Orange Revolution after the Central Election Commission announced preliminary results, according to which pro-Russian candidate (Viktor Yanukovich) won.

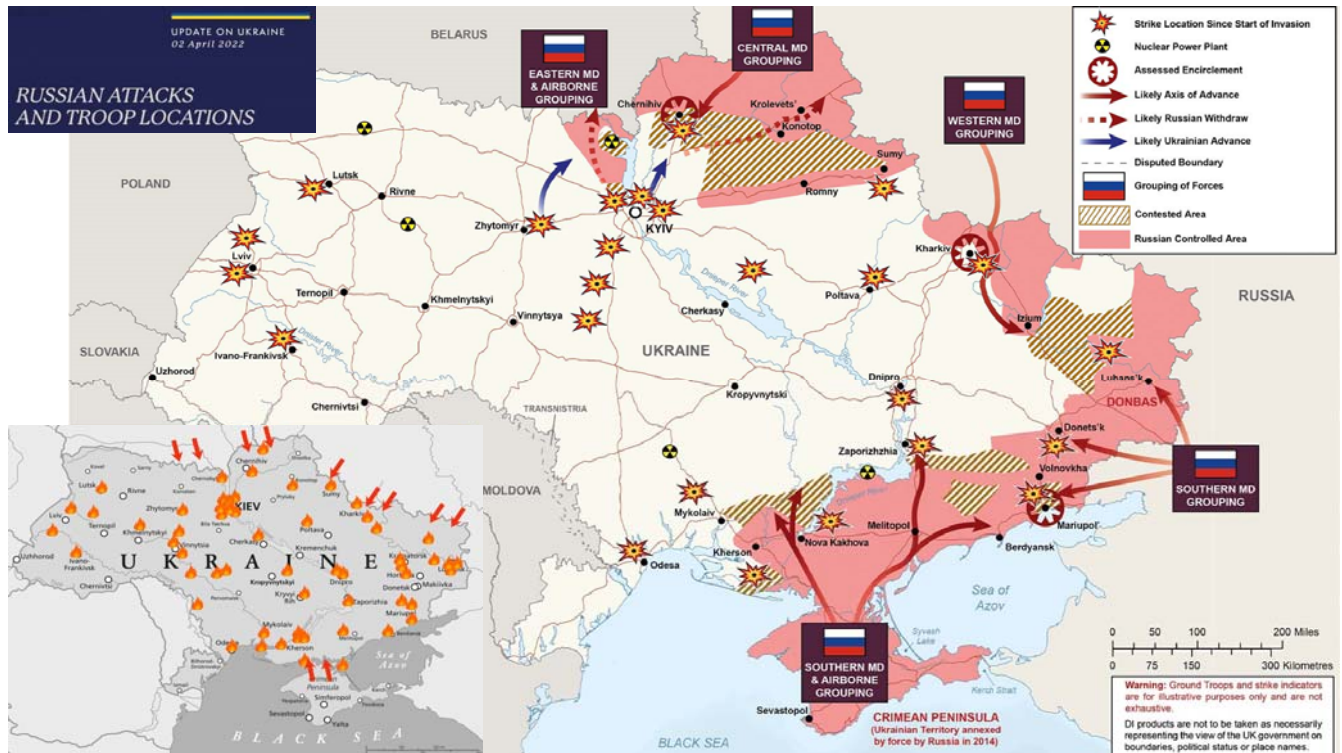
● (2009) **"Gas war" with Russia:** Russia cut off gas to Ukraine, and then ordered a halt to all gas supplies to the border with Ukraine.

● (2013) **Euromaidan:** Ukrainians start the Revolution of Dignity (Euromaidan) because pro-Russian government suspended preparations to entering the EU.

● (2014) **Annexation of Crimea and war in Donbas:** One month after the victory of the Revolution of Dignity, Russia brought its troops to Crimea and then to Donbas.

● (2022) **Full-scale war started by Russia:**

- In December 2021, an estimated 100,000 Russian soldiers are concentrated along the Ukrainian border.
- In January 2022, Russia, NATO, and OSCE hold talks. The US and Russia meet to de-escalate tensions in Ukraine, but differences remain unresolved. NATO puts troops on standby.
- In February 2022, Ukraine and Russia conduct military drills, Putin recognizes the independence of temporarily occupied regions of Ukraine and orders Russian forces to them. Then Russia launches full-scale invasion of Ukraine.



