

Trends and challenges during the spring season on the Black Sea ag markets

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Agricultural Economics

Damages and destroyed infrastructure objects of Ukraine total

\$ 143,8 bln



Private
passenger
cars

207 500 units



housing

153 900 units



education

3 170 units



Units of
public
transport

16 000 units



healthcare
objects

1 216 units



cultural
objects

1 800 units

50% of energy system is destroyed
**22% (7 mln hectares) of arable land is
occupied**

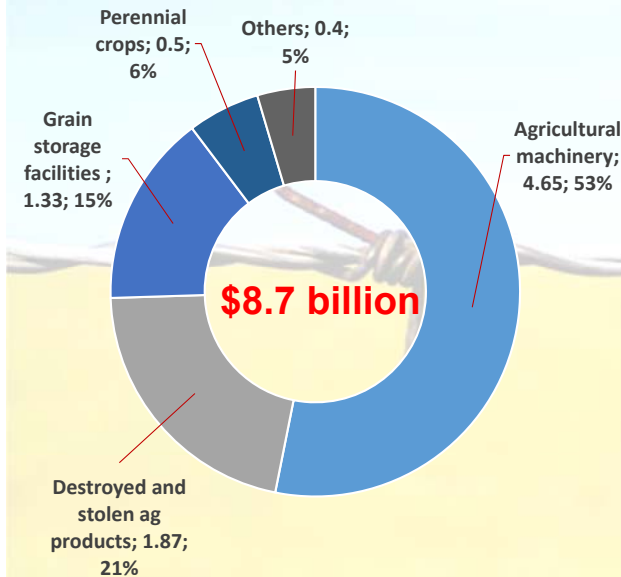


Property type Damage assessment, \$ billion

	Housing	53.6
	Infrastructure	36.2
	Assets of enterprises, industry	11.3
	Education	8.9
	Agriculture and land resources	8.7
	Energy	8.1
	Forests	4.5
	Transport	3.1
	Trade	2.3
	Culture, sport, tourism	2.2
	Healthcare	1.8
	Utilities	1.4
	Electronic communications	0.6
	Administrative buildings	0.5
	Social sphere	0.2
	Financial sector	0.04
	Total	143.8

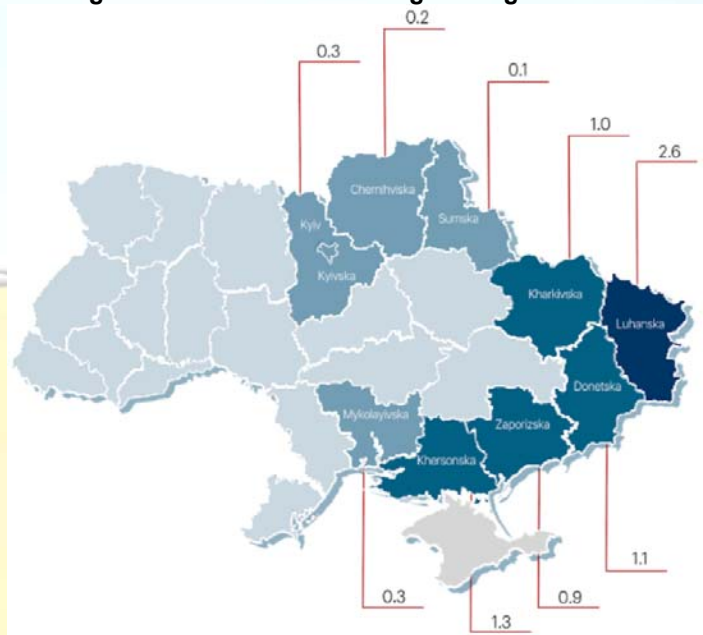
Source: Kyiv School of Economics, February 2023

DIRECT DAMAGE FROM THE WAR TO UKRAINIAN AGRICULTURE, \$ billion



Source: Kyiv School of Economics

Regional distribution of damages to agricultural sector



DEMINEING OF FARMLAND IN UKRAINE

5 mln ha of farmland (or 15% of arable land) in Ukraine is considered mined

Over **\$ 5 bln** is needed for demining farmland

70.4 thou. ha, of the deoccupied territory among which **57 thou. ha** of agricultural land was inspected and cleared by the State Emergency Service, mostly in Kyiv and Chernihiv regions

IMPACT ON THE LAND FUND



Formation of craters, soil compaction, destruction of vegetation and death of soil fauna caused by blast waves and movement of military



Contamination of soil, air, and groundwater with petroleum products and heavy metals may lead to **a temporary inability to grow crops in the affected areas**



Environmental pollution caused by damage to industrial or chemical facilities



Ukraine is tentatively **the world's most mined country** with the highest number of casualties caused by mines and explosives

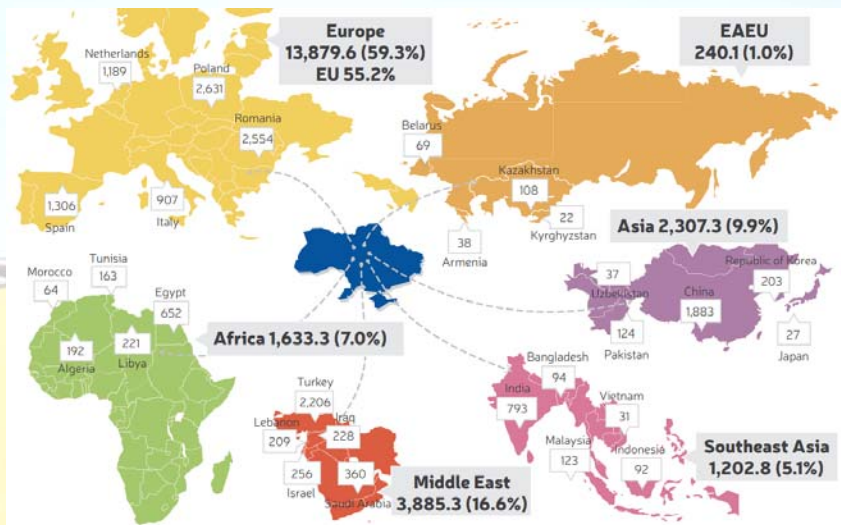
Interactive map of mine pollution



ROLE OF UKRAINE IN WORLD AGRICULTURE IN 2022

		Export, mln \$	Production	Export
corn		5 947	#8	↓ #4
sunflower oil		5 467	#3	↓ #2
wheat		2 677	#9	↓ #6
rapeseed		1 545	#7	↓ #3
sunflower		1 256	#2	↑ #1
soybeans		863	#9	↓ #8
poultry		852	#20	↓ #7
sunflower meal		765	#3	↓ #1
barley		446	#7	↓ #6
soybean oil		304	#23	↑ #8
soybean meal		210	#23	↑ #11
powdered milk, cream		90	#13	↑ #12
rapeseed oil		84	#15	↓ #8
butter		82	#13	↓ #9
walnuts		80	#5	↑ #4
beef		69	#20	↓ #22
live bovine animals		35	#15	↑ #9

