



# DEEPER LOOK INTO GRAIN CORRIDOR FUNCTIONING, IMPORTANCE AND CHALLENGES (OCTOBER 2022)

This report recaptures the Aug-Oct 2022 developments of grain export shipments from Ukraine and addresses the difficulties and challenges in current environment, including the complex developments around continuation of the corridor extension.

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101000751



# Weaponization of Grains Trade Resumes. For how Long?

## Oct 29th

- Russia inform about withdrawing from the agreement

## Oct 30th

- Ukraine says 218 ships still held up and Russia says they couldn't guarantee the grain ship's safety
- Turkey says it will approve 16 ships unilaterally. UN also agrees to inspect 40 ships.
- Russia leaves door open for talks, per Turkey

## Oct 31th

- Ukraine ships 354 tmt of Ag products from its seaports
- UN disputes Russia's claim that Ukraine attacked Russian ships on the 29th and thus no reason for the agreement withdrawal
- The UN speculates that russia is moving to control dry bulk movement through the Black Sea region

## Nov 1st

- UN, Turkey and Ukraine announced there will be no traffic on Nov 2

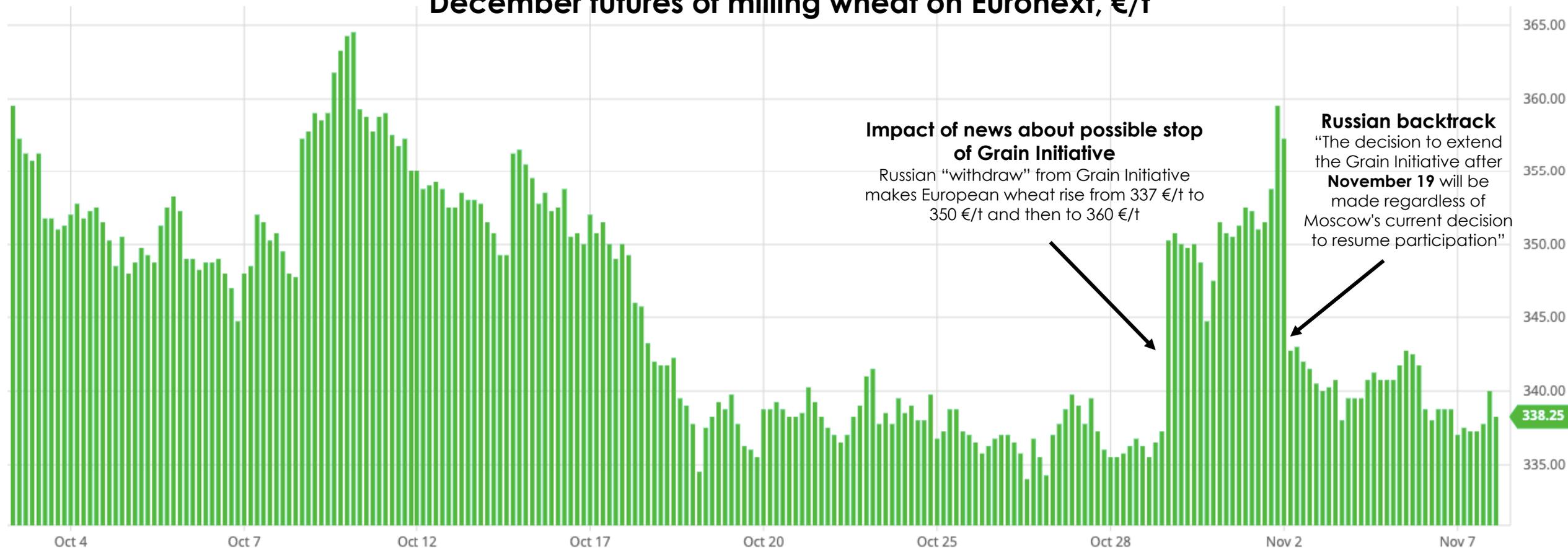
## Nov 2nd

- Russia informs of resuming participation in the Grain Initiative, as with help of Turkish counterpart it managed to obtain assurances from Ukraine that grain corridor will be used strictly for humanitarian purposes
- Russian Foreign Ministry: "The decision to extend the Grain Initiative after November 18 will be made regardless of Moscow's current decision to resume participation"

