Opening of the Black Sea Grain Corridor
(August 2022)

This report shows the immediate success of the "Grain Corridor Agreement", with 130+ grain ships sailing out of a beleaguered Ukraine through the Black Sea.

However, numerous problems remain. This implies policy challenges if another blockage is to be avoided, threatening a full supply (particularly) of African and Middle Eastern food markets, where they are needed in times of multiple crises and existential threats to food security.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no 101000751

Sources: Ukrainian Ministry of Infrastructure, Administration of Sea Ports of Ukraine, Turkish Ministry of Defense, UN, open sources, WFP

An “unprecedented agreement” on the **resumption of Ukrainian grain exports via the Black Sea** amid the ongoing war is “a beacon of hope” in a world that desperately needs it, UN Secretary-General António Guterres said at the **signing ceremony on 27 July** in Istanbul, Türkiye.

The "Initiative" reopens the sea lane for food shipments from three key Ukrainian deep-sea ports in the Black Sea (Odessa, Chornomorsk, Yuzhny) - the most important route by far for Ukraine's cereal exports especially to Africa.

In Egyptian Arabic, the word for "**bread**" is the same as the word for "**life**"

1st of 2 WFP vessels that left Ukraine

Results of Initiative

from **August 1 to September 14**

145 ships left deep-sea ports

61 ships with corn = **1672 kt**

39 ships with wheat = **826 kt**

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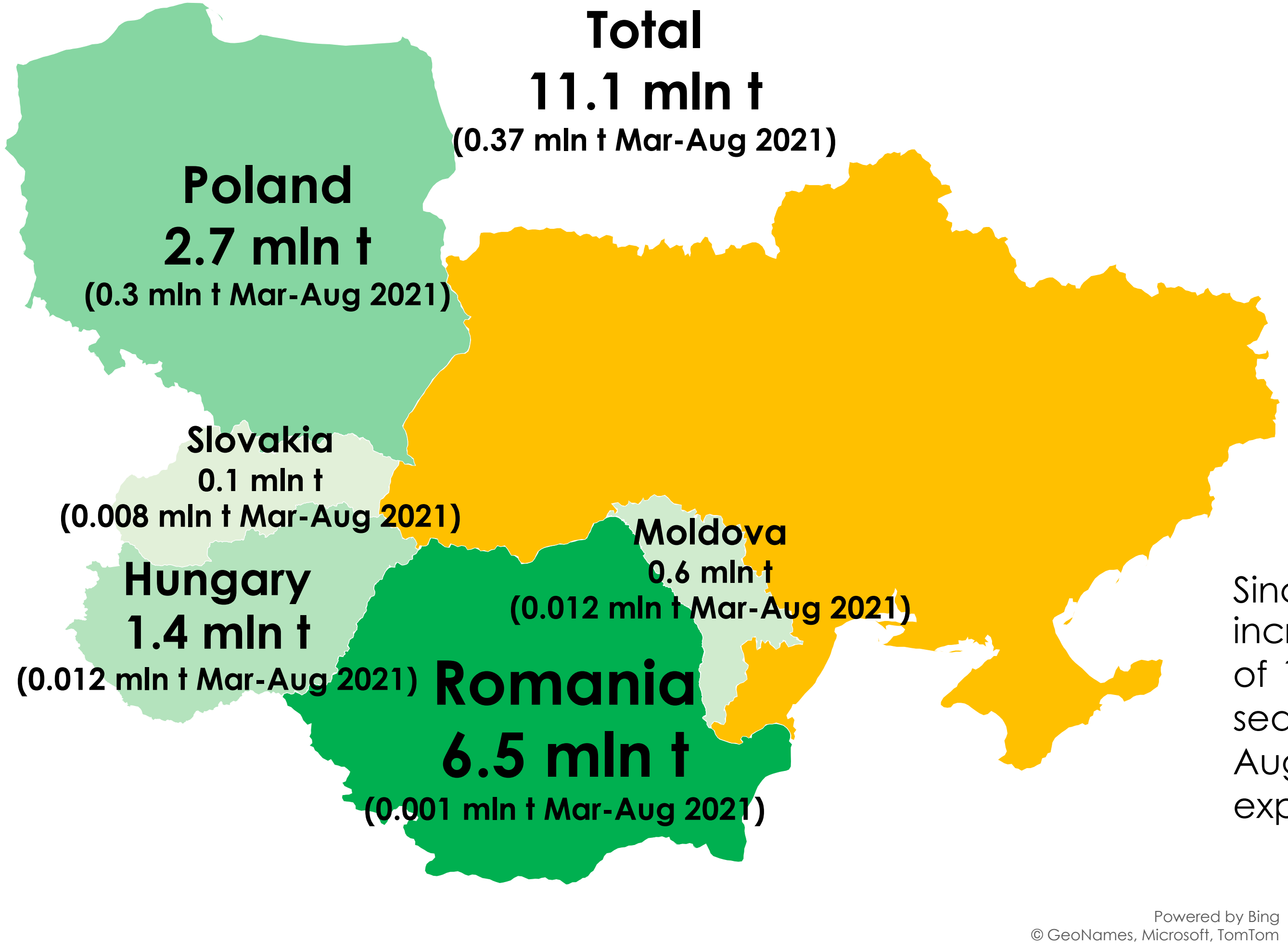
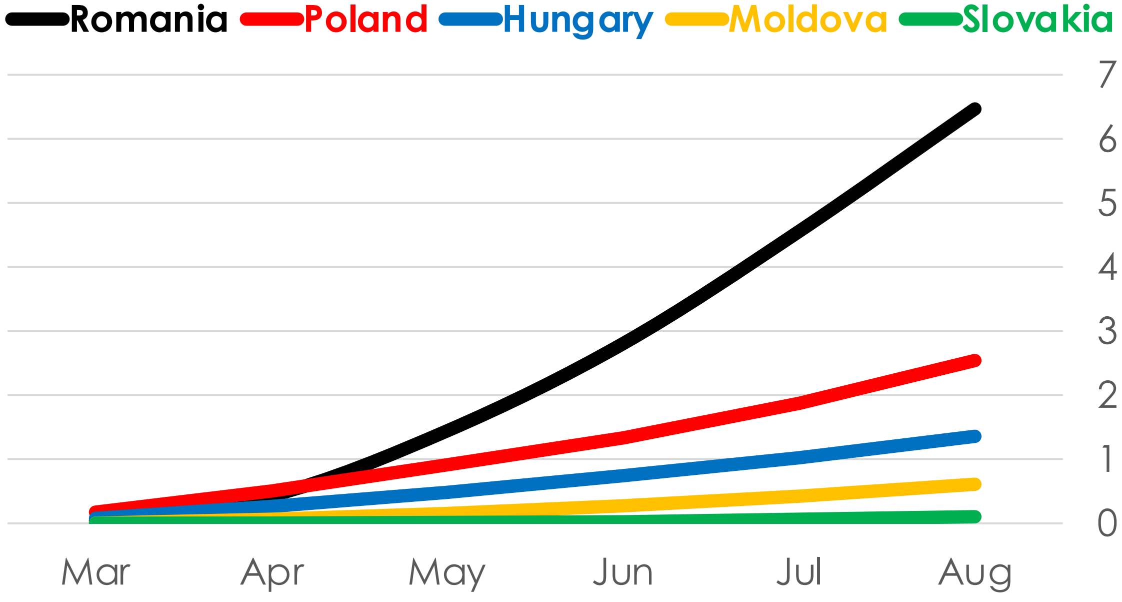
Sources: Ukrainian Ministry of Infrastructure, open sources

Ukrainian export through the land border from March to August (mln t)



Accumulated exports from Ukraine March-August (mln t)



Since the beginning of the full-scale invasion, Ukraine has actively increased exports through its western neighbors. However, the result of 11.1 mln t is significantly less than what Ukraine should export by sea. Due to the fact that exports from deep-sea ports began only in August thanks to the signing of the Initiative, Ukraine under-exported 16.8 mln t of grain and oilseeds in the 2021-22 season.