Major importers of Ukrainian products 2022, mln \$



Agricultural exports in 2022 reached

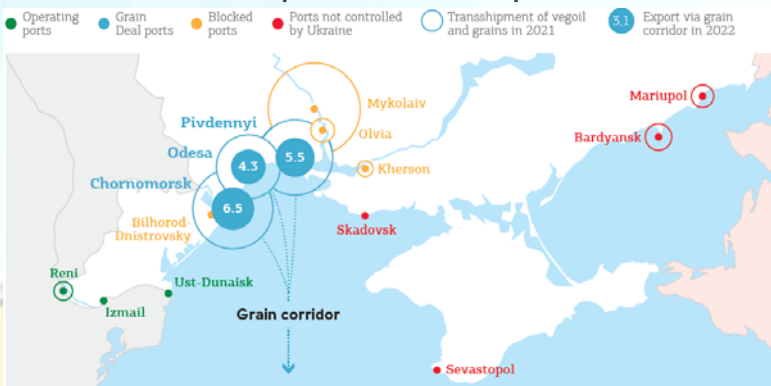
53% OR \$23.4 BILLION

compared to
40.7% OR \$27.7 BILLION in 2021

Source: Ministry of Agrarian Policy and Food of Ukraine, USDA

WARTIME LOGISTICS

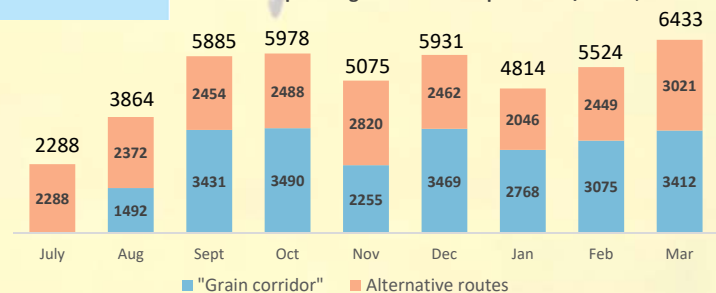
Transshipment in Ukrainian ports



Alternative export routes

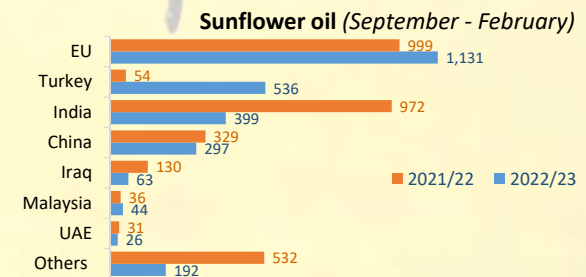
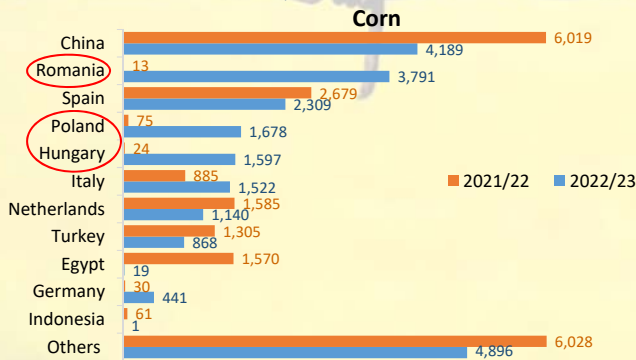
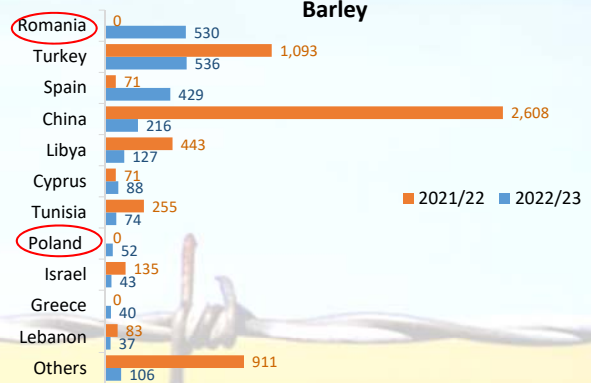
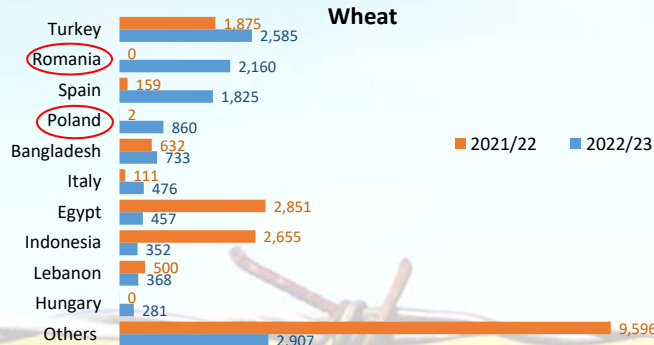


Ukrainian export of grain and oil crops in 2022/23 MY, thou. t



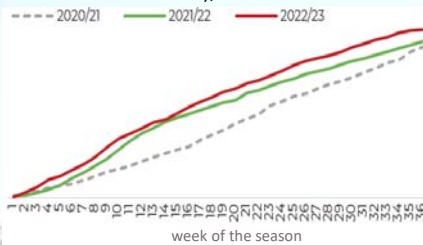
Sources: Ukrainian Grain Association and Latifundist

GEOGRAPHY OF UKRAINIAN EXPORT, July 1, 2022 – March 31, 2023, thousand tonnes

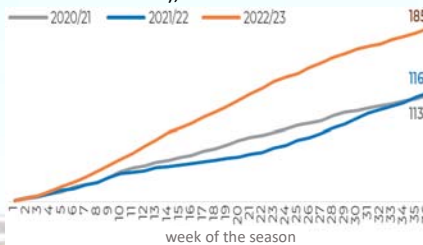


INTERNATIONAL AGRICULTURAL TRADE IN THE EUROPEAN UNION

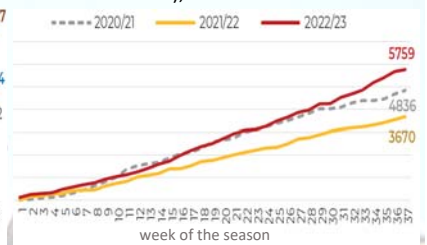
Dynamics of wheat exports from the EU
(cumulative result from the beginning of the season), thousand tons



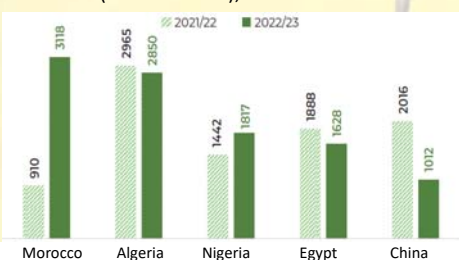
Dynamics of corn import to the EU
(cumulative result from the beginning of the season), thousand tons