## Nov 3rd

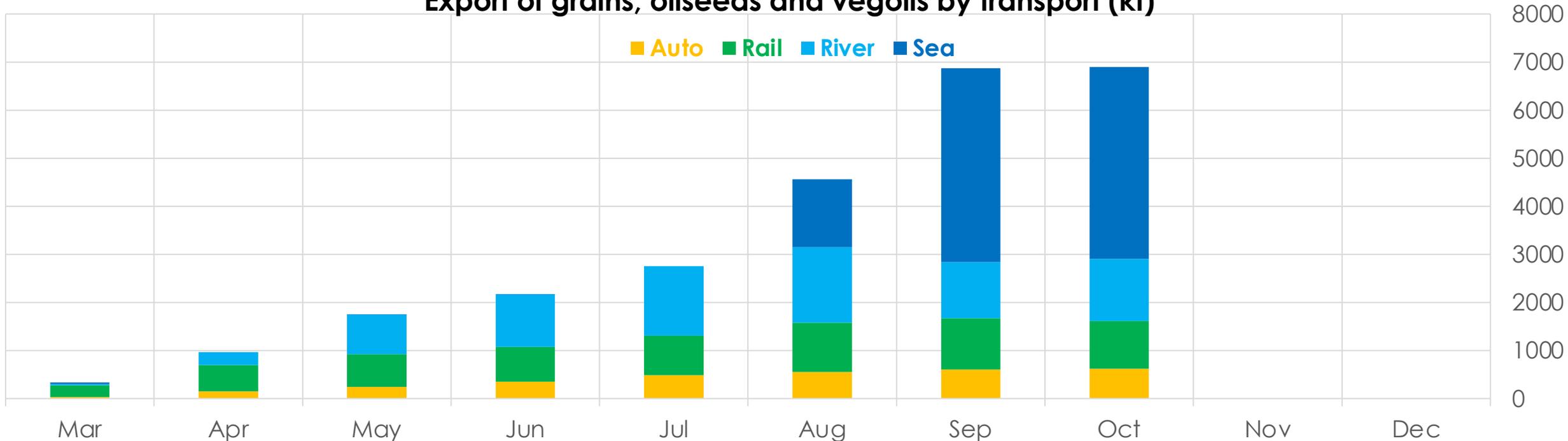
- Ministry of Foreign Affairs of Ukraine: "Ukraine did not take on any new obligations that would go beyond those already existing in the Grain Agreement"
- Russia in the negotiations on a grain deal asks Western countries to lift sanctions on the Russian Agricultural Bank in order to facilitate the export of Russian grain

## December futures of milling wheat on Euronext, €/t



The news about Russia's "withdrawal" from the Grain Initiative appeared over the weekend. So on Monday, the European stock market reacted with a sharp rise in the first minutes of trading. Prices jumped from 337 by 13 €/t and reached a peak of 357 €/t in two days. Prices returned to previous levels only after Russia announced its return to the Agreement. This news only covers the continuation of the Agreement until November 19. The growth of world prices in the absence of continuation of the Grain Initiative for the coming months will be much stronger.