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Sources: Ukrainian Ministry of Infrastructure, Administration of Sea Ports of Ukraine, Turkish Ministry of Defense, UN, open sources

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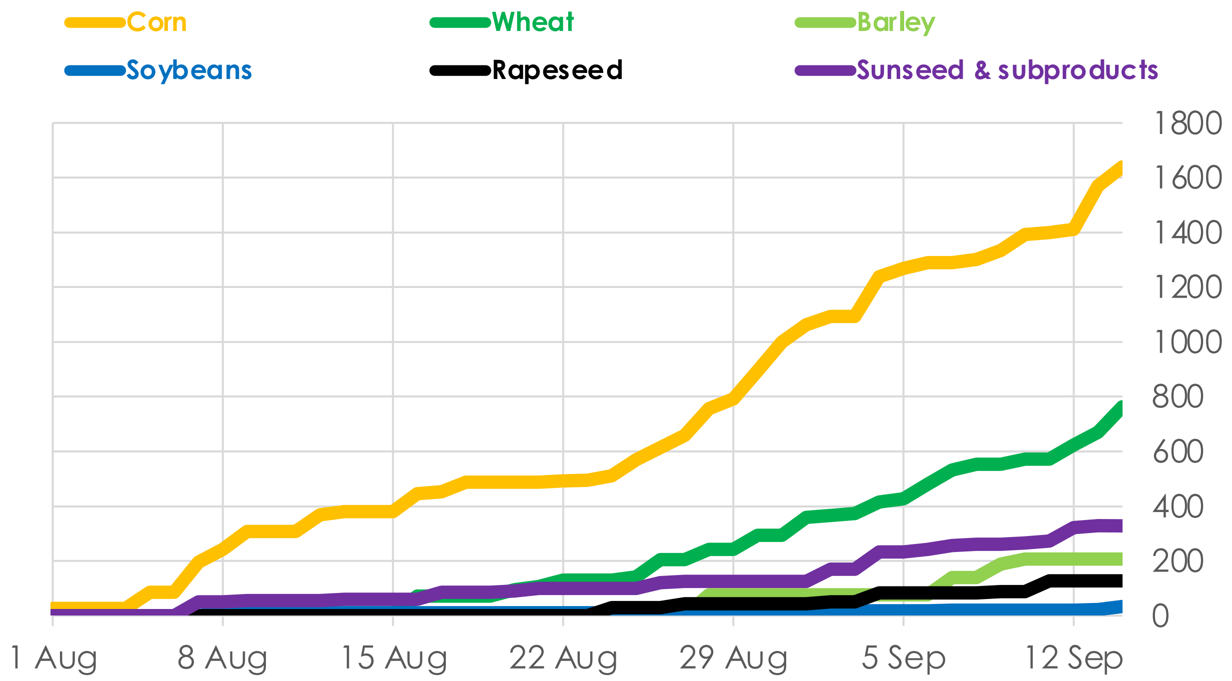
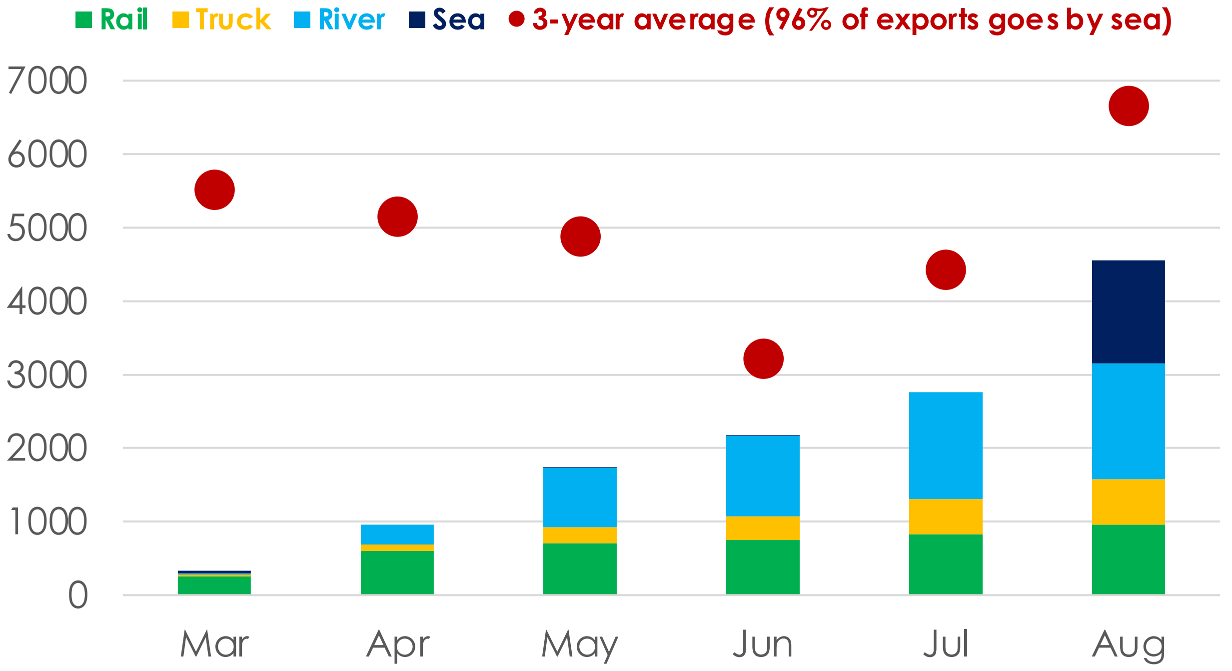
Cumulative export rate from deep-sea ports (kt)



Exports in Mar-Aug 2022 vs Mar-Aug 3-year average (kt)



Despite the Initiative on the Safe Transportation of Grain and Foodstuffs from Ukrainian Ports (hereinafter referred to as "Initiative"), due to the occupation of part of the territory, Ukraine does not have access to the small ports of Berdyansk and Mariupol. Due to frequent shelling of Mykolaiv, the largest Ukrainian port (1.9k ships/29.8 mln t of cargo in 2019) isn't working. Export is carried out through the ports of Odesa, Yuzhniy and Chornomorsk. Due to the risk of shelling, trading companies are not risking to stockpile large quantities of grain at the ports and currently buy only as much as is needed for ships bound for the ports. The fewer working ports Ukraine has, the more limited the rate of export will be, the more importers will feel the lack of supply of grain and vegetable oils. This also is a disincentive for planting/seeding new winter crops in Ukraine.

Uninterrupted operation of ports is a necessary condition for the supply grains from Ukraine to starving countries.

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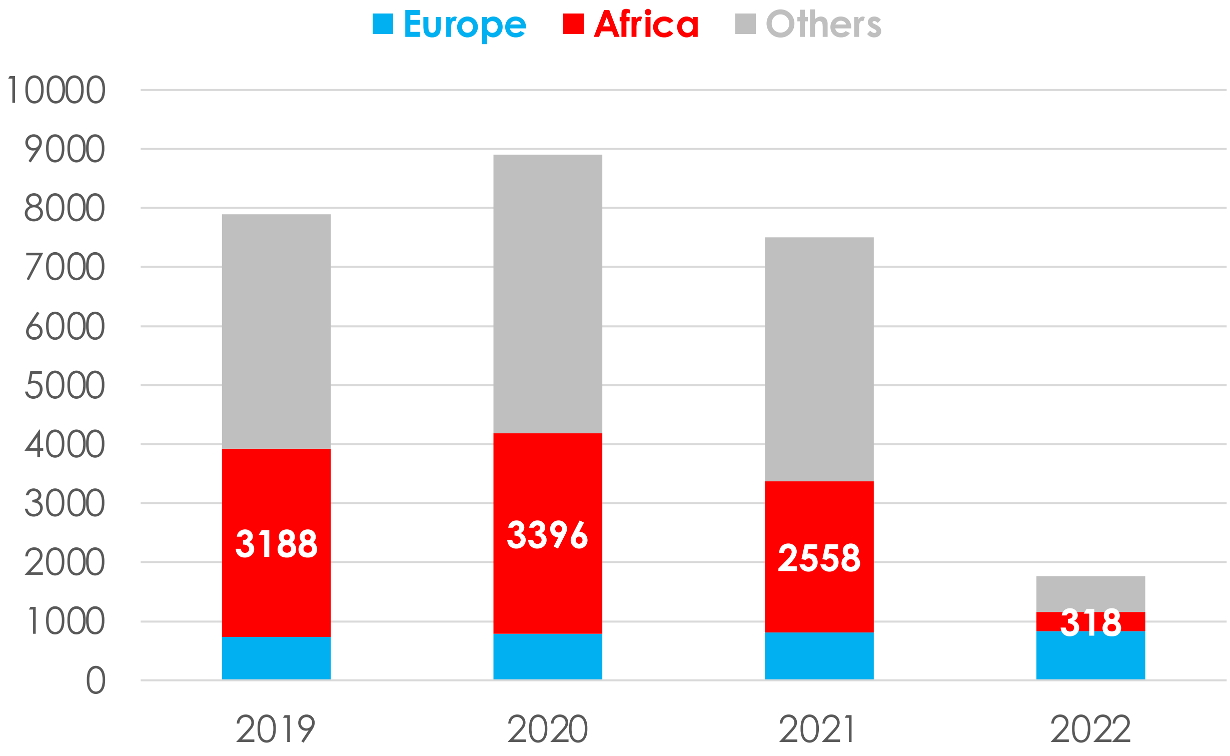
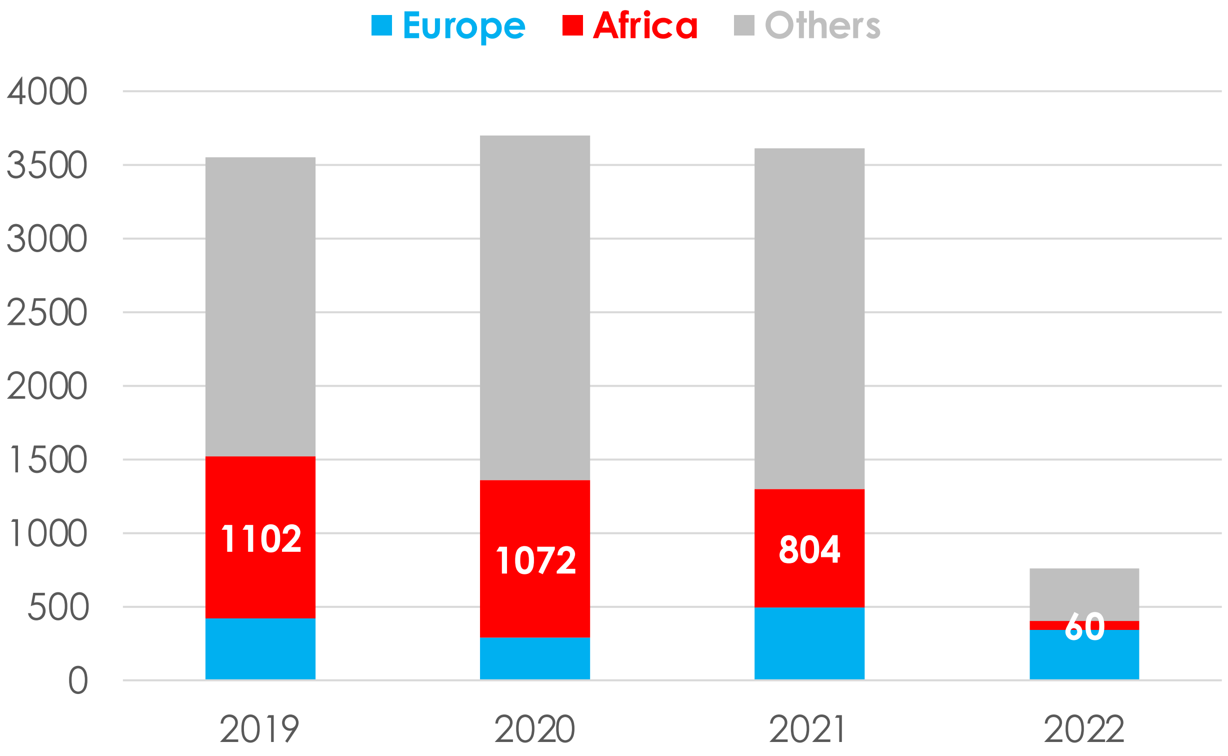
Sources: Ukraine custom service