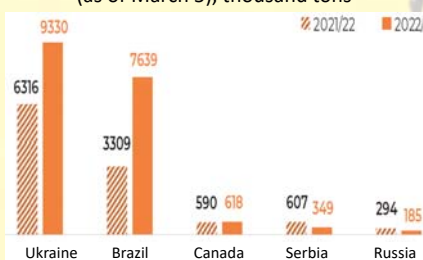
Dynamics of rapeseed import to the EU
(cumulative result from the beginning of the season), thousand tons



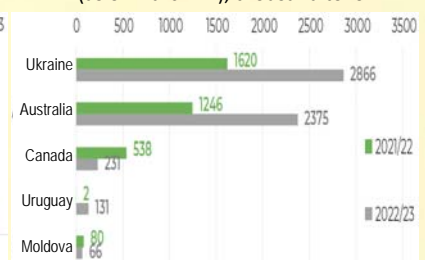
TOP-5 importers of wheat from the EU
(as of March 5), thousand tons



TOP-5 exporters of corn to the EU
(as of March 5), thousand tons



TOP-5 exporters of rapeseed to the EU
(as of March 12), thousand tons



Source: The European Commission

RESTRICTIONS ON UKRAINIAN AGRICULTURAL EXPORTS TO EUROPEAN COUNTRIES



Poland:

As of April 15, 2023, a ban on the import of agricultural products from Ukraine was introduced.

From April 21, 2023, the **transit of Ukrainian agricultural products** through the Republic of Poland is resume.

List of agricultural products prohibited for import from Ukraine:

- cereals, sugar;
- dry fodder, seeds, linen and hemp;
- vegetables and fruits, vegetable and fruit processed products;
- hops, wines, ethyl alcohol of agricultural origin;
- beef and veal, milk and dairy products, pork, lamb and goat meat, eggs, chicken meat, beekeeping products.



Romania:

Romania is considering the possibility of temporarily suspending the import of agricultural products from Ukraine. No decision has been made yet.

From April 24, Romania will start sealing vehicles that transit Ukrainian agricultural products.

The customs authorities of Romania will install seals on trucks with Ukrainian agrarian transit goods.

Source: Ministry of Agrarian Policy and Food of Ukraine



Slovak Republic:

As of April 17, 2023, a **ban on the import of agricultural products** from Ukraine was introduced. The ban will **not apply to goods transiting** through the territory of Slovakia.

List of agricultural products prohibited for import from Ukraine:

- wheat, rye, barley, oats, corn, sorghum, buckwheat;
- sugar beet, cane or beet sugar, isoglucose, molasses;
- flour products, malt, starch, inulin, wheat gluten;
- soybeans, flax seeds, rapeseed, sunflower seeds, other oil seeds, hemp;
- vegetables, fruits, products of fruit and vegetable processing,
- cones of hops, wine, wine vinegar, ethyl alcohol;
- natural honey, royal jelly and food propolis, pollen, beeswax.

RESTRICTIONS ON UKRAINIAN AGRICULTURAL EXPORTS TO EUROPEAN COUNTRIES



Hungary:

From April 18, 2023 to July 1, 2023, a ban was introduced on the import of agricultural products from Ukraine, but **transit is allowed**, which must be completed through the territory of Hungary within 7 days from the date of entry, cargoes must be sealed with customs seals. Reloading is allowed at the border crossings.

List of agricultural products prohibited for import from Ukraine:

- wheat and mixed crops, rye, barley, corn buckwheat, millet, canary grass seeds;
- wheat flour or mixed flour, other grain flour, processed cereals (e.g., peeled, flattened, flaked, cut into chunks, or coarsely ground), whole grain germs, flattened, polished or ground;
- beef, pork, lamb and goat meat, poultry meat (fresh, chilled and frozen), eggs;
- rapeseed and rapeseed oil (incl. crashed), sunflower seeds (incl. crashed); sunflower, saffron, cottonseed oil, as well as their fractions and refined;
- cane and beet sugar and pure sucrose in the solid state;
- bread, pastries, cakes, biscuits and other pastries containing cocoa, wafers, rice paper;
- vegetables (except candied), which are prepared without vinegar and acetic acid or their contents (except tomatoes and edible mushrooms), not frozen;
- wine from fresh grapes, grape must (except grape spirit juice).

Source: Ministry of Agrarian Policy and Food of Ukraine



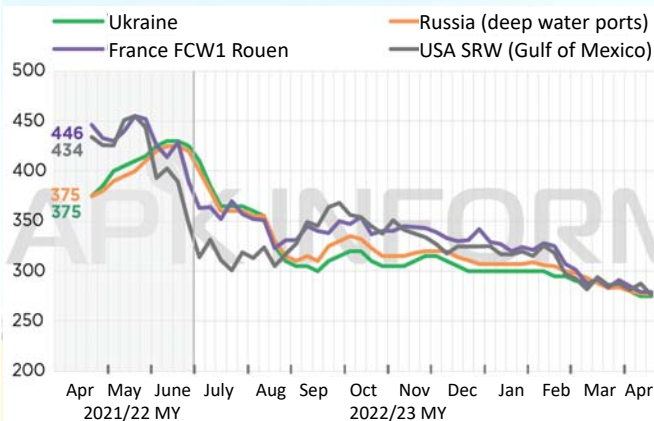
Republic of Bulgaria:

From April 24 to June 30, 2023, a ban on the import of agricultural goods from Ukraine is introduced. The ban will **not apply to goods transiting** through the territory of Bulgaria. Cargoes must be sealed with customs seals, reloading is not allowed.

List of agricultural products prohibited for import from Ukraine:

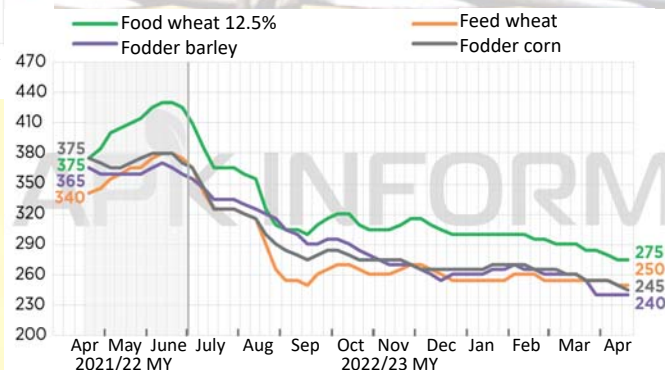
- wheat, corn, rye, barley, buckwheat, sorghum;
- wheat flour, wheat gluten, oat flakes, flax seeds, starches, inulin;
- sunflower seeds, sunflower oil, soybeans, rapeseeds;
- raw and powdered milk, milk concentrate, eggs, chicken meat, pork, sheep and goat meat, honey and beekeeping products;
- walnuts, hazelnuts;
- wine, wine vinegar, ethyl alcohol.