Ukraine at a Glance

Population: 41.6 million (2021 est., excluding more than 2 million in Crimea)

Size: 630,550 sq. km (Slightly smaller than Texas)

Agricultural land: 42.7 million hectares (105.5 million acres), 33 million ha (81.5 million acres) are in tillage

Capital: Kyiv

Ethnicity: 78% Ukrainian, 17% Russian, 0.5% Crimean Tatar (2001 census)

Languages: Ukrainian (official), Russian (regional status)

GDP/GDP per capita: \$193 billion/\$4,663 (2021)

GDP per capita (Purchasing power parity): \$14,000 (2021)

Top Exports: grain, iron and steel, fats and oils, iron ores, electrical equipment and parts, industrial machinery, oil seeds

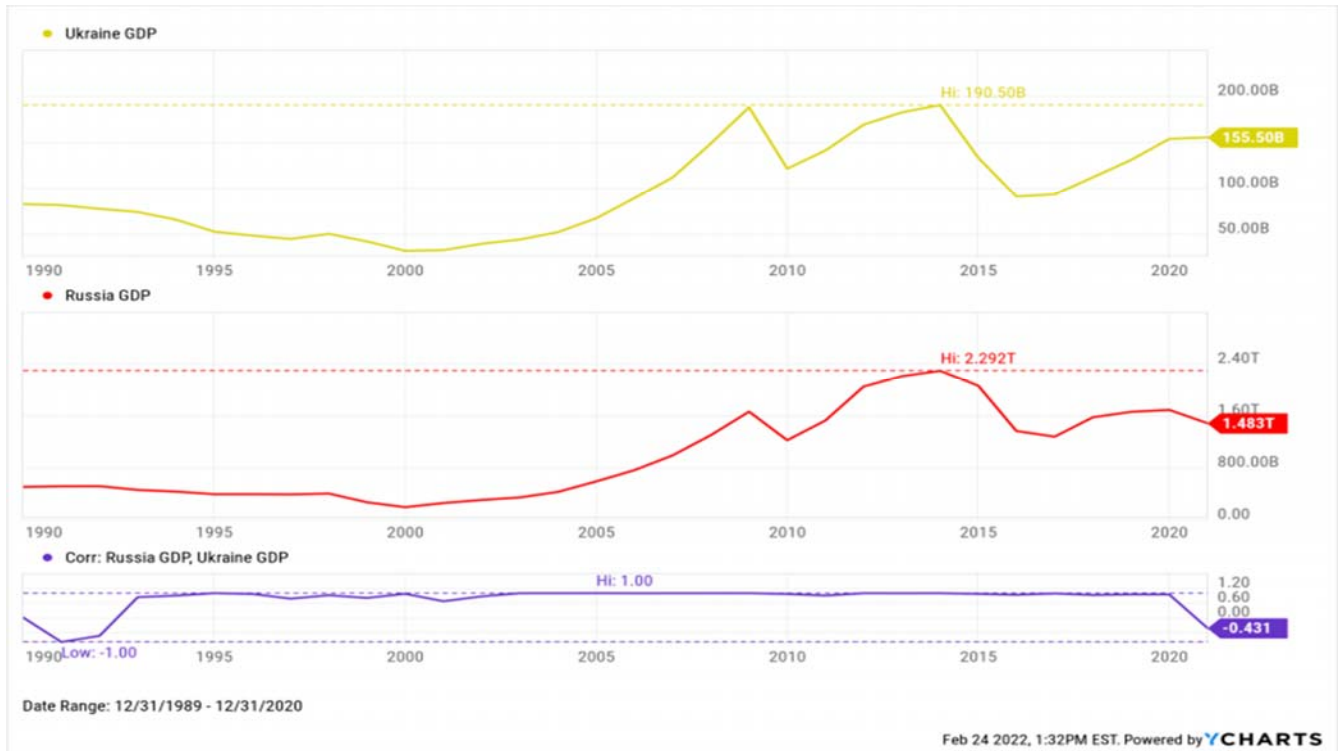
Year	Consumer price index, %	Unemployment rate, %
2000	125.8	12.4
2001	106.1	11.7
2002	99.4	10.3
2003	108.2	9.7
2004	112.3	9.2
2005	110.3	7.8
2006	111.6	7.4
2007	116.6	6.9
2008	122.3	6.9
2009	112.3	9.6
2010	109.1	8.8
2011	104.6	8.6
2012	99.8	8.1
2013	100.5	7.7
2014	124.9	9.7
2015	143.3	9.5
2016	112.4	9.7
2017	113.7	9.9
2018	109.8	9.1
2019	104.1	8.6
2020	105.0	9.9
2021	110.0	10.3