Export of wheat from Ukraine from March to August (kt)



Export of wheat from Ukraine in August (kt)



Since March, Ukraine has exported 5.7-7.1 mln t less of wheat compared to previous years. Of this volume, 2.2-3.1 mln t to African countries. As will be shown on the example of Egypt, countries are forced to buy wheat from other exporters. In conditions of less competition, exporters offer crops at higher prices. Ukrainian farmers are worried about the risks of stopping sea exports, which would mean the inability to sell their crops for export and a drop in prices below breakeven. There is a great risk of a sharp decrease in the planted area under winter crops - primarily wheat, barley and rapeseed.

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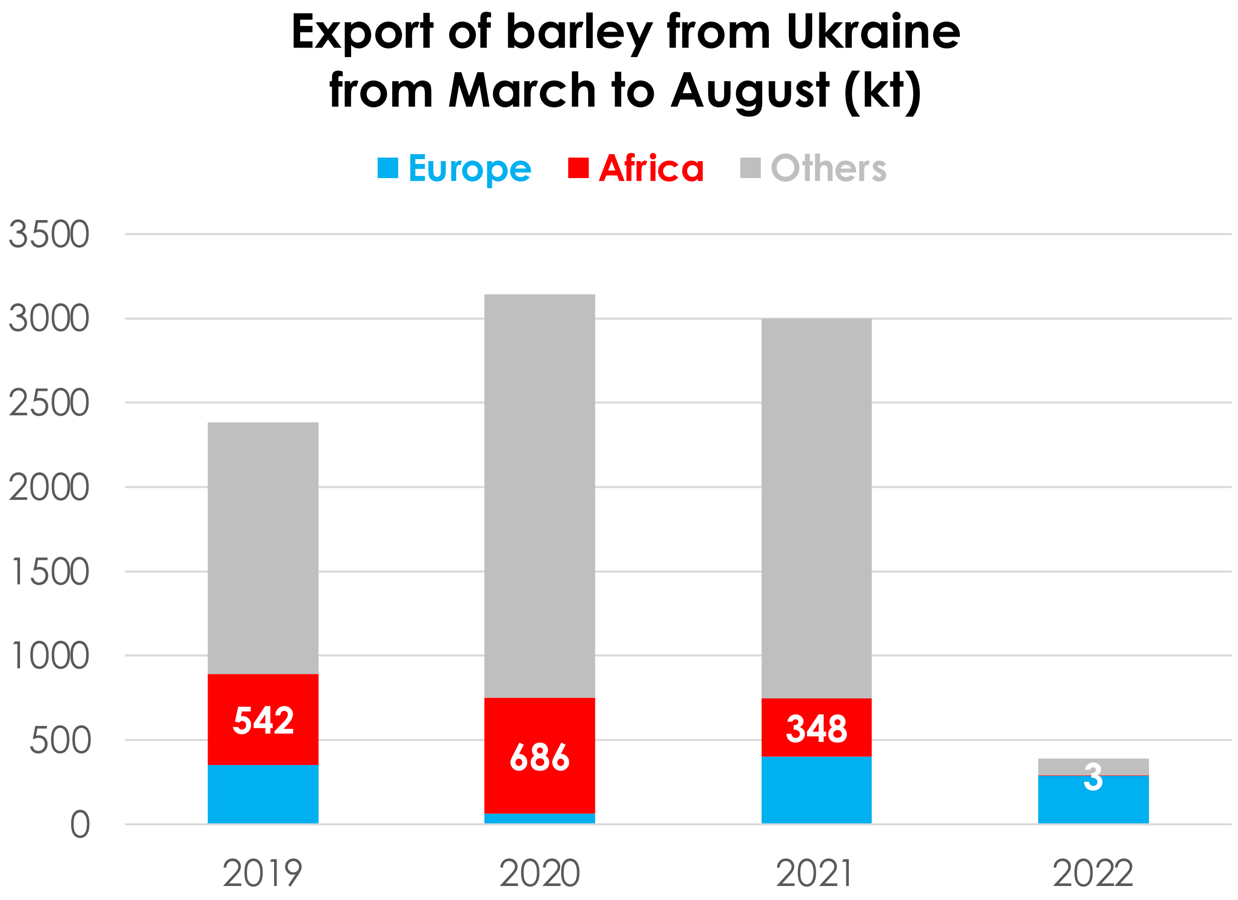