Dynamics of food wheat prices, USD/t



IMPACT OF THE WAR ON GRAIN PRICES

Export prices for grain in Ukraine (deep water ports), Offer, FOB, USD/t



EXPORT OF CEREALS and LEGUMES
with products of their processing as of March 31,
2023,

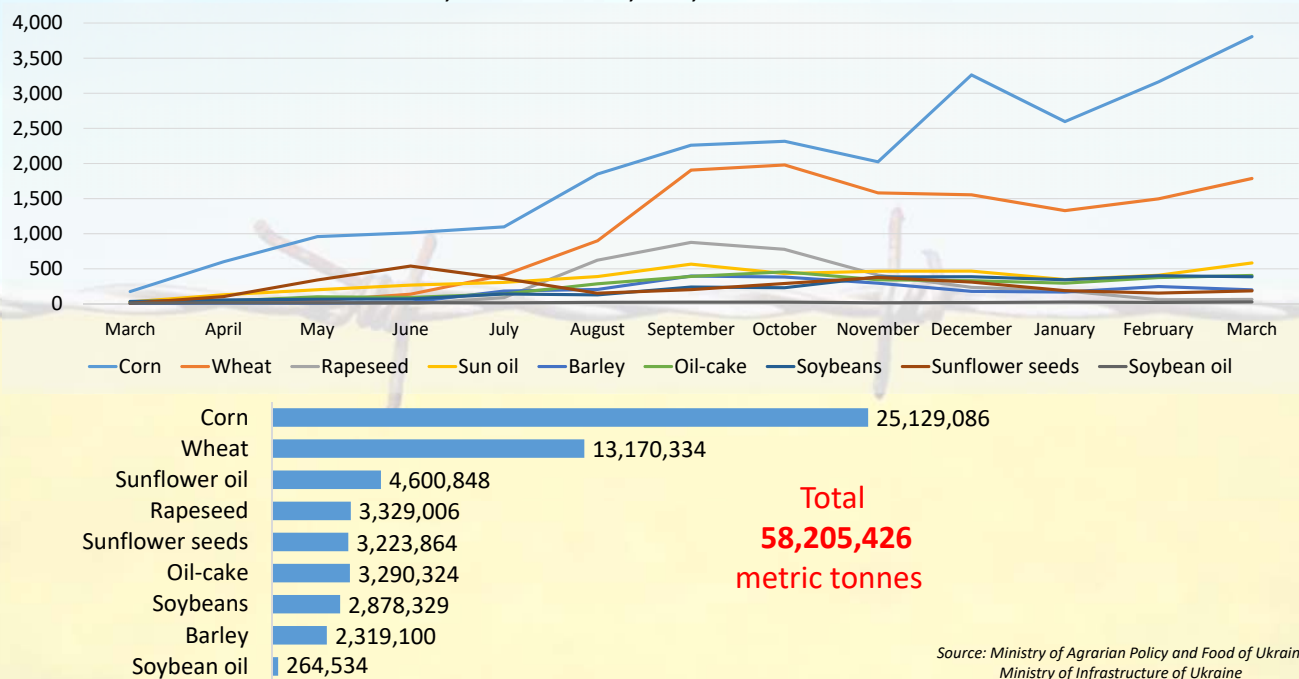
	2020/2021 MY Total	2021/2022 MY thousand tonnes			2022/2023 MY	
		Total	As for March 2022	including March 2022	Total as for March 2023	including March 2023
Cereals and legumes, total	43939	48508	44943	1428	37639	5341
• wheat	16413	18741	18399	307	12880	1542
• barley	4210	5752	5643	7	2276	226
• rye	15.8	161.9	161.9	0	17.5	1.0
• corn	22596	23535	20439	1108	22163	3559
Wheat flour	123.7	69.4	66.9	0.3	111.2	16.3
Other flour	1.1	1.5	1.5	0	4.3	0.4
Total flour	124.8	70.9	68.4	0.3	115.5	16.7
Total export (grain + flour)	44105	48579	45011	1428	37755	5358

Source: based on data of State Customs Service of Ukraine

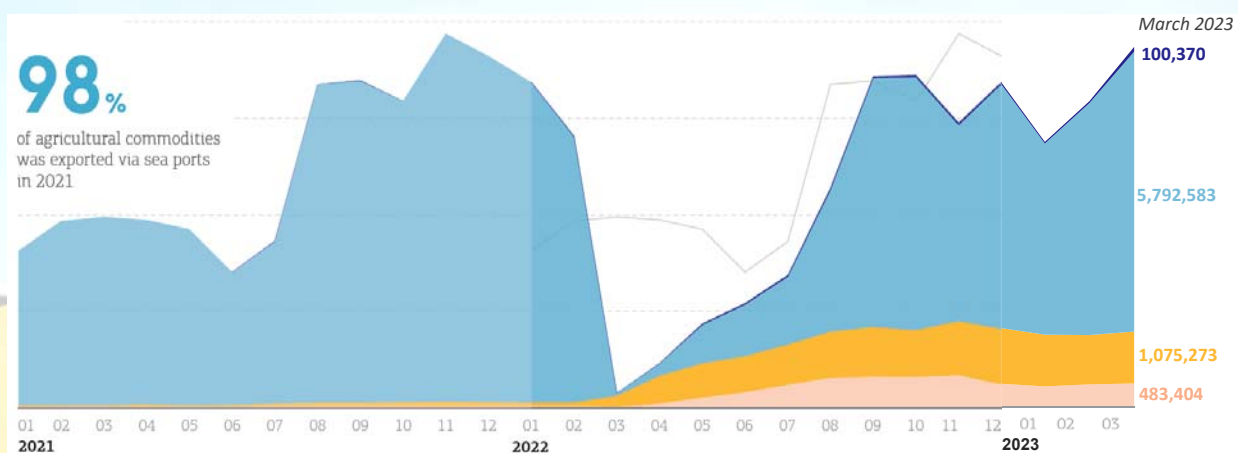
Dynamics of grain exports from Ukraine, thousand tonnes



**BORDER-CROSSING FROM UKRAINE DURING THE WAR TIME BY TYPES OF AGRICULTURAL PRODUCTS,
March 1, 2022 – March 31, 2023, thousand metric tonnes**