Source: based on the data of the State Statistic Service of Ukraine

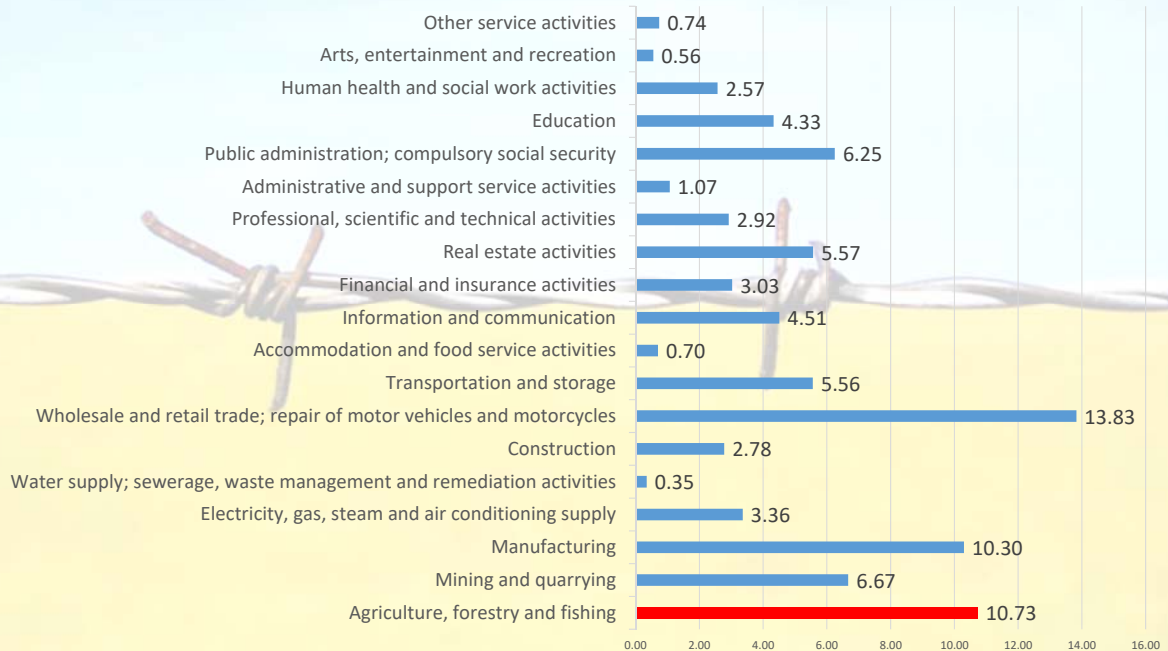
Dynamics of the GDP of Ukraine, billion \$ US



Source: based on the data of the State Statistic Service of Ukraine

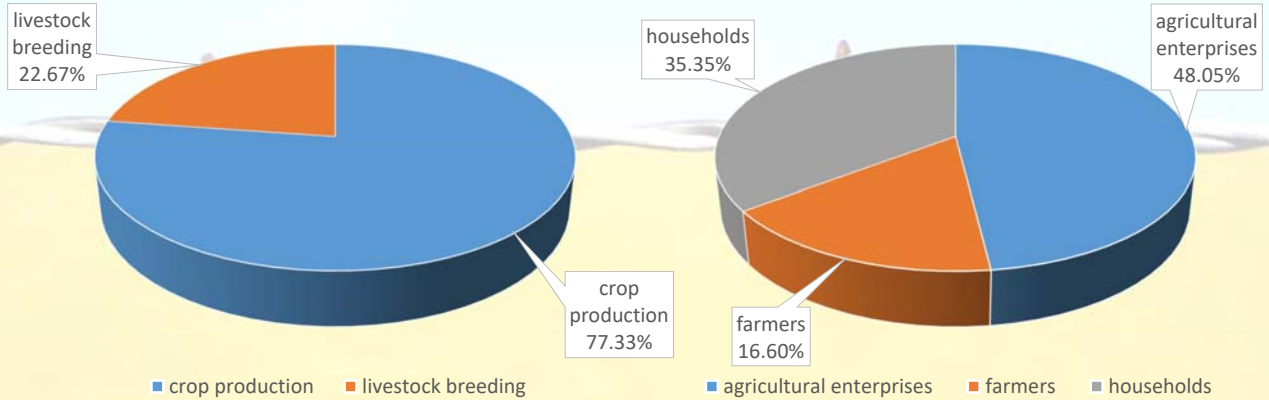


Composition of Gross Domestic Product of Ukraine in 2021, %



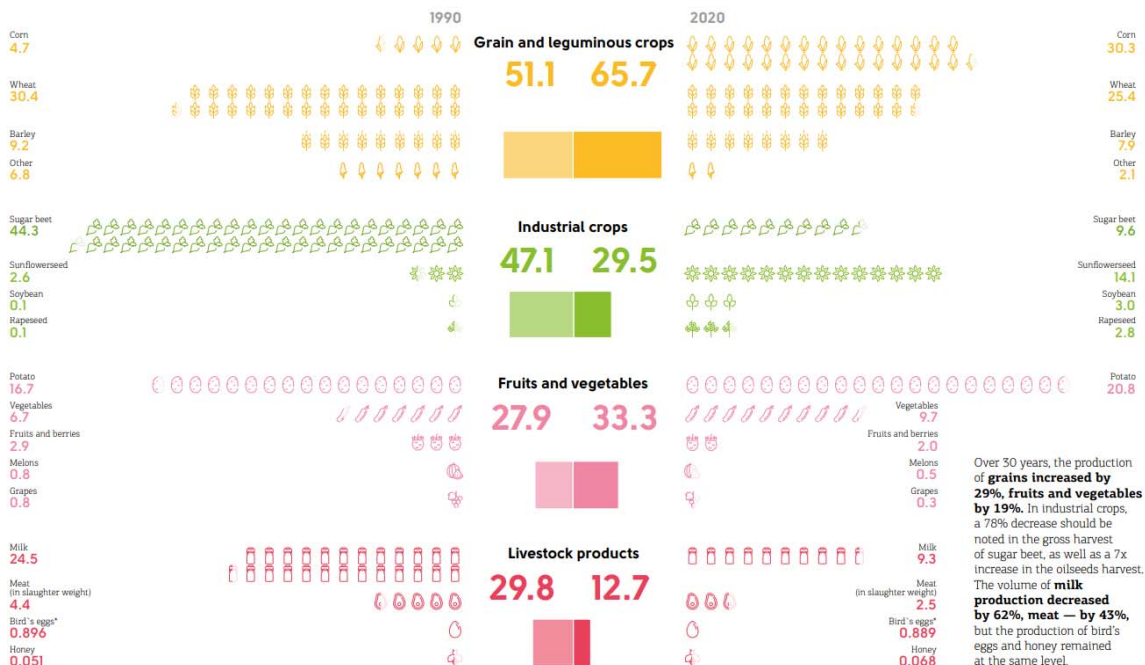
Source: based on the data of the State Statistic Service of Ukraine