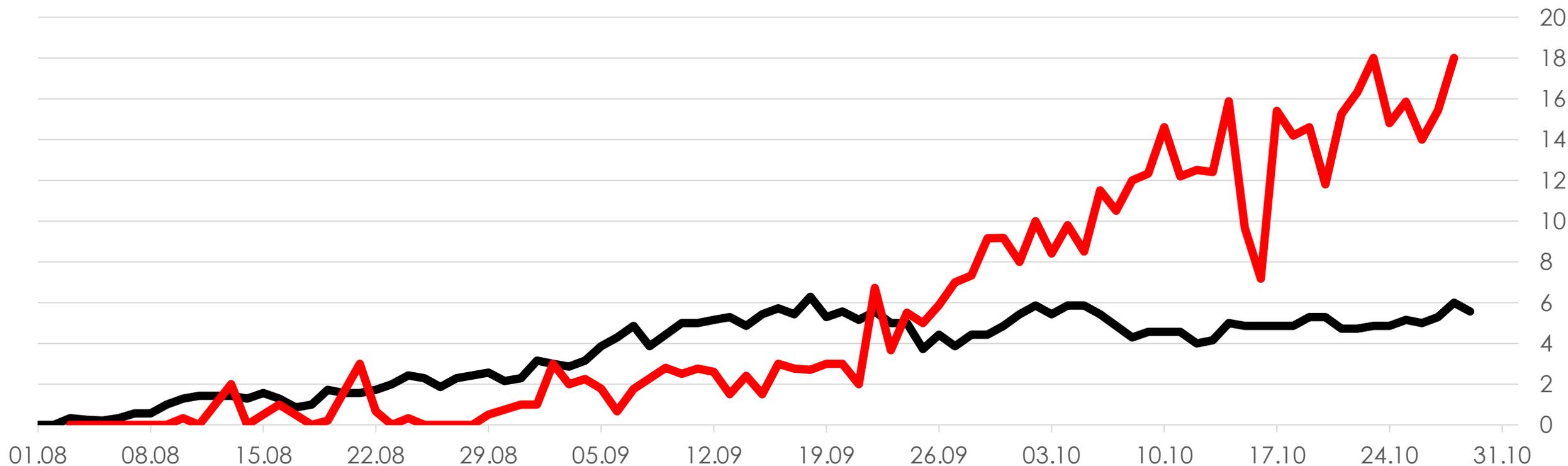
### Export of grains, oilseeds and vegoils by transport (kt)



September became the first full-swing month of operation of deep-sea ports since the start of full-scale invasion. In just 1 month, 4 mln t of grain and oilseeds were exported through the ports of Yuzhny, Odessa and Chornomorsk- this is 40% more than combined by other types of transport. In addition to greater export capacity, deep-sea ports also provide an opportunity to export directly to traditional consumers: to the countries in North Africa, the Middle East and East Asia. Also, it made possible to export corn to Spain, which would be too costly to execute by trucks. And all this became possible despite the fact that not all deep-sea ports are working. For now, due to constant Russian shelling of the city, as well as for military reasons, export through Mykolaiv still not possible. Taking in account 20 largest port terminals of Ukraine, 44% of transshipment capacities and 33% of storage capacities are currently unavailable. But the future of Grain Initiative still unclear.

Chart Title

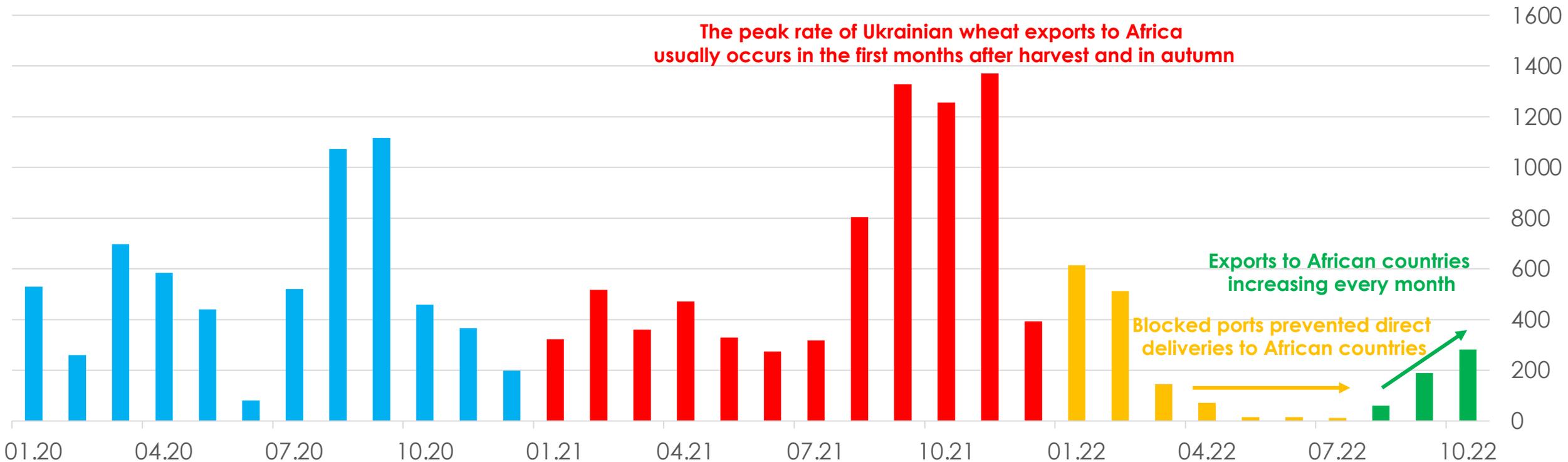
 Inspected ships (7-days average)