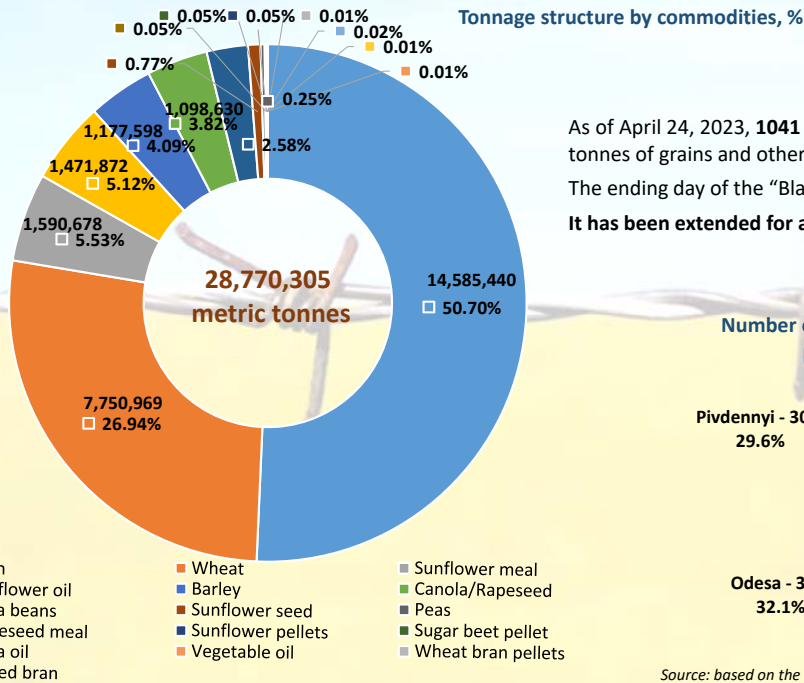


**BORDER-CROSSING OF AGRICULTURAL PRODUCTS FROM UKRAINE IN TRANSPORTATION BREAKDOWN,
as of March 31, 2023, metrics tonnes**



Source: Ministry of Agrarian Policy and Food of Ukraine
Ministry of Infrastructure of Ukraine

EXECUTION OF THE AGREEMENT "Initiative for the safe transportation of grain and food products from Ukrainian ports"

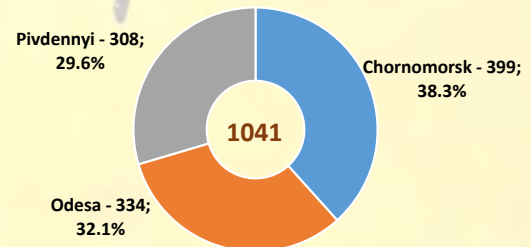


As of April 24, 2023, **1041 shipments (914 vessels)** of **28,770,305** metric tonnes of grains and other foodstuffs have left Ukrainian ports.

The ending day of the "Black Sea Grain Initiative" was **March 18, 2023**.

It has been extended for another 120 days.

Number of grain cargoes left Ukrainian Black Sea ports under "grain agreement"

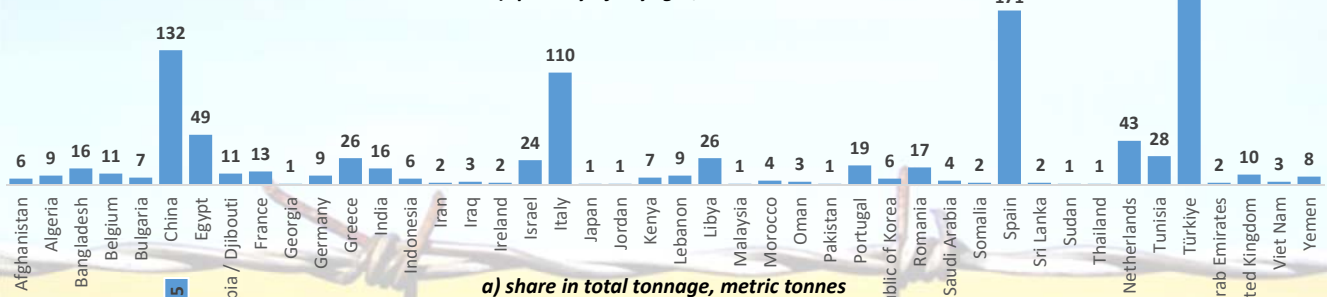


Source: based on the data of the Black Sea Grain Initiative Joint Coordination Centre

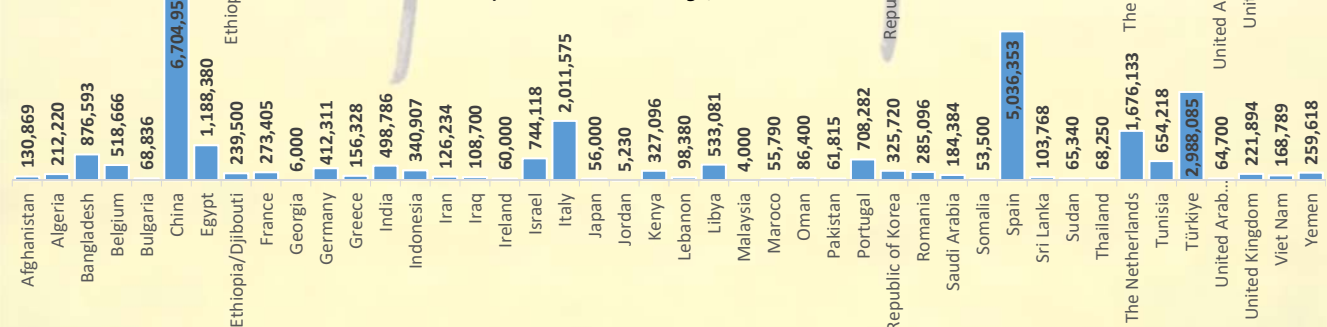
EXECUTION OF THE AGREEMENT "Initiative for the safe transportation of grain and food products from Ukrainian ports"