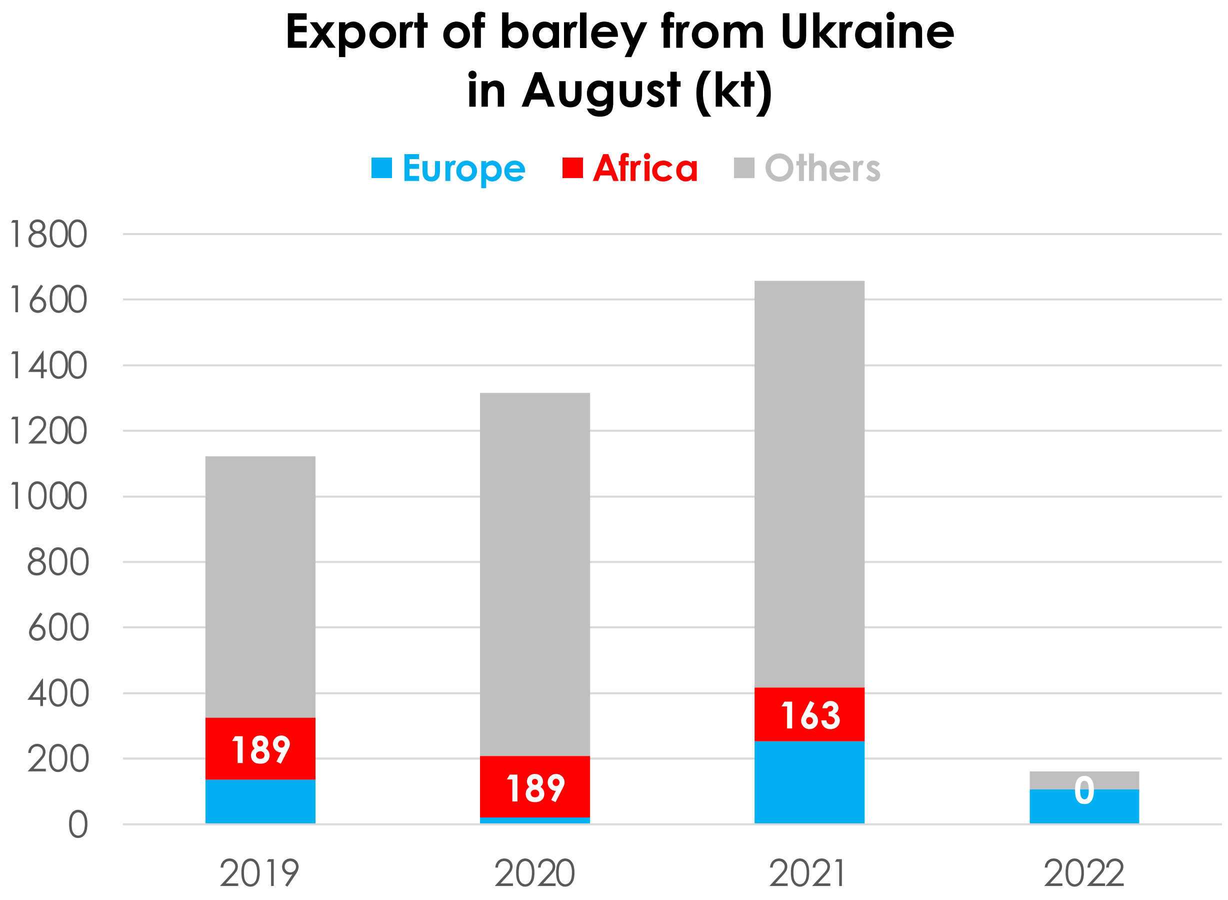

The Russian invasion stopped Ukrainian barley exports. The new crop began to harvest in June, but due to the lack of sea routes, Ukraine managed to export only 0.7 mln t during the summer instead of 3.9-5.9 mln t, as it was in the past 3 years. The main importer of Ukrainian barley in Europe is Spain, Cyprus and Romania, so exports mainly go by sea. Demand for barley on the land border of Ukraine remains weak. If Russia continues to undermine the confidence of world market participants regarding the continuation of the Initiative, almost all Ukrainian barley will stay in the country.

As with wheat, a significant number of farmers are considering reducing the area planted under barley this fall.

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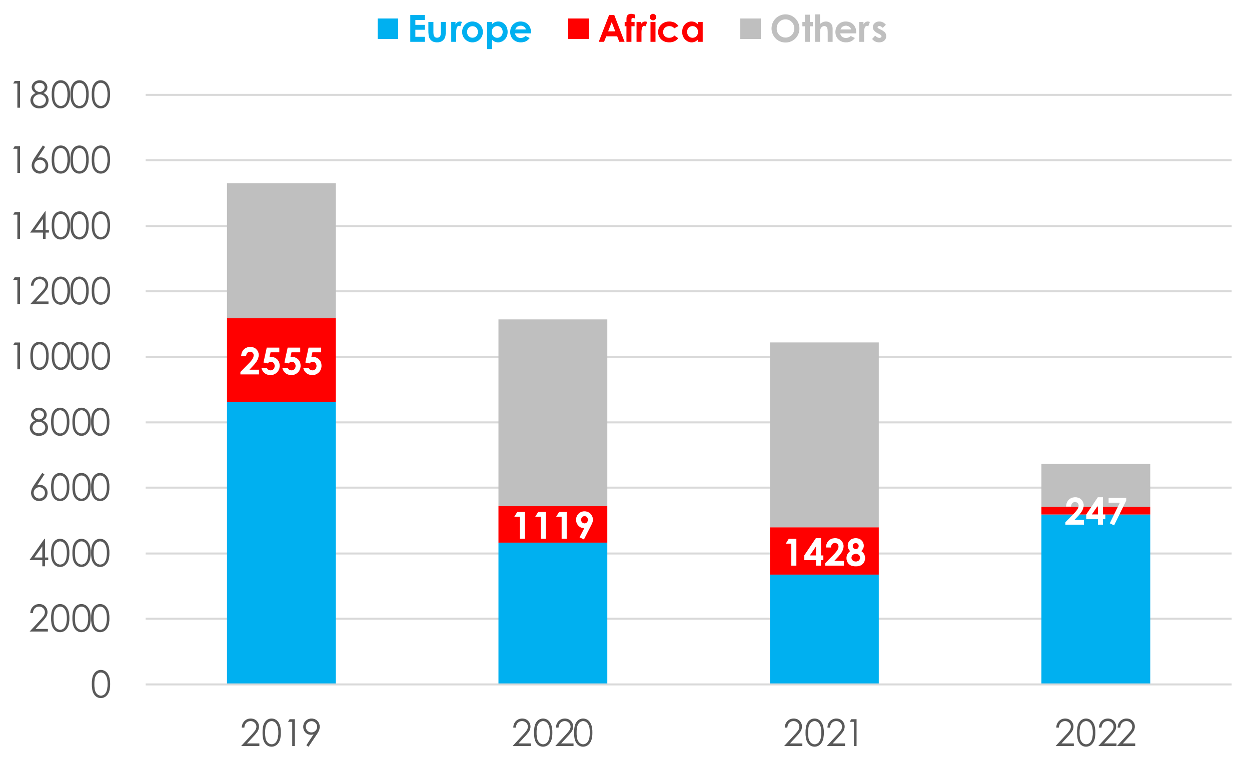
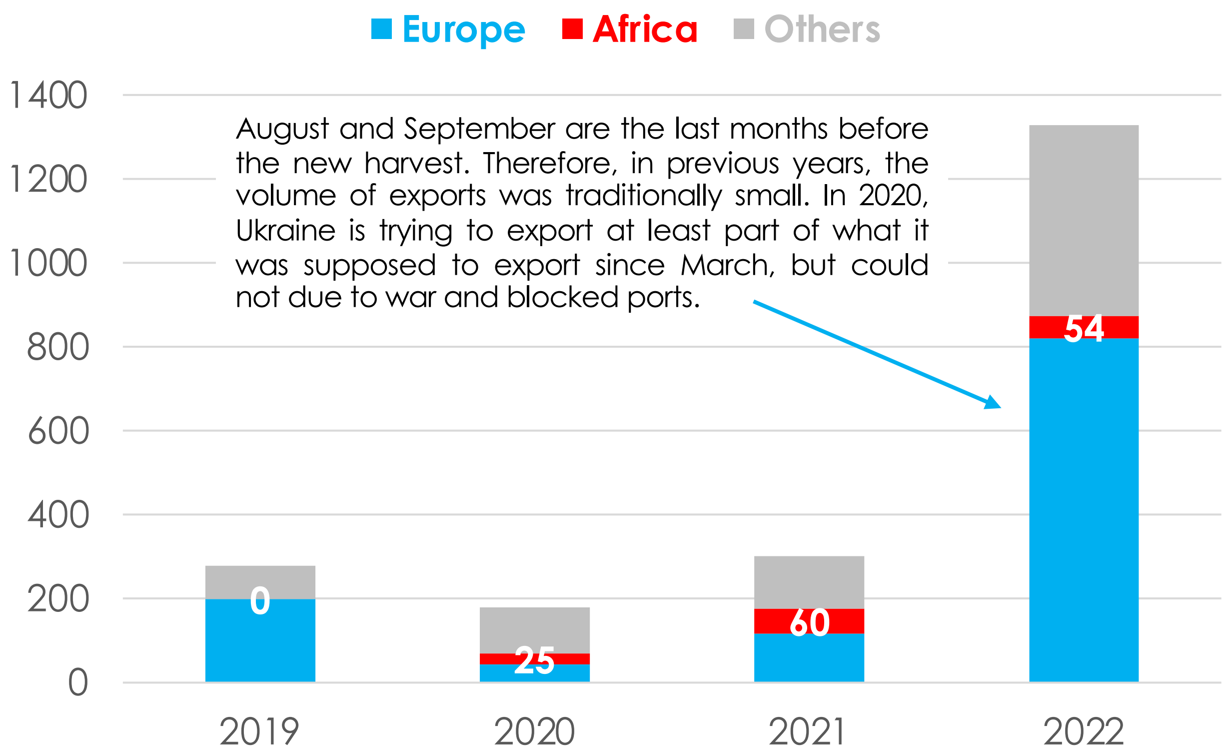
Sources: Ukraine custom service

Export of corn from Ukraine from March to August (kt)



Export of corn from Ukraine in August (kt)



Since the beginning of the full-scale invasion, corn has remained the most exported crop from Ukraine. The main reason is that, in addition to Ukraine, the largest exporters in the world are the USA, Brazil and Argentina - the rest of the countries have much smaller volumes for sale. In addition, the EU is a traditional importer of Ukrainian corn. From March to August, Ukraine's exports are 6.7 mln t, which is 3.7-8.8 mln t less than in previous years (15.3 mln t in 2019, 11.1 mln t in 2020 and 10.5 mln t in 2021). Now the corn harvest has started in Ukraine. The new crop, as well as large unsold stocks (11.0 mln t) of the season that ended, Ukraine can export only in case of availability and guarantee of safety of sea transportation.