Structure of agricultural production in Ukraine



Source: based on the data of the State Statistic Service of Ukraine

CHANGE IN PRODUCTION OF MAIN AGRICULTURAL COMMODITIES OVER 30 YEARS, MLN T

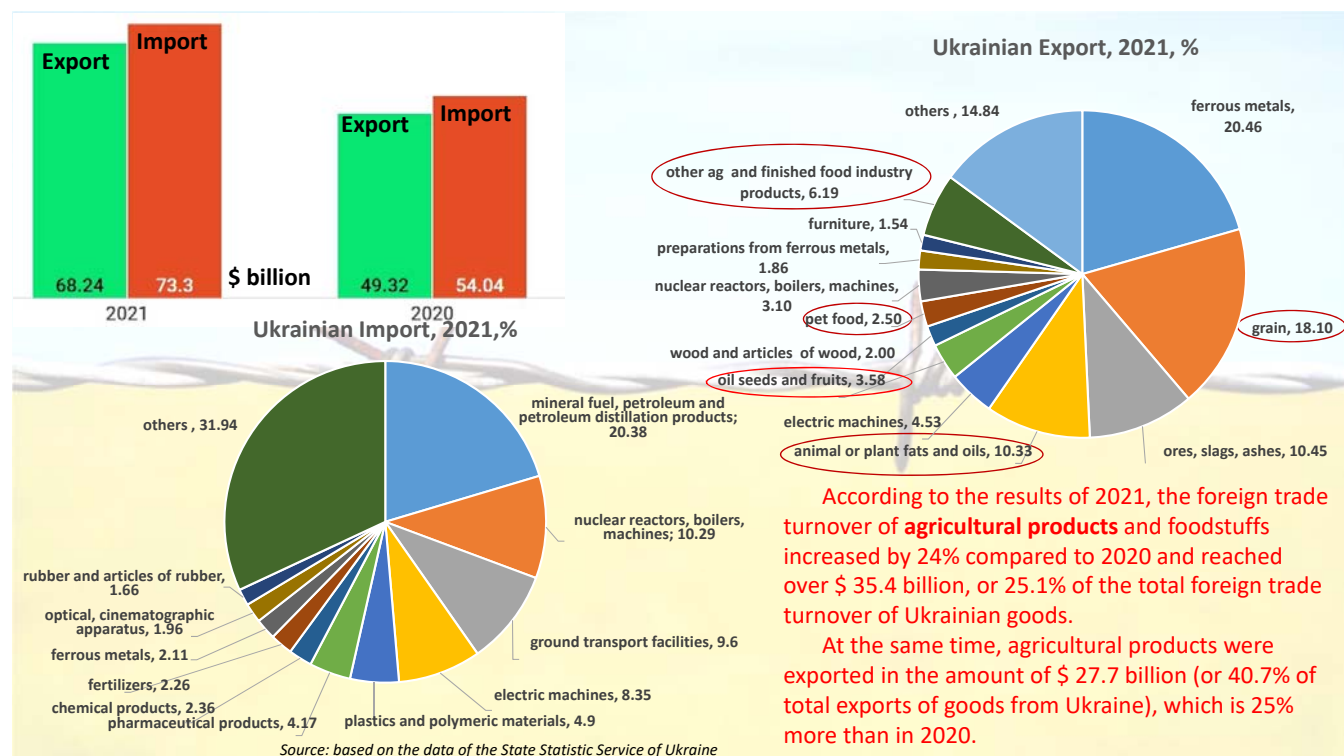


Source: Agribusiness of Ukraine 2020/2021 Infographic Report

Harvesting of Agricultural Crops in Ukraine in 2021

Crops	Harvested area, thsd. ha		Volume of production, thsd. metric ton		Yield, metric ton per ha of the harvested area		Yield, bushels per acre 2021
	2021	2021 % to 2020	2021	2021 % to 2020	2021	2021 % to 2020	
Cereal and leguminous crops	15380.3	104.2	84570.36	133.5	5.50	128.2	x
wheat	7055.5	108.3	32719.67	129.4	4.64	119.6	69.00
- winter wheat	6869.8	108.2	31928.41	129.6	4.65	119.8	69.14
- spring wheat	185.7	112.3	791.26	125.2	4.26	111.5	63.34
corn	4972.3	100.9	39819.37	141.9	8.01	140.8	127.61
barley	2464.0	103.9	9646.23	123.2	3.92	118.8	72.86
- winter barley	1132.3	112.8	4948.18	147.5	4.37	130.8	81.23
- spring barley	1331.7	97.4	4698.05	104.9	3.53	108.0	65.61
winter rye	171.6	126.3	616.12	131.7	3.60	104.3	57.35
oat	177.3	89.1	494.79	92.5	2.79	103.7	77.79
buckwheat	87.8	106.7	113.35	109.0	1.30	102.4	24.16
millet	81.8	52.9	205.71	80.1	2.52	151.8	38.11
rice	9.3	89.4	51.51	88.7	5.53	99.1	109.64
leguminous crops	310.5	100.0	701.69	113.1	2.26	113.0	33.61