 Waiting days an average before pass the inspection


Russia insisted on inspections of all vessels moving to or from Ukraine. When the pace of exports from Ukrainian ports gained momentum, a new problem appeared. These inspections led to the formation of a huge queue of almost 200 vessels, which makes timely delivery of grain to importing countries impossible. In addition, Russia rejected requests to increase the number of inspection teams from 5 to 10. The teams themselves also often delayed inspections for various reasons. As a result, the average rate of passage of inspection vessels was 4-6 per day. Additional proof that this slowdown was intentional is the fact that on November 1 (when Russia withdrew from the Grain Initiative) Turkey and the UN immediately increased the number of inspection groups to 10 and inspected more than 40 vessels in one day.

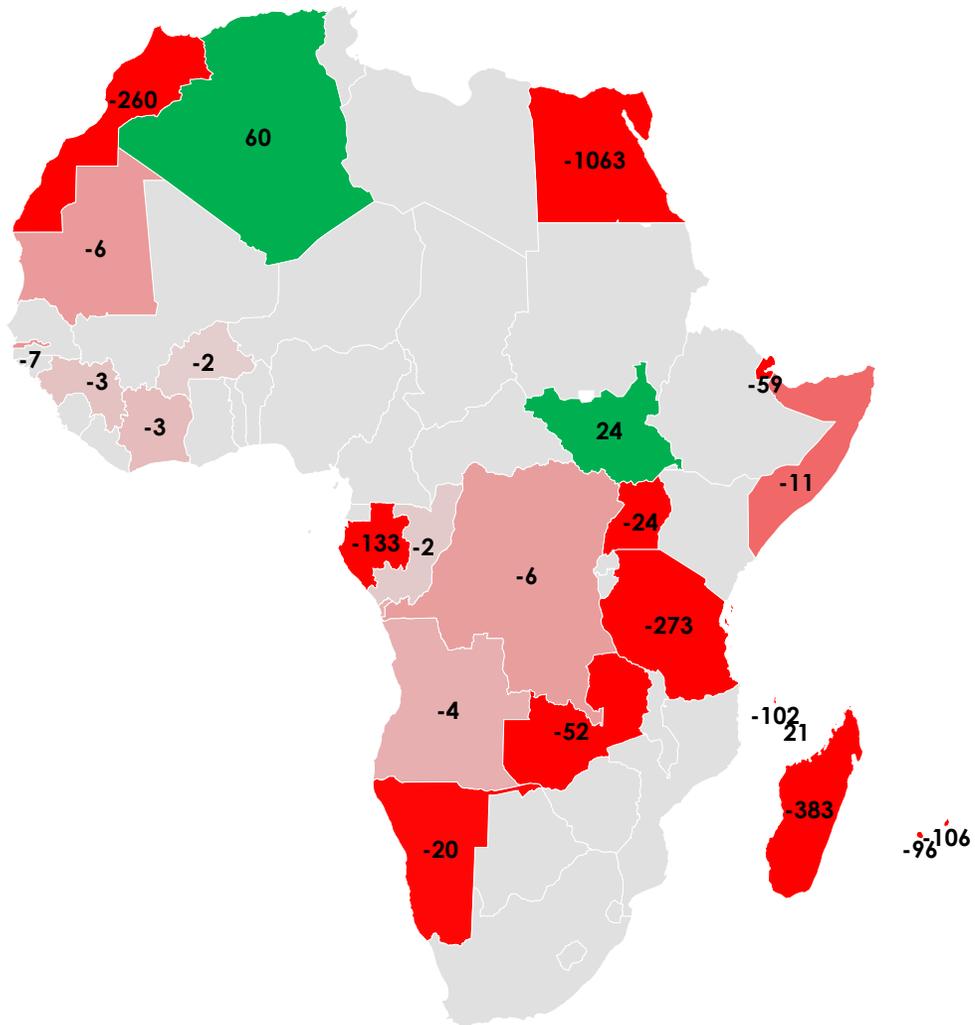
## Ukrainian wheat exports to African countries (kt)