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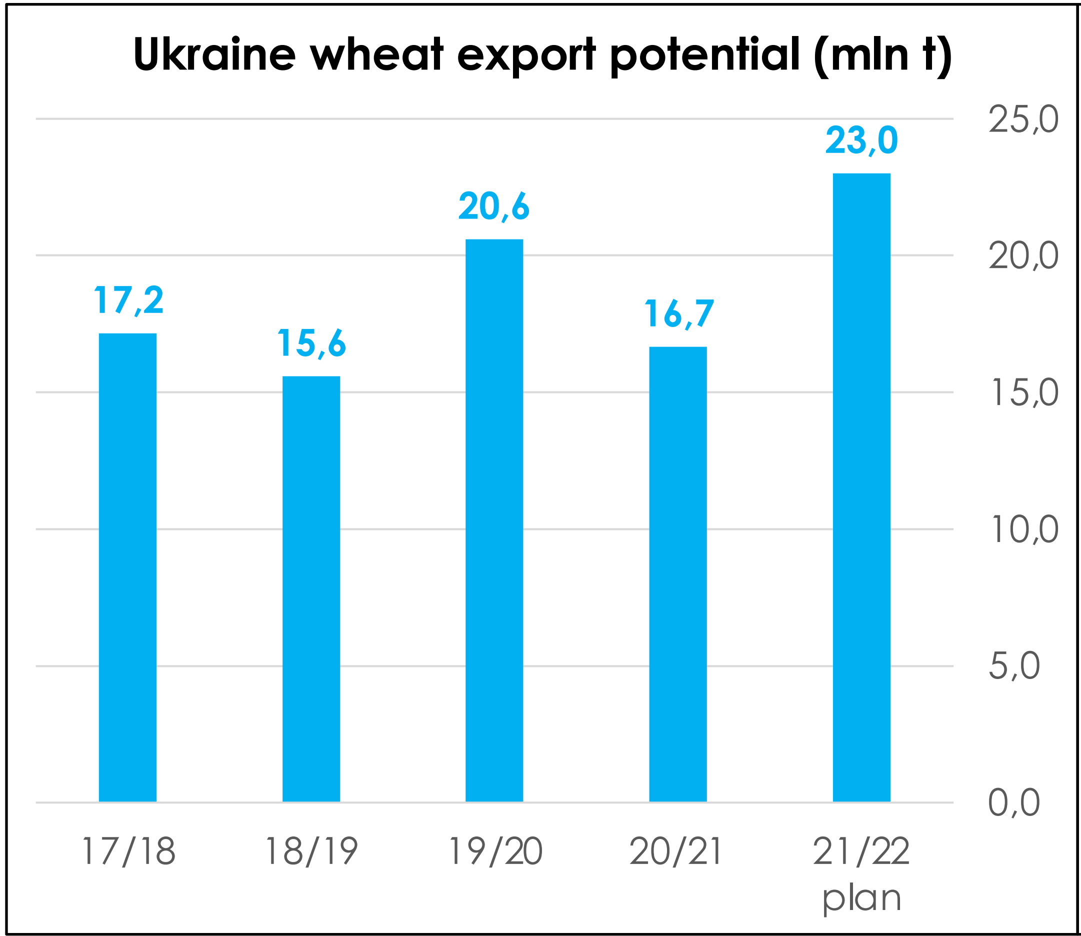

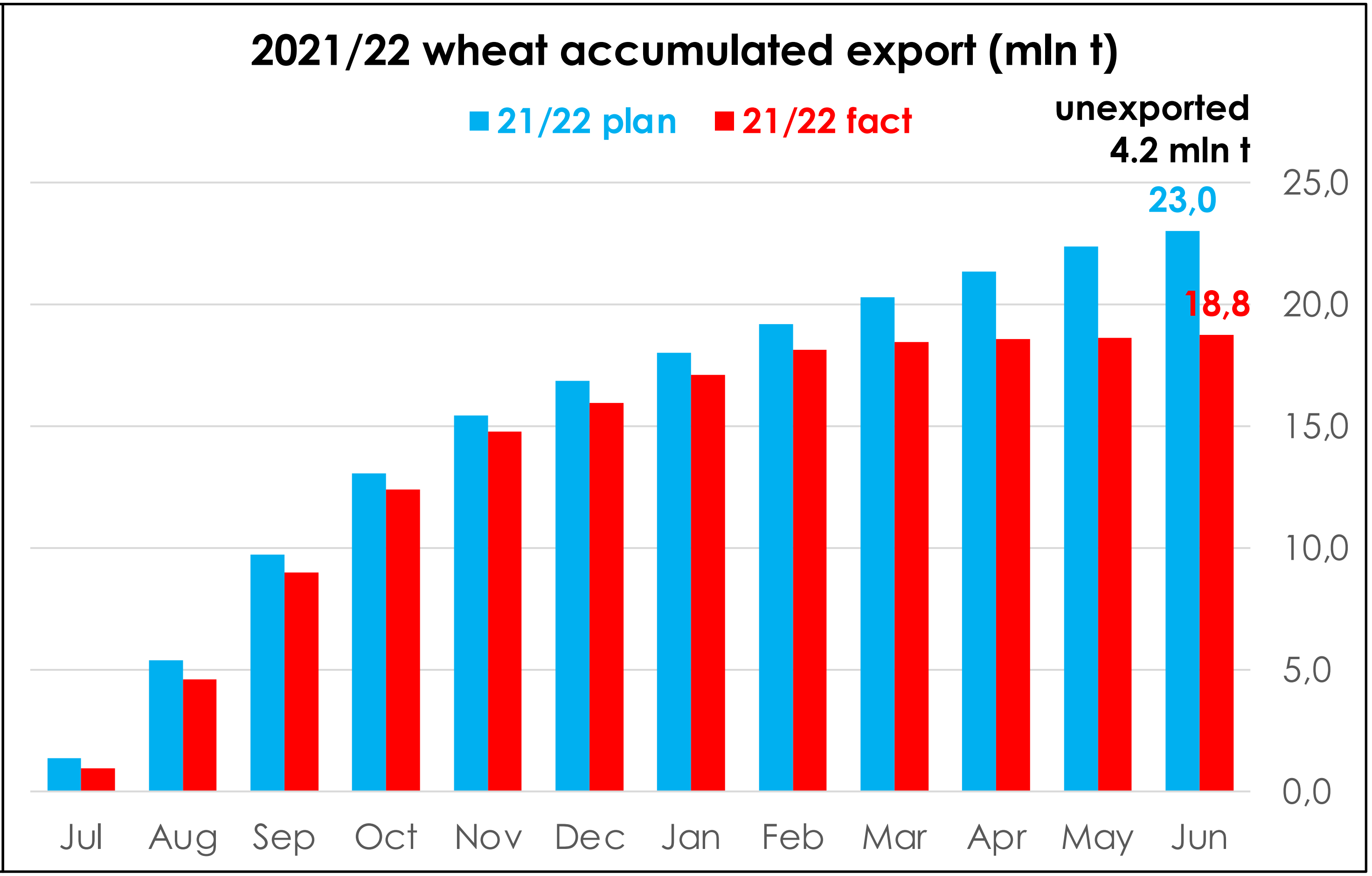

Due to the record wheat harvest of 32.5 mln t, Ukraine had an export task of 23.0 mln t in the 2021/22 season. Since the beginning of the season (July-June), Ukraine has had a constant but slight lag of the actual rate of export from the planned rate, which is necessary to export all the grain before the end of the season. At the end of February, the lag was 1.1 mln t. Due to the impossibility of exporting grain from seaports, by the end of the 21-22 season, **wheat exports totalled only 18.8 mln t. As a result, 4.2 million tons did not reach the importing countries**.

These stocks of Ukraine became a component of the export potential for 22-23.

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Sources: Ukrstat, Ukraine custom service, own research

Wheat Supply & Demand forecast (mln t)

	"Peace"		"War"	
	21-22	22-23	21-22	22-23
Beginning stocks	0.9	1.8	0.9	6.0 (+4.2)
Production	32.5	28.3	32.5	20.2 (-8.1)
Domestic consumption	8.7	8.7	8.3	7.2 (-1.5)
Export	23.0	20.3	18.8 (-4.2)	17.9 (-0.4)
Ending stocks	1.8	1.2	6.0 (+4.2)	1.2 (0.0)

Our production and market development estimates under two scenarios:

"Peace"
No full-scale invasion in 2022.

"War"
Russia's new invasion of Ukraine starting 24 February, and occupation of about 20% of the territory before 2014.

Exports shows the possible export volumes after deduction of domestic consumption and stocks.

How did the Russian invasion affect Ukraine's wheat market?

- Ukraine temporarily lost control over a large part of the territory. Zaporizhzhia and Kherson oblasts are among the key ones in wheat production, which will probably lead to a much smaller crop. Part of last season's stock is also in uncontrolled territory or has already been stolen by Russian forces.
- In 2022-23 Ukraine harvested about 20 mln t of wheat, which is 8 mln t less than we could expect under a "Peace" scenario.
- At the same time, the temporary loss of territories and migration of the population led to a decrease in the domestic consumption of wheat for both food and feed needs.
- Taking into account larger ending stocks, despite decline of harvest 22/23, **Ukraine can still offer the world about 18.3 mln t of wheat - only 2 mln t less than without "War.** If this wheat werehad full access to the world market, the competition between exporters would be much higher. **This would allow importers and the WFP to get lower prices, which is especially important for those whose ability to pay is low or affected by the lockdown.**
- The successful liberation of a part of occupied Ukraine, at the beginning of September 2022, will not substantially alter the volume of unsold ending stocks in 2022, as most of the wheat stocked there was lost (damaged or stolen).