Structure of delivered loads by destination, August 1, 2022 – April 24, 2023

a) quantity of voyages, units

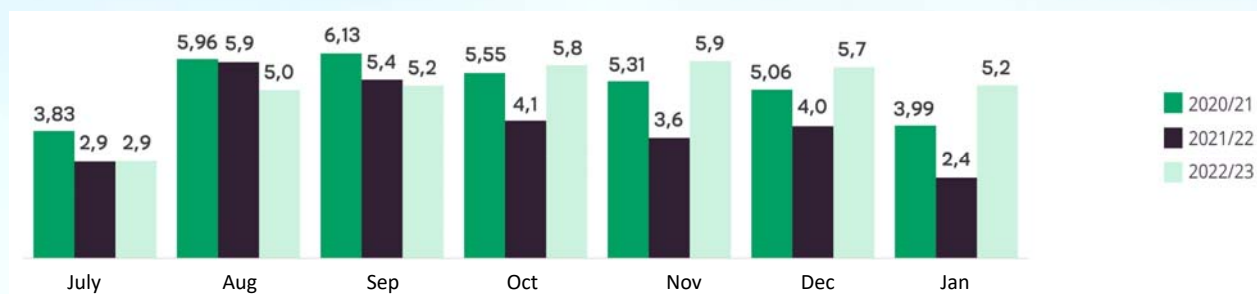


a) share in total tonnage, metric tonnes

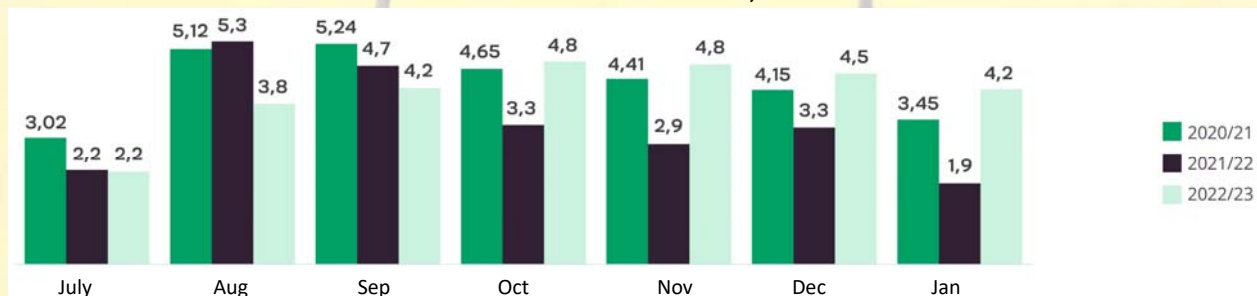


Source: based on the data of the Black Sea Grain Initiative Joint Coordination Centre

EXPORT OF GRAIN FROM RUSSIA, mln tonnes

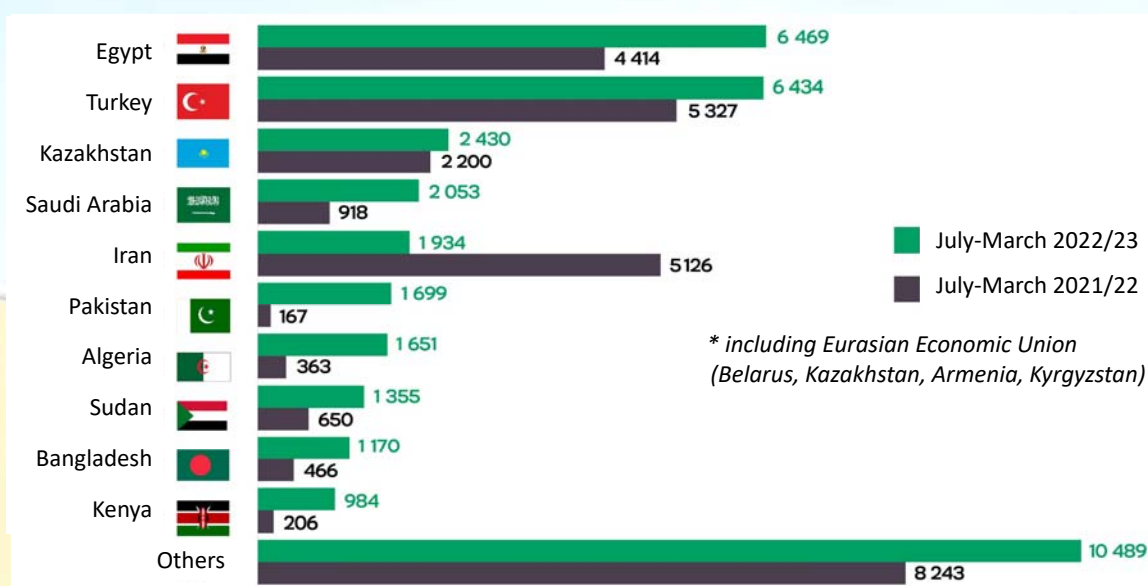


EXPORT OF WHEAT FROM RUSSIA, mln tonnes



Source: Rusagrotrans

TOP-10 IMPORTERS OF WHEAT FROM RUSSIA, thousand tonnes *

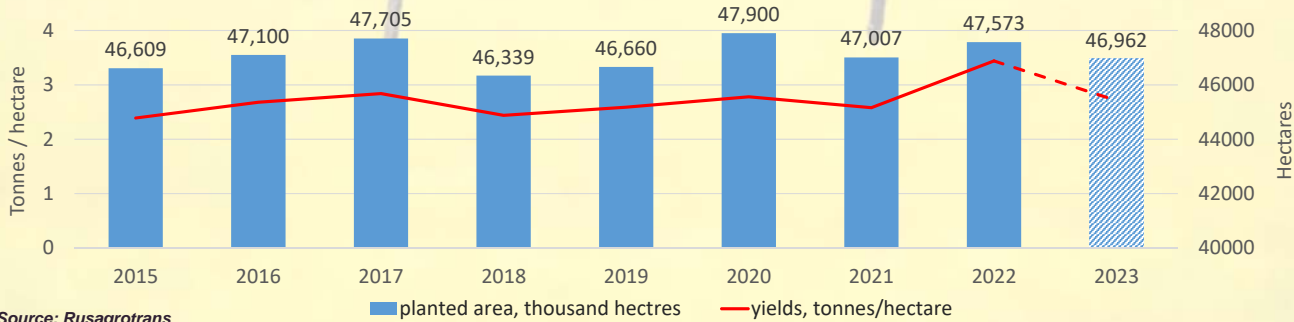


Source: Rusagrotrans

GROSS GRAIN HARVEST IN RUSSIA, mln tonnes



GRAIN PLANTED AREAS AND YIELDS IN RUSSIA



Source: Rusagrotrans

SOWN AREA OF WINTER CROPS IN UKRAINE, thousand hectares

Crops	Sown areas in 2020	Sown areas in 2021	Planted in 2022 for the 2023 harvest	% of planted in 2022 to 2021
Winter crops total, including:	8,973.5	9,029.4	5,449.4	60.3 %
• winter wheat	6,714.4	6,538.4	3,758.8	57.5 %
• winter barley	1,080.4	969.0	612.5	63.2 %
• winter rye	166.8	108.5	79.2	73.0 %
• winter rapeseeds	1,011.9	1,413.5	998.9	70.7 %

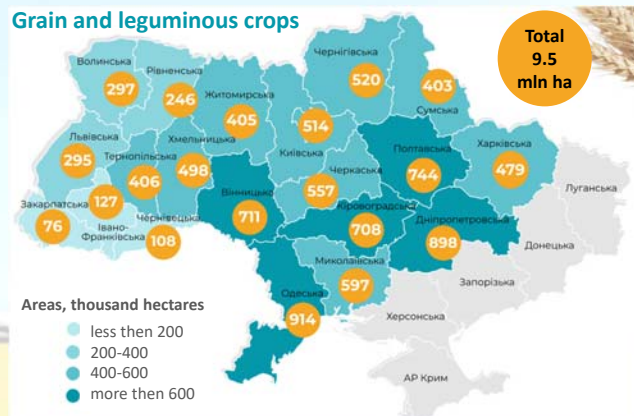
SOWN AREA OF SPRING CROPS IN UKRAINE, thousand hectares