■ 2020 ■ 2021 ■ 2022 ■ Grain Initiative

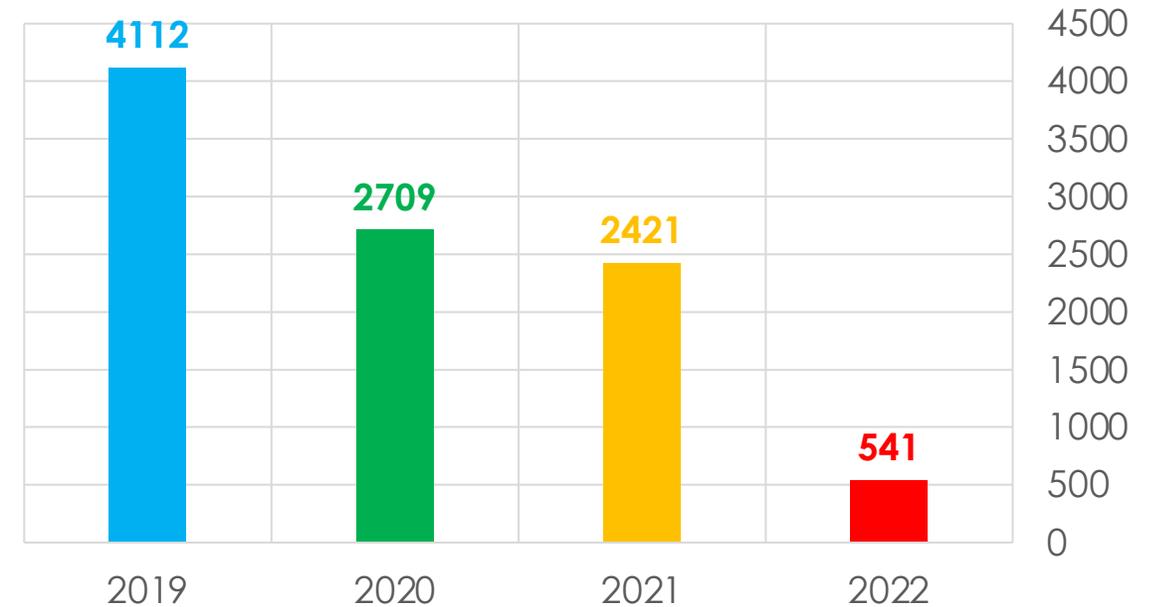


During the period from March to October in the last 3 years, Ukraine exported from 5.0 to 5.9 mln t of wheat to African countries. In the current season 22-23, this value is only 789 kt, as the active export months of June and July were lost due to the blockade of the ports. The first shipment of wheat through by ports took place only on August 12 - first those ships that had been stuck in the ports since February 24 (mainly corn) were taken out. However, in just 2 months of full operation of the Grain Initiative (September-October), 471K tons of Ukrainian wheat was exported to Africa. It indicates ability to increase volumes in the future and also shows the importance of Grain Initiative for improving the African continent's food supply.