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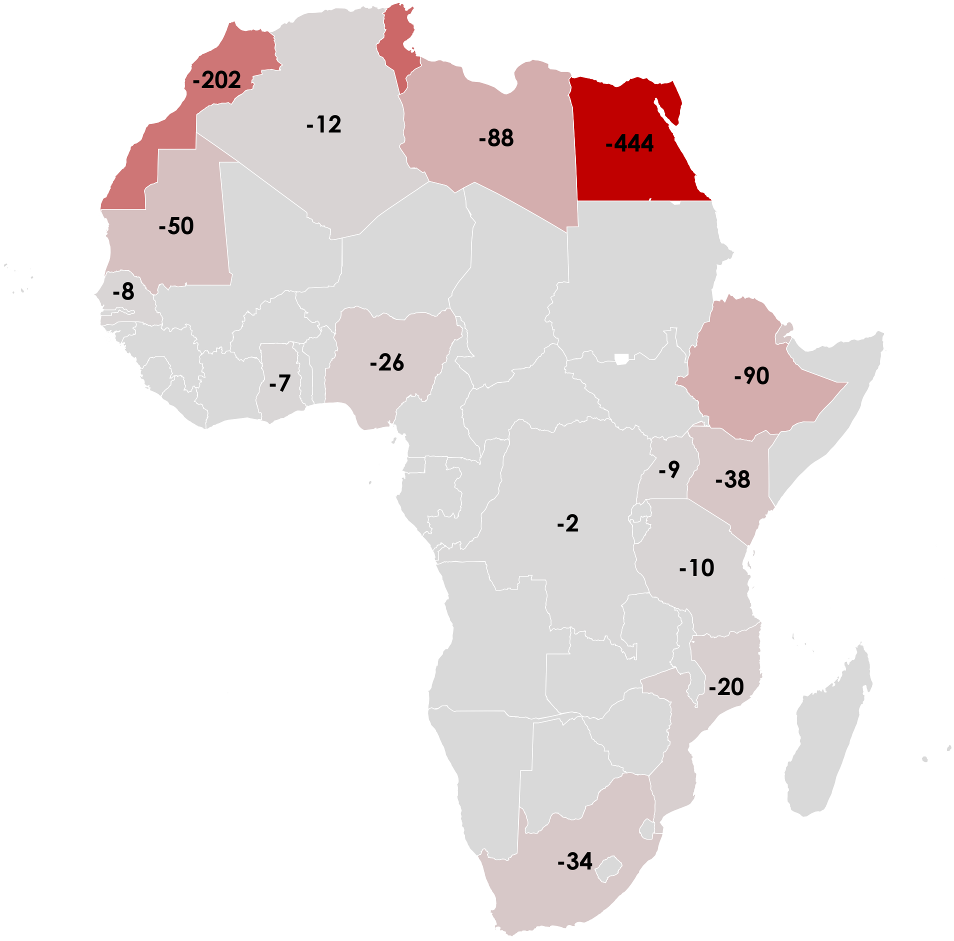
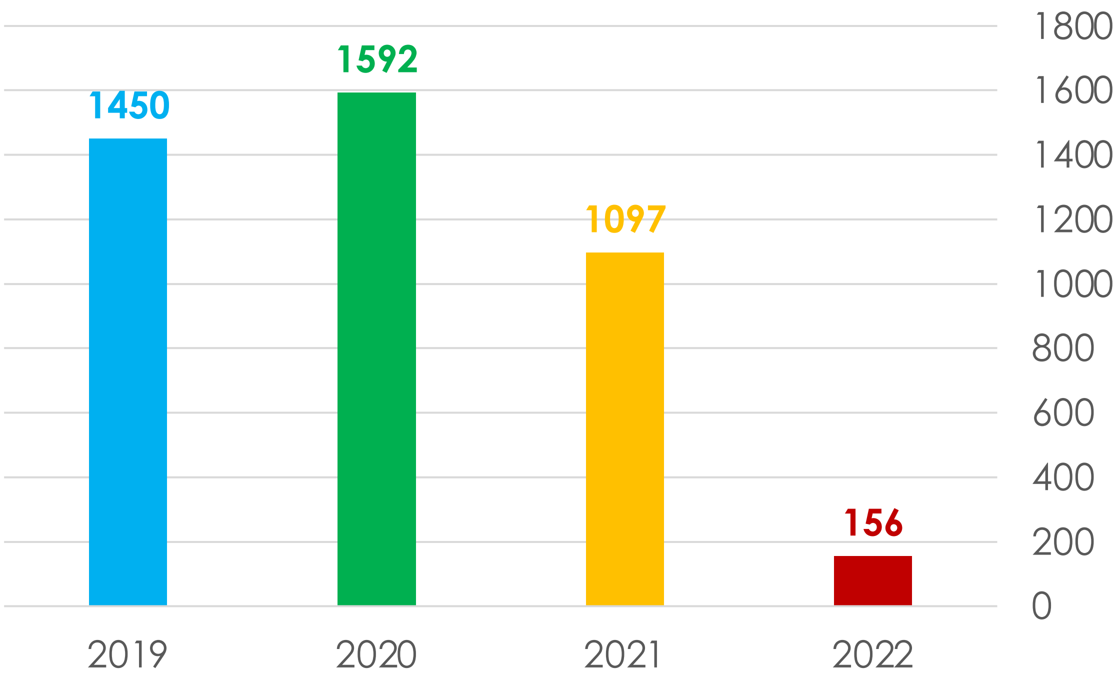
Sources: Ukraine custom service

Change of wheat import from Ukraine Jul-Aug 2022 vs Jul-Aug 3Y Avg (kt)



Imported wheat by African countries from Ukraine Jul-Aug (kt)



Under normal conditions, Ukraine should have already exported 4.2 mln t of wheat from July to August 2022 (15-20% of the export task for the season 22-23). This includes 1.3 mln t to Africa: 400-600kt to Egypt, 200-300 kt to Tunisia, and the remaining 400-700 kt to other. However, this year, during these months, Ukraine managed to export only about 150, kt to African countries (60 kt each to Egypt and Tunisia, the rest to Ethiopia and Tunisia). The map shows how much African countries was deprived of Ukrainian wheat in just 2 months.

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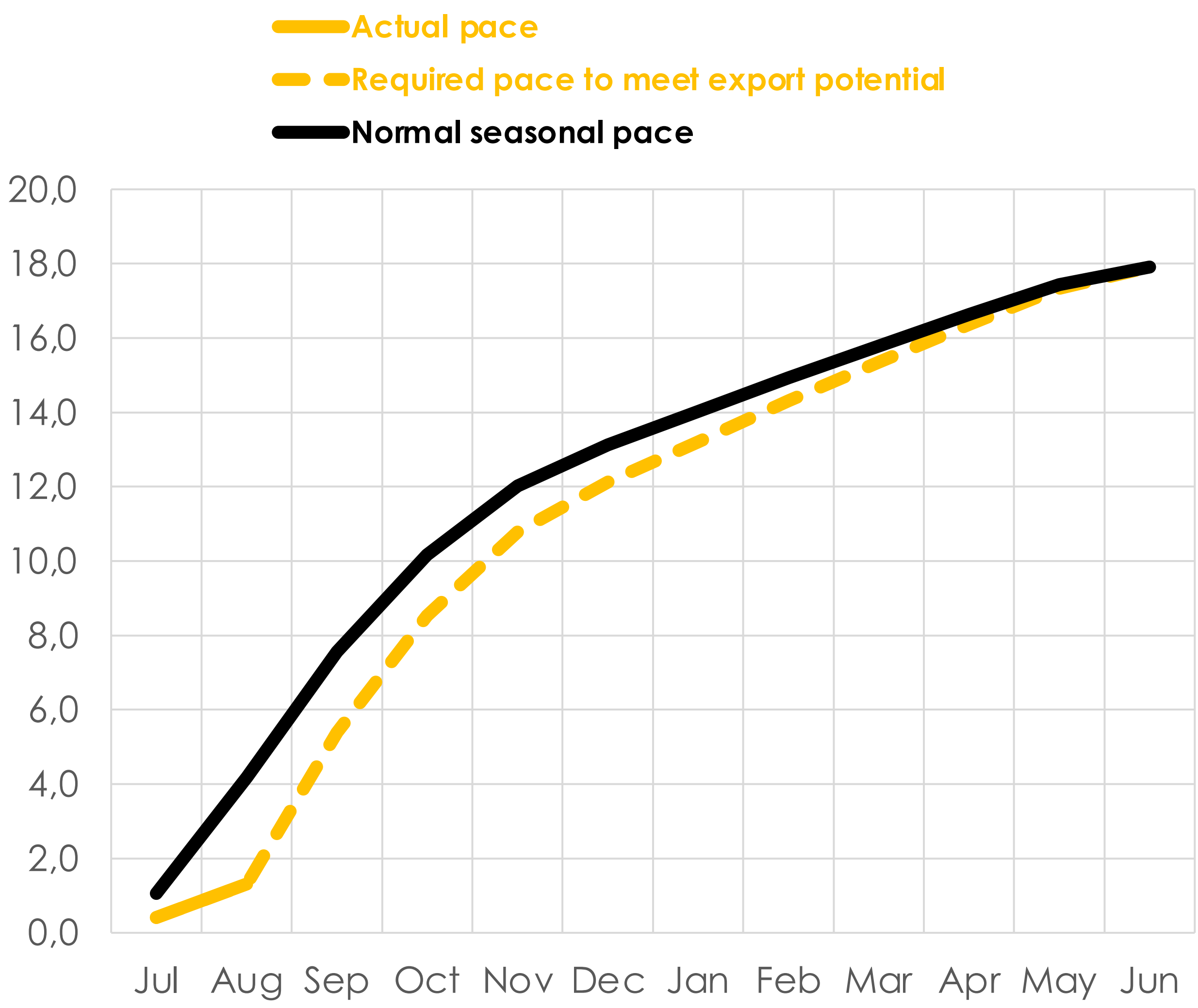
Sources: Ukrstat, Ukraine custom service, own research