- peas	239.2	102.5	581.93	118.4	2.43	115.2	36.13
Soya beans	1271.5	96.3	3409.34	123.5	2.68	128.2	39.85
Winter rapeseed and colza (spring rapeseed)	1004.0	90.8	2960.08	114.4	2.95	126.1	52.64
winter rapeseed	971.8	90.1	2884.30	114.1	2.97	126.9	53.00
colza (spring rapeseed)	32.2	119.3	75.78	128.6	2.36	107.8	42.11
Sunflower seeds	6523.9	102.2	16439.84	125.1	2.52	122.3	74.94
Sugar beet (for processing)	212.6	105.4	9834.62	119.1	46.26	113.0	x
Potatoes	1280.4	96.6	21299.51	102.1	16.63	105.7	x
Vegetables grown in the open	454.7	89.7	9416.54	103.3	20.71	103.6	x

Source: based on the data of the state Statistic Service of Ukraine



TOP-10 positions of Ukrainian exports in 2021 in monetary terms

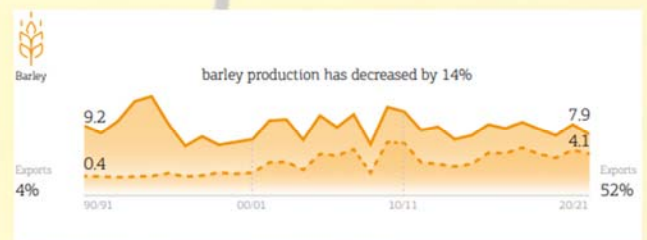
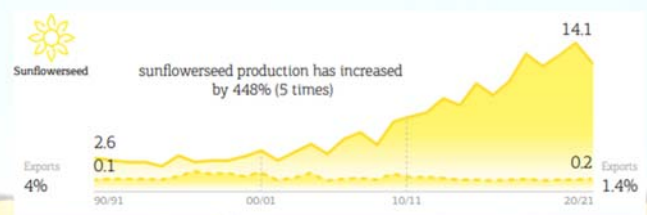
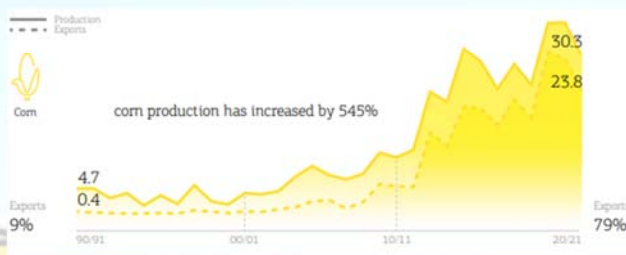
Products	\$ billions	TOP-3 partner countries
Iron Ore	6.91	China, Czech Republic, Poland
Sunflower oil	6.4	India, China, the Netherlands
Corn	5.89	China, Spain, the Netherlands
Wheat	5.07	Egypt, Indonesia, Turkey
Semi-finished steel products	4.09	Italy, Turkey, Dominican Republic
Flat rolled carbon steel	3.74	Turkey, Poland, Russia
Cast iron in ingot	1.64	USA, Italy, Turkey
Cables	1.59	Germany, Poland, Romania
Barley	1.28	China, Turkey, Saudi Arabia
Ferroalloys	1.04	Turkey, Italy, China