Crops	Sown, thousand hectares		2022 to 2021	2023 forecast	2023 as of April 24
	2021	2022			
Total (selected crops)	15633.2	12327.0	78.9%	13477	1176.6
Spring cereals and legumes including:	7586.0	6196.9	81.7%	5700	984.9
• spring wheat	192.1	191.1	99.4%	285	169.1
• spring barley	1337.0	951.4	71.2%	1041	568.5
• oats	177.9	159.3	89.5%	195	81.7
• peas	242.1	131.0	54.1%	235	110.2
• corn	5474.8	4639.4	84.7%	3618	53.4
• buckwheat	84.0	75.3	89.6%	131	0.3
• millet	78.1	49.5	63.3%	115	1.7
Spring rapeseed	33.2	34.1	102.7%	75	0
Soybeans	1279.6	1212.6	94.8%	1841	0
Sunflower	6509.7	4702.7	72.2%	5641	137.3
Sugar beet	224.7	180.6	80.4%	220	54.4

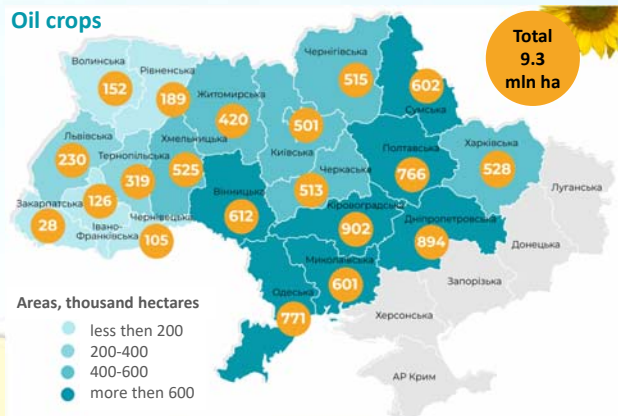
Source: based on the data of the State Statistic Service of Ukraine and Ministry of Agrarian Policy and Food of Ukraine

FORECAST OF SOWING AREAS IN UKRAINE IN 2023

Grain and leguminous crops



Oil crops



THE COST OF SOWING CAMPAIGN 2023



Total cost

\$ 8 bln

+10%

compare to the previous year



Fertilizers

+ 32-35%



Seeds

+ 22-24%



The cost of spring campaign

\$ 6.25 bln

+17%

compare to the previous year



Plant protection products

+ 15%



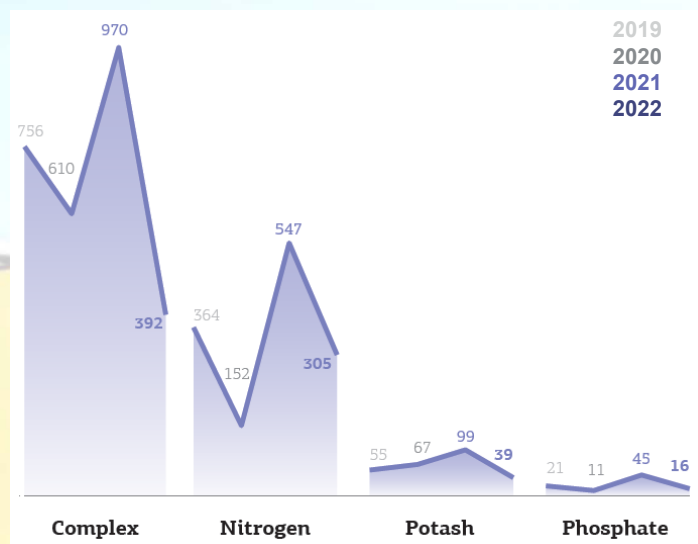
Fuel

+ 8%

Source: Ministry of Agrarian Policy and Food of Ukraine and UCAB

MINERAL FERTILIZERS

Fertilizer import dynamics, USD thousand

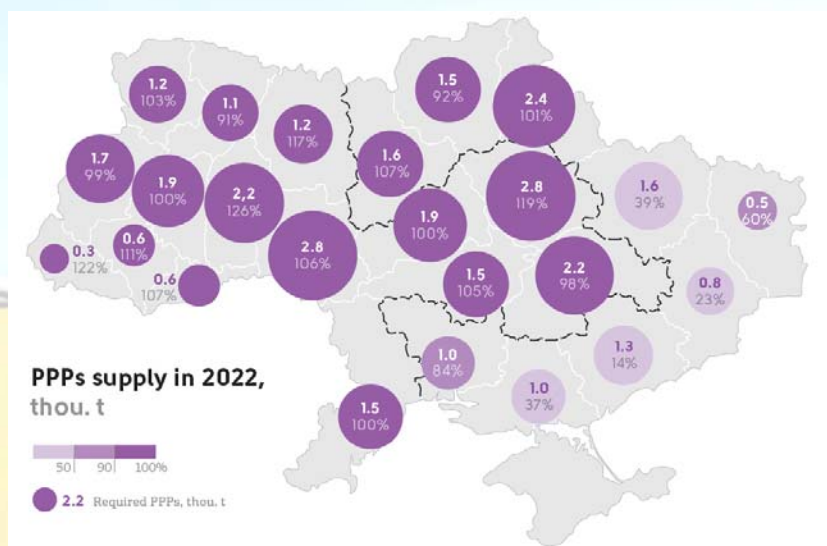


Imports origin, USD thousand

2021		2022	
Belarus	572	Poland	238
		Belarus	140
		Lithuania	59
		Turkmenistan	36
		Uzbekistan	29
		Other	250
Lithuania	248		
Poland	234		
Kazakhstan	85		
Uzbekistan	76		
Other	449		

Sources: based on State Statistic Service of Ukraine, State Customs Service, Ministry of Agrarian Policy and Food of Ukraine

PLANT PROTECTION PRODUCTS



Top 5 PPPs suppliers to Ukraine, USD mln

2021	2022
China 274	China 297
France 224	France 141
Germany 129	Germany 113
Spain 80	Spain 64
Israel 63	Hungary 44
Other 283	Other 177