Season 22/23 wheat export pace (mln t)



Instead of 4.2 mln t, Ukraine exports in Jul-Aug is only 1.3 mln t, including those ships that actively leave deep-sea ports during August thanks to the Initiative.

Although the difference may not seem so significant and temporary, it is worth understanding the reasons for such seasonality and the uneven pace of exports.

With the harvest in the Northern Hemisphere (summer-autumn), importers have an opportunity to build up their stocks, buying when there is a significant supply from exporters. In December-February, and especially in March-May, the main volumes have already been purchased and importers are replenishing their stocks mainly based on expectations of the next harvest (both from exporters and their own).

Accordingly, since Ukraine cannot export at a normal pace, importers are still forced to buy elsewhere, but more expensive due to less competition from exporters without irrigation or other subsidies. This decreases food security, especially for those countries with significant economic problems and natural disasters.

In order for Ukraine to be able to offer all available volumes of wheat to importers, the rate of export must significantly exceed the normal level. Therefore, Initiative must continue, ports and ships must be protected from shelling.

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Sources: Ukrainian Ministry of Infrastructure, Turkish Ministry of Defense, UN, open sources

Ships bound for Africa and the Middle East from Ukrainian deep-sea ports

Departure	Ship	Cargo	kt	Destination
1.8.22	Razoni	Corn	26.5	Syria
7.8.22	Glory	Corn	66.0	Iran
12.8.22	Star Laura	Corn	60.0	Iran
16.8.22	Brave commander	Wheat	23.0	Ethiopia
22.8.22	Great Arsenal	Wheat	25.0	Egypt
24.8.22	Ganosaya	Corn	16.5	Libya
26.8.22	Seaeagle	Wheat	63.3	Sudan
26.8.22	Pretty Lady	Corn	45.0	Egypt
27.8.22	S Breeze	Corn	44.0	Egypt
28.8.22	FPMC B 201	Wheat	33.0	Egypt
29.8.22	Ash Baltic	Corn	11.0	Egypt
2.9.22	Stella GS	Corn	30.3	Israel
4.9.22	BC Callisto	Wheat	31.4	Egypt
5.9.22	My Meray	Corn	30.0	Egypt
6.9.22	Queen Sara	Corn	11.1	Egypt
7.9.22	Super Henry	Wheat	51.4	Kenya
9.9.22	Super Bayern	Corn	33.0	Egypt
10.9.22	A-line	Corn	10.7	Egypt
15.9.22	Kan 2	Corn	11.0	Libya
12.9.22	Sally M	Corn	6.9	Lebanon
13.9.22	Yasa Team	Corn	65.0	Israel
15.9.22	Maher	Wheat	7.8	Tunisia

Total to Africa and Middle East 721kt:
467kt of corn, 235kt of wheat, 29 kt of other

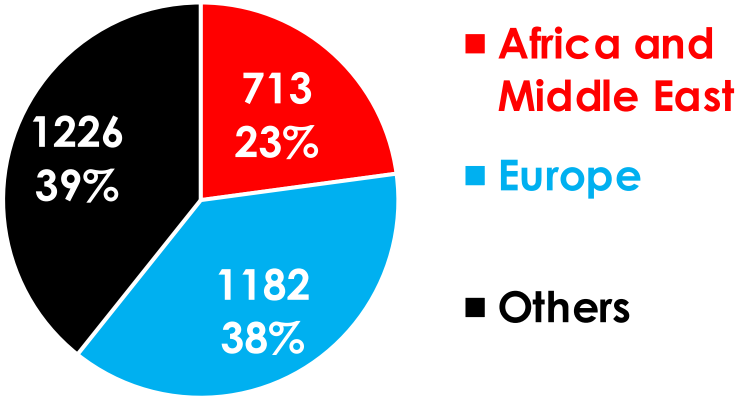
Russian president raised the issue of the future fate of the Initiative on the Safe Transportation of Grain and Foodstuffs from Ukrainian Ports (hereinafter referred to as "Initiative"):

- Accused the West of deception and imperialism - that the grain from the ports goes not to developing countries, but to the EU (which is not true)
- He said that only 2 ships was sent to "developing countries" (which is not true)
- He said that he would consult with his allies and Turkey regarding the need to restrict Ukraine's export destinations.

Despite the real reasons for such a statement (for example, blackmailing Western countries, as happens with gas), for Ukraine, this is a real risk of disruption of sea exports. According to the terms, Agreement is valid for 120 days (from July 22 to November 19) and is automatically extended in the absence of objections.

These are the reasons the Russian Federation is looking for.

Exports from Ukraine deep-sea ports (by kt and %)



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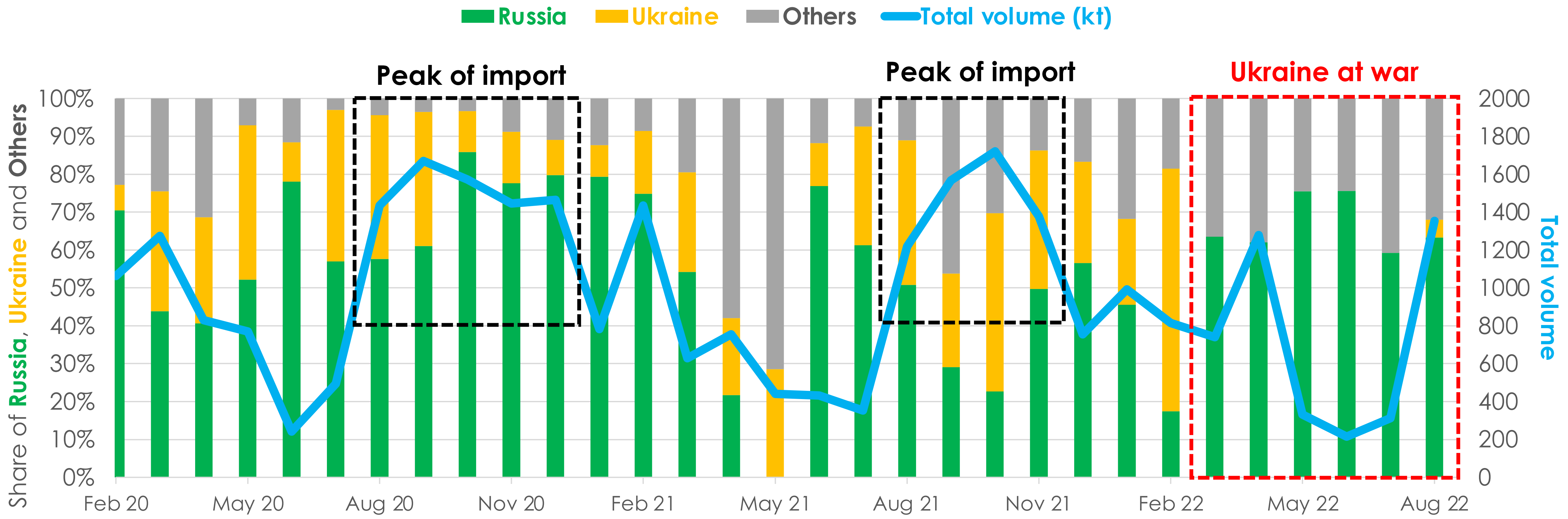
Sources: Ukraine, Russian, US custom statistics, European Commission, open sources

Import of wheat by Egypt when suppliers face supply constraints



Before the war, Egypt mainly relied on wheat supplies from both Russia and Ukraine. With the beginning of a full-scale invasion, in order to prevent a food crisis, it was necessary to purchase grain at much higher prices. The optimistic point is that the period of port blockades was at the end of the season, so other countries were still able to fill Egypt's relatively low needs. But in the coming months, the demand from Egypt is likely to increase strongly. The Russian invasion strongly increased prices because not many other countries could fill the gap. If the war continues, Egypt's supply problems could yet increase in the absence of Ukrainian supplies.