TOP-10 positions of imports to Ukraine in 2021 in monetary terms

Products	\$ billions	TOP-3 partner countries
Petroleum products	5.62	Belarus, Russia, Lithuania
Natural gas and liquefied gas	4.98	Switzerland, Hungary, Russia
Cars	4.42	USA, Japan, Germany
Coal	2.49	Russia, USA, Kazakhstan
Phones	1.34	China, Vietnam, Hungary
Computer Engineering	0.86	China, Poland, Czech Republic
Crude oil products	0.83	Azerbaijan, Algeria, Libya
Tractors	0.79	USA, Germany, Belarus
Spare parts	0.62	China, Russia, Germany
Cables	0.6	Germany, Hungary, Poland

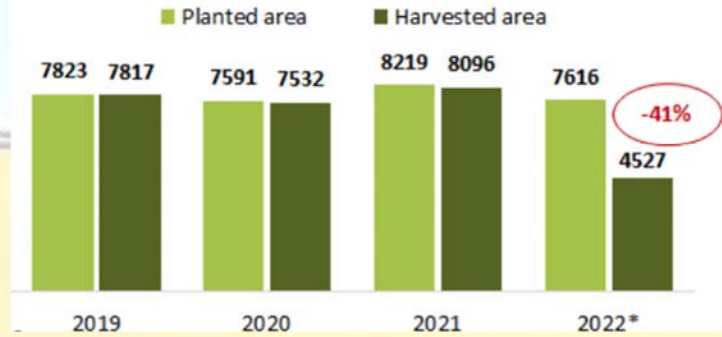
Source: *based on the data of the state Statistic Service of Ukraine

Production and exports from Ukraine, mln t

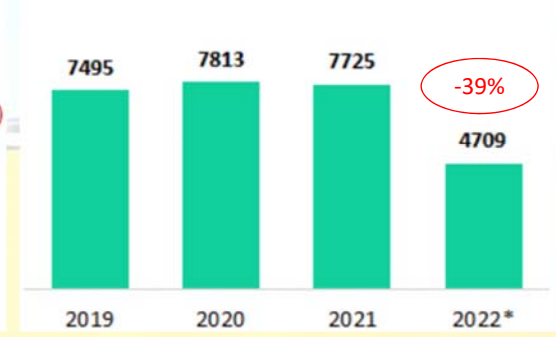


Source: Agribusiness of Ukraine 2020/2021 Infographic Report

Dynamics of planted and harvested area under winter crops in Ukraine, thsd ha



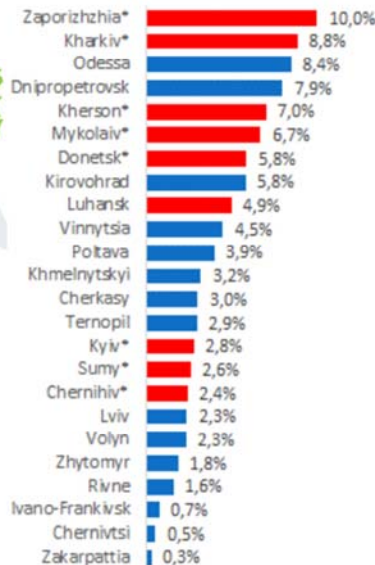
Dynamics of planted area under spring grains in Ukraine, thsd ha



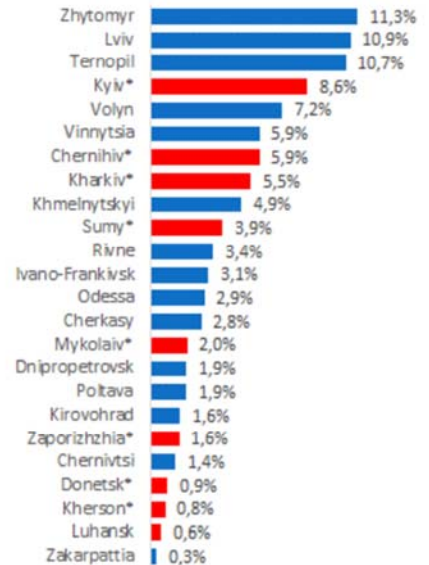
Forecast as of April 1



Regional distribution of winter wheat planted area for 2022 crop in Ukraine, %



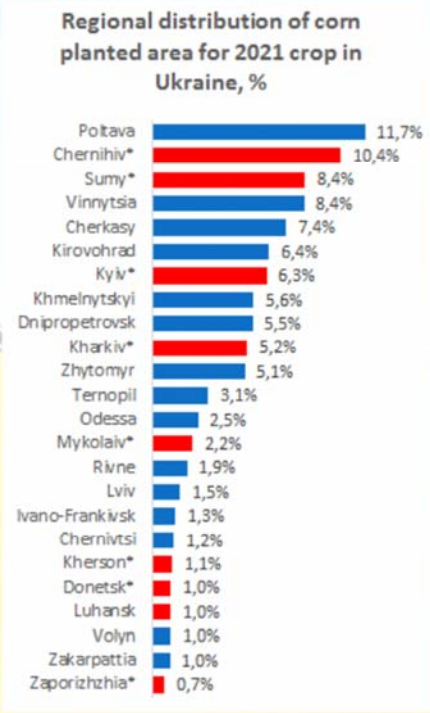
Regional distribution of spring wheat planted area for 2021 crop in Ukraine, %