## Difference of Ukrainian wheat import Jul-Oct 2022 vs Jul-Oct 3 years average (kt)



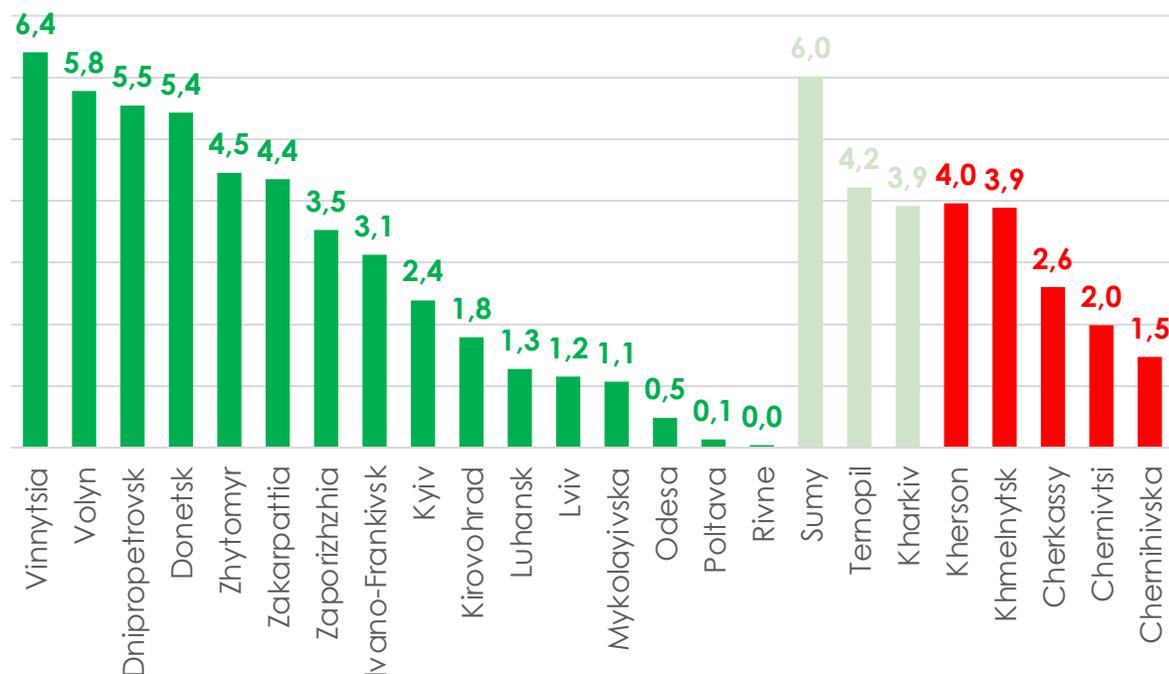
## Imported wheat by African countries from Ukraine Jul-Oct (kt)



During the period from July to October, the only countries that showed an increase in wheat imports from Ukraine were Algeria and South Sudan. The resumption of Ukrainian wheat imports was made possible not only by the signing of the Grain Initiative, but also thanks to purchases of 190Kt by the UN Food Program. During the period of active purchases and conclusion of contracts (June-July), the fate of sea exports from Ukraine was generally unknown, so some importers were still forced to overpay without waiting for the resumption of Ukrainian wheat supplies.

## Grain storage capacity before full-scale invasion (kt)

■ Free ■ Liberated ■ Occupied (Full/Partial)



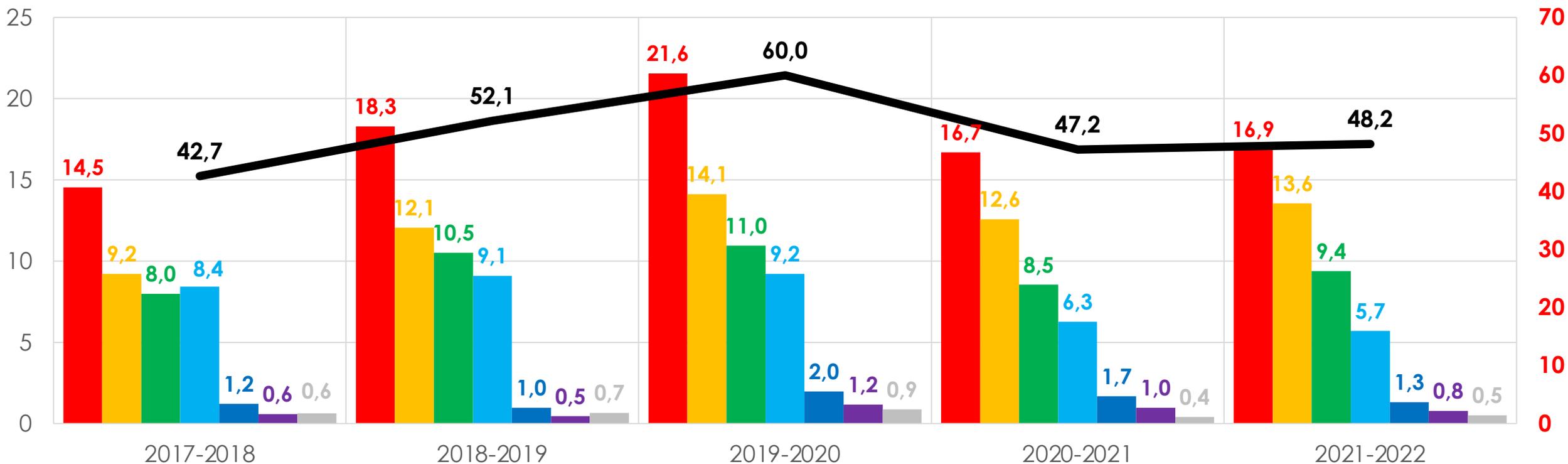
## Occupied and liberated areas as of Nov 3, 2022