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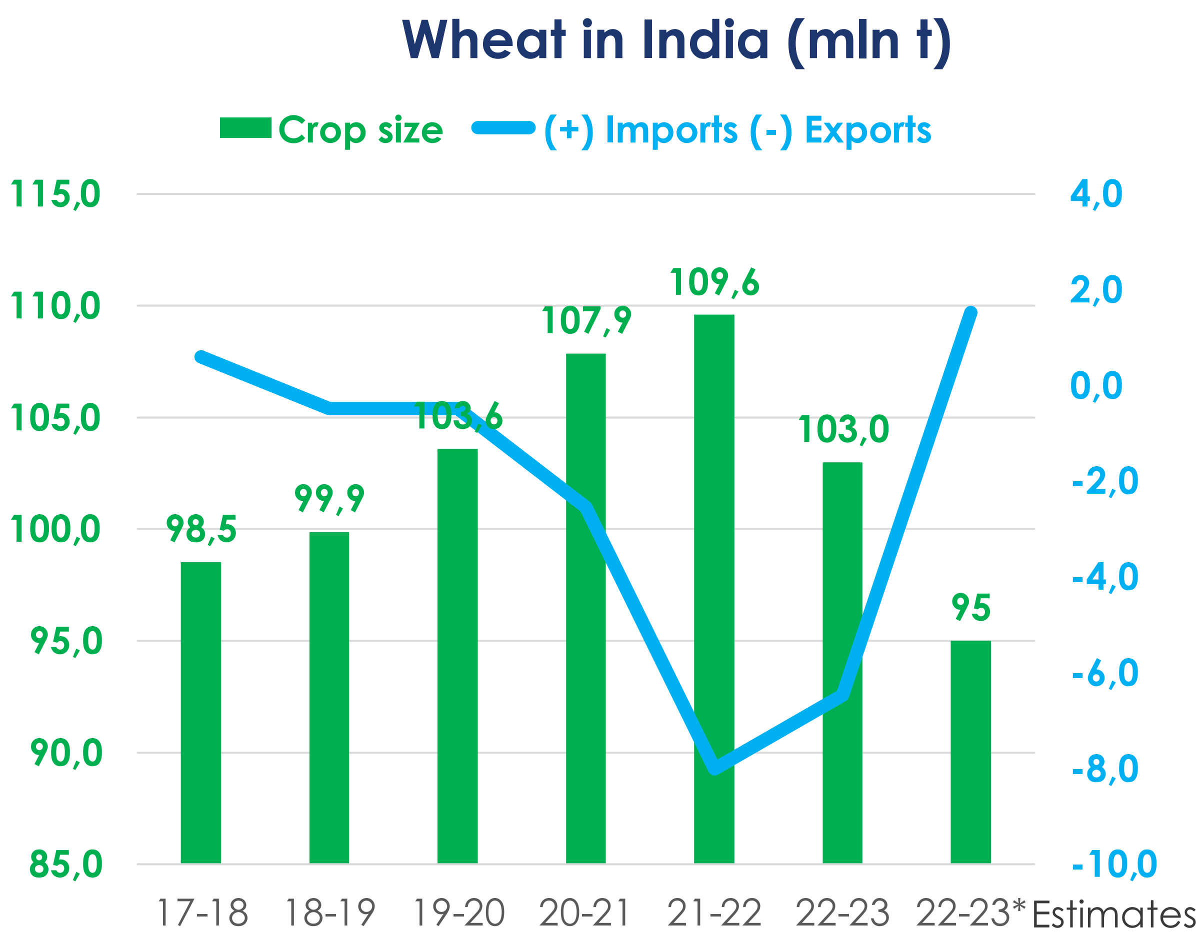
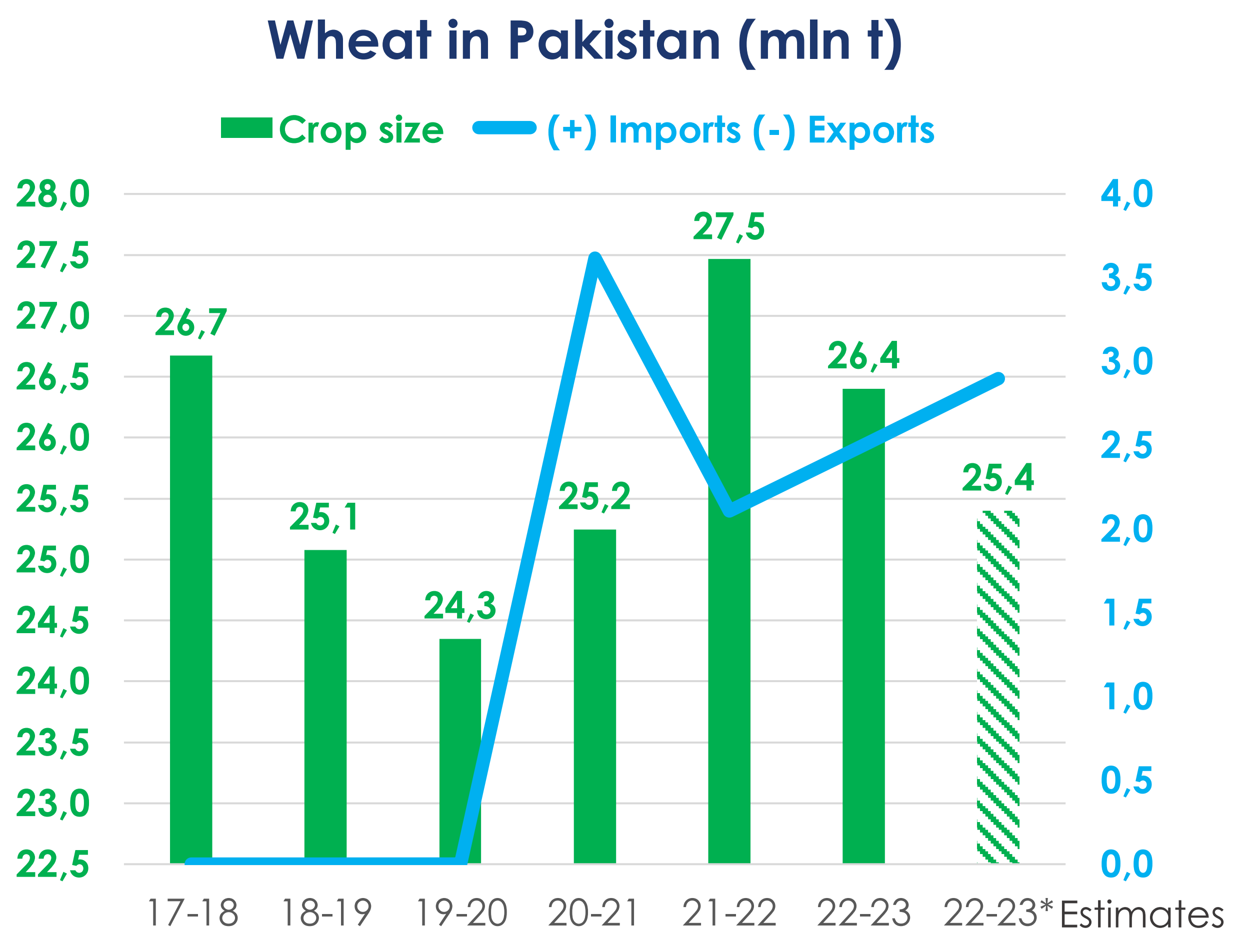
Sources: USDA, open sources





India's role in global wheat market can change very rapidly due to the size of its market and weather fluctuations. A record crop was expected in the spring, making India a net exporter. In June, an agreement was even concluded with Egypt on the supply of 180 kt of wheat. However, the weather worsened sharply and India introduced a temporary export prohibition. The Minister of Food of Egypt said at the end of August that there was no delivery of wheat from India. There is possibility, that India can become from net-exporter to net-importer. This increases the pressure on neighbouring countries as well, particularly Bangladesh and Nepal.

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Sources: open sources

War impairs the contribution of trade to global food security

Hundreds of dried up rivers in southern China

Sprouted wheat. Unsuitable for consumption

Floods in Pakistan

Given the impact of weather disasters that are observed in densely populated countries, the huge reserves of grain in Ukraine can significantly help food security. However, in order to avoid a disaster, the Grain Corridor must work at least during the harvest season. If not, the importing countries will be forced to pay higher prices for crop from other sources. In addition, Ukrainian farmers, not being able to sell their crops, will have to significantly reduce the planted area. We have already seen such practices before the opening of the port of Odessa, and they are still echoing now after the speech of the President of Russia on September 7.

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