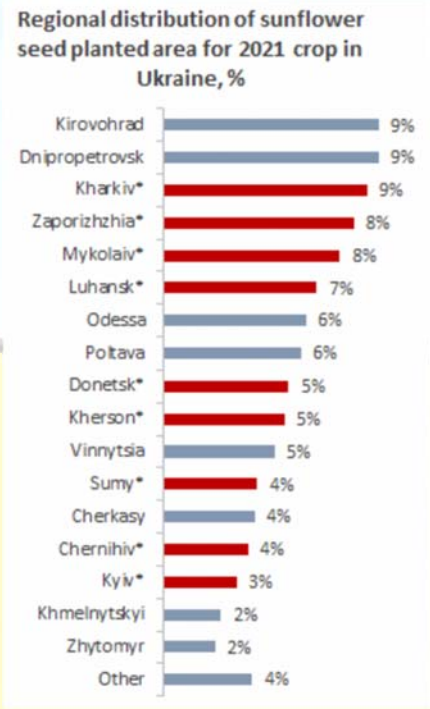
Almost 51% of the total area under winter wheat located in the most dangerous regions.

According to the results of the planting campaign in the previous season, the total share of spring wheat in hazardous regions is estimated at 30%.

* Hereinafter red color means dangerous oblasts due to military activity



Analysis of the distribution of corn area in 2021 shows that dangerous regions account for more than 36% of the total area. Chernihiv, Sumy and Kyiv oblasts are the most critical, where more than 25% of corn area located in 2021.



Planted area under sunflower seeds in Ukraine, thousand ha



* Forecast as of April 1, APK-inform

Forecast of production of grains and oilseeds in Ukraine in 2022

Crop	Planted area, thsd ha		Harvested area, thsd ha		Yields, c/ha		Production, thsd tonnes		
	2021	2022*	2021	2022*	2021	2022*	2021	2022*	+/-
Grains and pulses	15 944	12 325	15 916	9 129	53,8	42,6	85 680	38 906	-55%
Wheat	7 100	6 686	7 081	3 935	45,3	37,8	32 075	14 865	-54%
Rye	175	109	173	69	34,4	25,4	594	174	-71%
Barley	2 475	1 941	2 468	1 622	38,2	28,2	9 419	4 577	-51%
Corn	5 475	3 144	5 459	3 066	76,7	60,4	41 870	18 516	-56%
Oats	178	127	179	125	26,3	20,5	471	256	-46%
Millet	78	59	87	59	23,5	13,5	204	79	-61%
Buckwheat	84	49	92	48	11,5	10,9	106	53	-50%
Peas	242	119	240	118	23,8	17,2	571	203	-64%
Rice	10	5	10	5	49,1	49,0	49	22	-54%
Other grains	128	85	127	83	25,2	18,8	322	160	-50%
Oilseeds	9 257	6 850	9 165	6 388	25,4	22,6	23 260	14 449	-38%
Sunflower seed	6 790	4 200	6 722	4 172	24,6	22,0	16 550	9 178	-45%
Soybean	1 353	1 200	1 344	1 192	26,4	23,0	3 547	2 743	-23%
Rapeseed	1 065	1 440	1 051	1 014	29,5	24,9	3 104	2 520	-19%
Flaxseed	28	6	27	6	15,5	10,0	41	5	-87%
Mustard seed	21	5	21	4	9,0	7,5	18	3	-82%

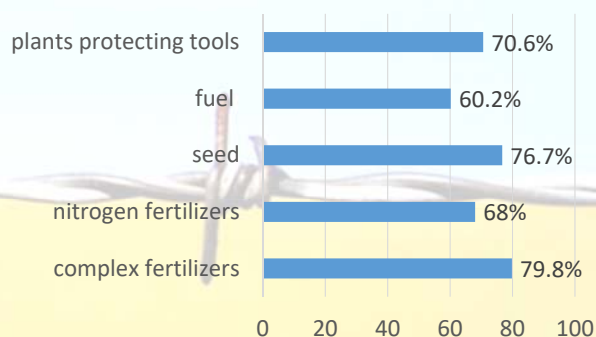
Forecast as of April 1, based on the data of the state Statistic Service of Ukraine

As of April 7, According to the operative data of structural subdivisions of military administrations, 23 regions of Ukraine have started sowing spring crops, except for Luhansk, where hostilities are taking place practically on the whole territory.