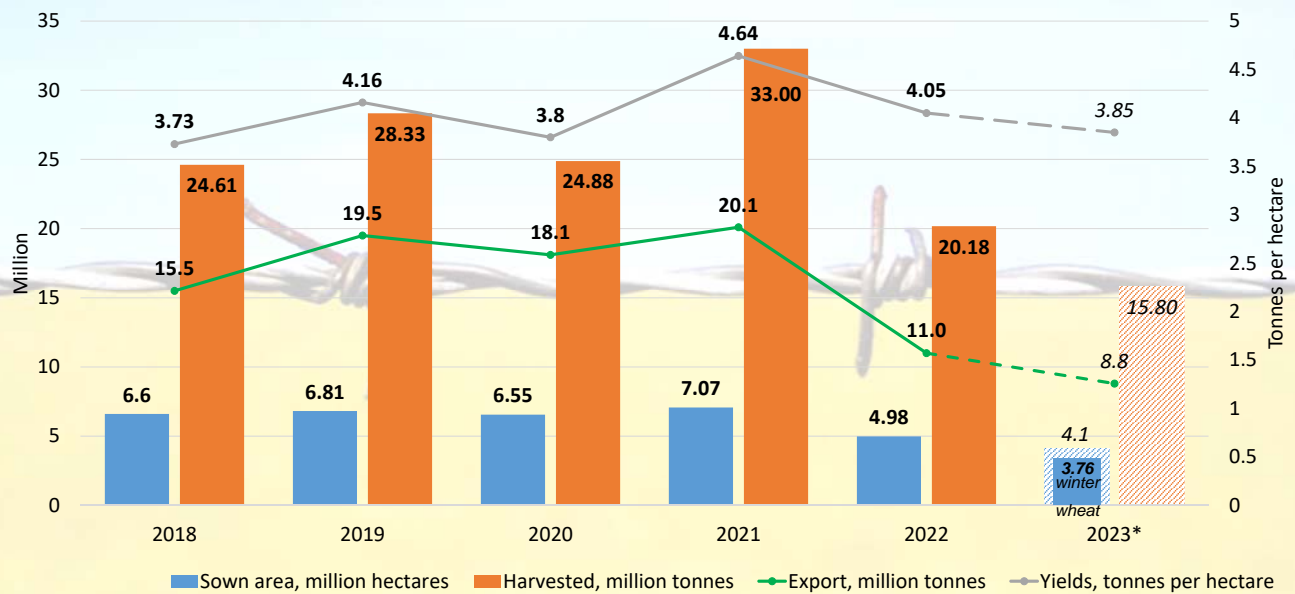
Source: based on the data of the State Statistics Service in Ukraine, State Customs Service of Ukraine

BALANCE OF SUPPLY AND DEMAND OF GRAIN AND LEGUMES IN UKRAINE (*forecast as of April 17, 2023)

	2020/21	2021/22	2022/23*	2023/24*	Deviation, %	
	thousand tonnes	thousand tonnes	thousand tonnes	thousand tonnes	2022/23 to 2021/22	2023/24 to 2022/23
Initial stocks	4,216	4,811	12,454	6,707	in +2,6 times	-46.1%
Sown area, thousand hectares	15,392	15,995	13,997	10,240	-12.5%	-26.8%
Harvested area, thousand hectares	15,283	15,948	10,970	9,500	-31.2%	-13.4%
Yield, tonnes / hectare	4.25	5.39	4.88	4.65	-9.5%	-4.7%
Gross harvest	64,933	86,010	53,500	44,175	-37.8%	-17.4%
Import	208	123	120	146	-2.4%	21.7%
Total supply	69,358	90,945	66,074	51,028	-27.3%	-22.8%
Domestic consumption:	19,184	26,282	19,030	17,786	-27.6%	-6.5%
food	4,775	4,592	4,039	4,025	-12.0%	-0.3%
fodder	9,720	13,325	9,640	9,681	-27.7%	+0.4%
seeds	2,224	1,928	2,079	1,894	+7.8%	-8.9%
losses	1,515	5,692	2,217	1,316	-61.1%	-40.6%
other (alcohol, malt, starch, etc.)	946	737	1,055	870	+43.1%	-17.5%
Export	45,363	52,209	40,337	29,284	-22.7%	-27.4%
Total distribution (demand)	64,547	78,491	59,367	47,070	-24.4%	-20.7%
Ending stocks	4,811	12,454	6,707	3,958	-46.1%	-41.0%
Ratio of ending stocks to distribution	7%	16%	11%	8%		

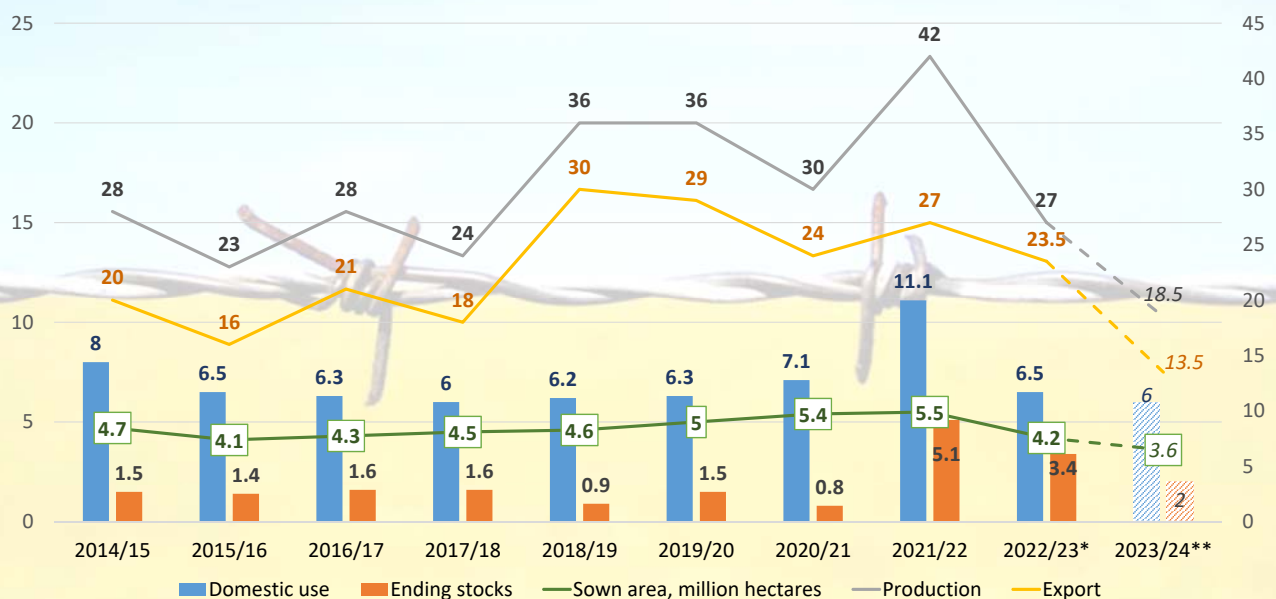
Source: based on "APK-Inform", the State Statistic Service of Ukraine and the State Customs Service of Ukraine

DYNAMICS OF UKRAINIAN WHEAT PRODUCTION AND EXPORT



Source: based on data of Ministry of Agrarian Policy and Food of Ukraine, State Statistic Service of Ukraine and UCAB

DYNAMICS OF CORN PRODUCTION, TRADE AND STOCKS IN UKRAINE, million tonnes



Source: based on data of USDA, State Statistic Service of Ukraine, UCAB and APK-inform



Thank you!

Questions?

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