All categories of farms are sown:

- spring wheat 113.5 thousand hectares;
- spring barley 550.8 thousand hectares ;
- spring rapeseed 11.6 thousand hectares;
- oats 81.0 thousand hectares;
- peas 82.5 thousand hectares;
- buckwheat 0.2 thousand hectares;
- millet 0.2 thousand hectares;
- corn 13.6 thousand hectares;
- sugar beets 55.2 thousand hectares;
- sunflower 108.1 thousand hectares;
- soybeans 14.1 thousand hectares;
- potatoes 43.2 thousand hectares.
- **Total 1074 thousand hectares (less than 10% of expected crop area) / 2653,912 thousand acres**

Availability of crop inputs for spring sowing



Source: *the Ministry of Agrarian Policy and Food of Ukraine

Since the beginning of Russia's aggression, the railway has become almost the only grain-bearing artery, and the western border has been the main route for grain to foreign markets. Seaports through which up to 7 million tons of grain per month were transported are currently blocked.

The Ukrainian Railway can transship 1 million tons of grain per month at the western border crossings. The company is working on expanding the capacity to 5 million tons.

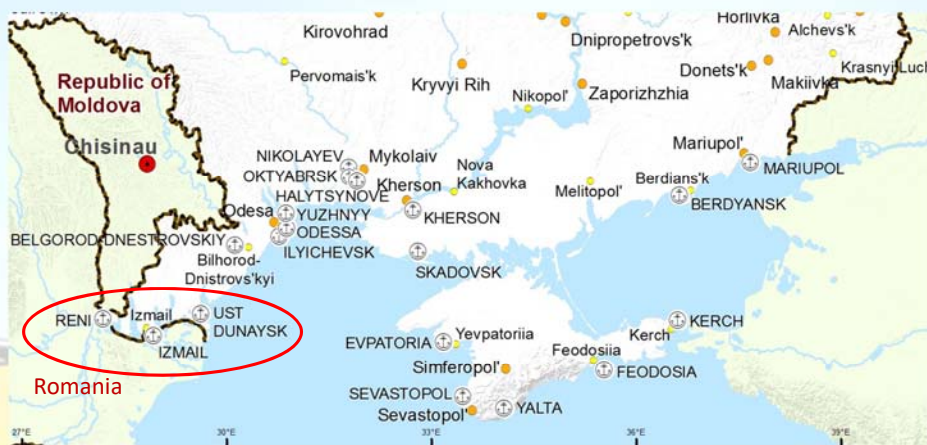
The Ukrainian Railway offers exporters to reload grain at 12 terminals:

- on the border with Poland - terminals at the border crossings "Mostyska-2", "Yagodyn", "Izov",
- on the border with Romania - crossings "Dyakovo-2", "Vadul-Siret",
- on the border with Moldova, the Reni-Giurgiu and Mohyliv-Podilskiy crossings, from which cargo can be sent to the port of Reni,
- on the border with Slovakia - Uzhhorod and Chop crossings.

In March 2022, the load of grain cargo transported via The Ukrainian Railway amounted to 685 thousand tons or 8.6% of the total load of 7.97 million tons. The average daily load of grain in March 2022 amounted to 22 thousand tons. The average daily load from 21 to 31 March increased to 35 thousand tons. For comparison, in March 2021 shipments per month amounted to only 77 thousand tons grains.

Grain cargo for export amounted to 415.9 thousand tons (-1567 thousand tons or -79% compare to March 2021)

Source: *press service of the Ukrainian Railway



- The ports of Mariupol, Berdyansk, Skadovsk and Kherson are temporarily closed. Entry / exit of vessels is temporarily impossible;
- Belgorod-Dniester does not work due to lack of fleet and cargo in the port. Entry / exit of vessels is temporarily impossible;
- Mykolayiv, Olvia, Pivdennyi, Odesa, and Chernomorsk are partially processing the fleet berths available at the berth and shipping them by rail and road. Entry / exit of ships is temporarily impossible
- The port of the Dunay river (Danube) - Izmail, Reni and Ust-Danubsky – have now become the key water arteries of grain exports as an alternative to sea ports.

Source: *press service of the Ministry of Infrastructure of Ukraine

Conclusion

Russia's hostilities in Ukraine will have an extremely negative impact on the functioning of food systems. In particular, the following consequences are expected:

- disruption of integrated supply chains of agricultural products and food products (from primary producers to end consumers), as well as activities to create added value in the agro-industrial complex related to the production, processing, distribution, consumption and disposal of food;
- breakdown of the sowing timeline, which is particularly threatening, given the high world prices for gas and, consequently, mineral fertilizers. Active hostilities are currently taking place in Kharkiv, Odesa, Zaporizhzhia – the regions where most of the wheat is grown. On the aggregate, these factors will reduce grain yields, harvests and exports;
- hampered exports of Ukrainian products to foreign markets due to the blockade of Ukrainian ports by Russia (60% of Ukraine's agricultural products are exported by sea), which will negatively affect primarily the countries that depend on food imports.

The consequences will pose serious threats to global food security. They will lead to:

- a further rise in world food prices (according to the FAO forecast of 11.03.2022, world prices for wheat and coarse grains may increase by as high as 20 percent due to the war in Ukraine);
- a global spike in inflation, which will primarily affect countries with underdeveloped economies in the Middle East and North Africa



Questions?