The total capacity of simultaneous grain storage in Ukraine at the beginning of the year was 75.01 mln t. 44.5 mln t of that are warehouses of agricultural producers. Given the seasonality pace of harvest and export, it was generally sufficient to meet storage needs. Currently, there are storage facilities for about 10 million tons of grain in the territories occupied by Russia. Using farms and their facilities as military bases and warehouses lead to severe destruction of agricultural infrastructure. In the conditions of an active war it is impossible to calculate losses and some studies use the assumption of a linear daily progression of destruction based on outdated statistics, which is unlikely to lead to correct values.

## Seaport export from Ukraine by MY, mln t

■ Mykolaiv ■ Chornomorsk ■ Pivdennyi ■ Odesa ■ Berdyansk ■ Mariupol ■ Kherson — Total

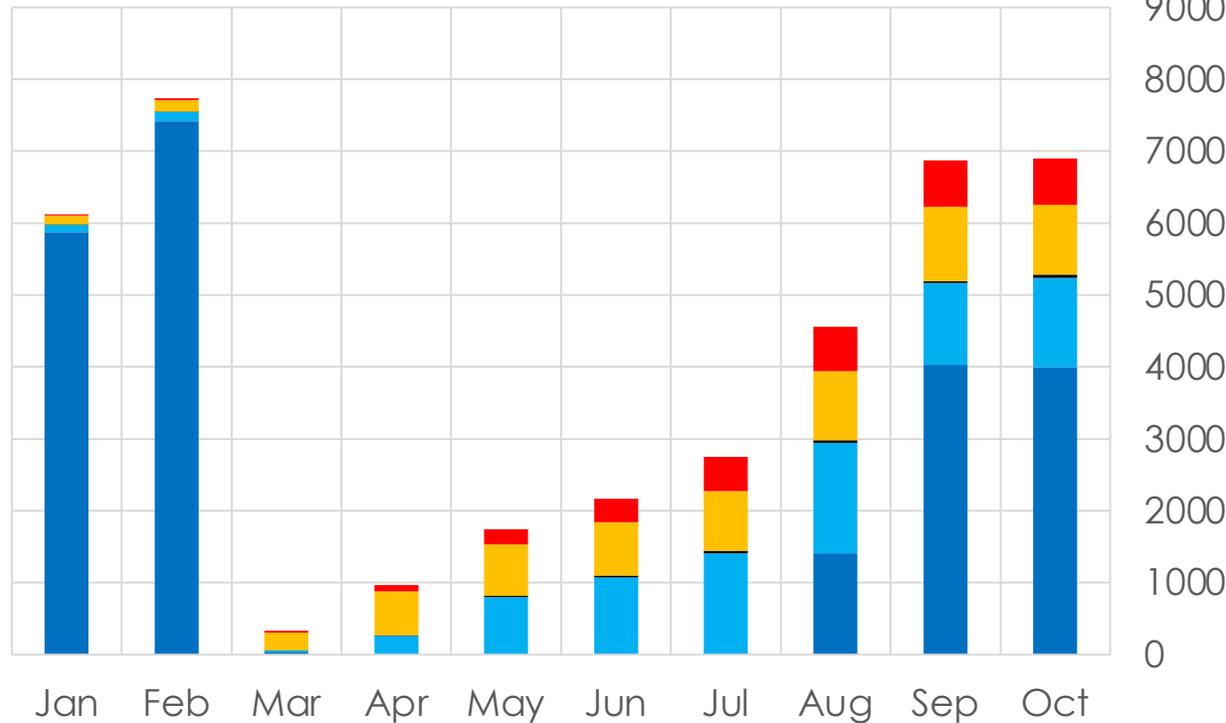


The primary importance for the export of Ukrainian grain is the continuation of the Grain Initiative for the coming months. Next priority is the effectiveness of inspections initiated by Russia. Even after that, it will be too early to talk about the full restoration of the export potential, since the next problem is the inaccessibility of the entire maritime infrastructure of Ukraine.

Currently, the ports of Mariupol, Berdyansk and Kherson are under occupation with a total annual shipment capacity of about 4 mln t of crops per year. Mykolaiv seaport, which handled up to 22 mln t of crop per year, also remains blocked.

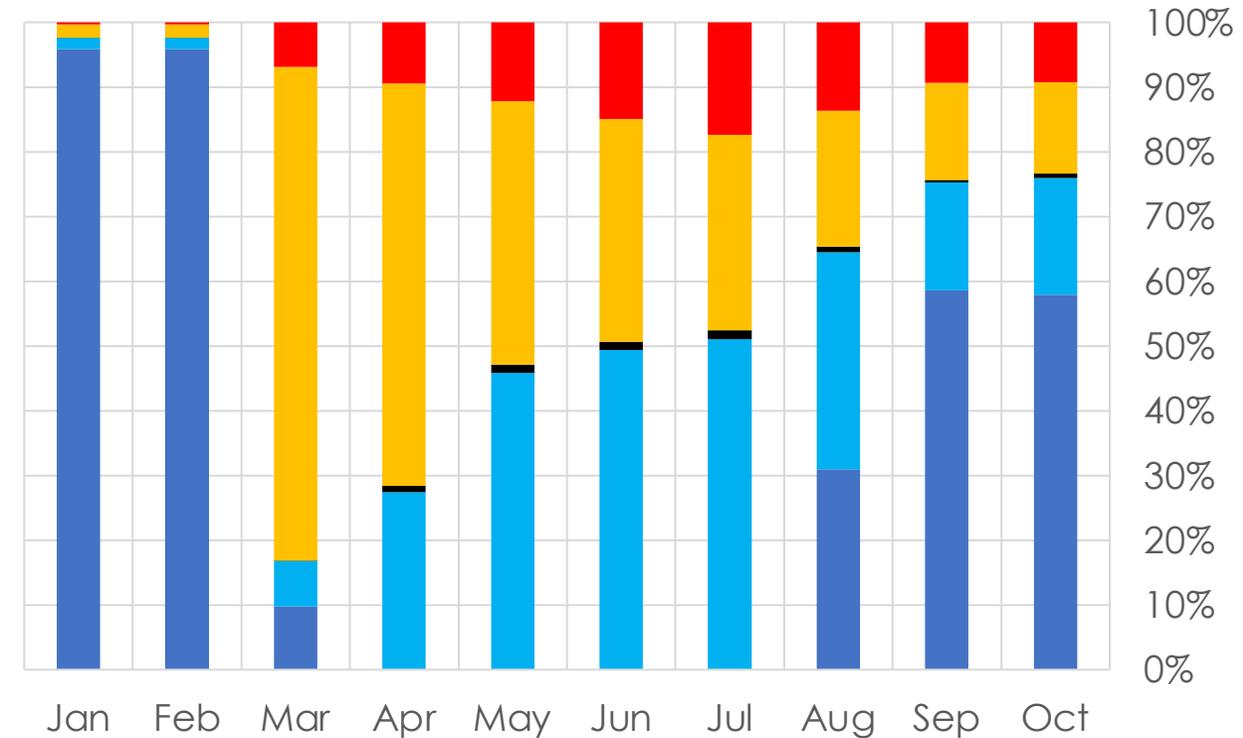
## Exports by transport (kt)

■ Sea ■ River ■ Ferry ■ Rail ■ Auto



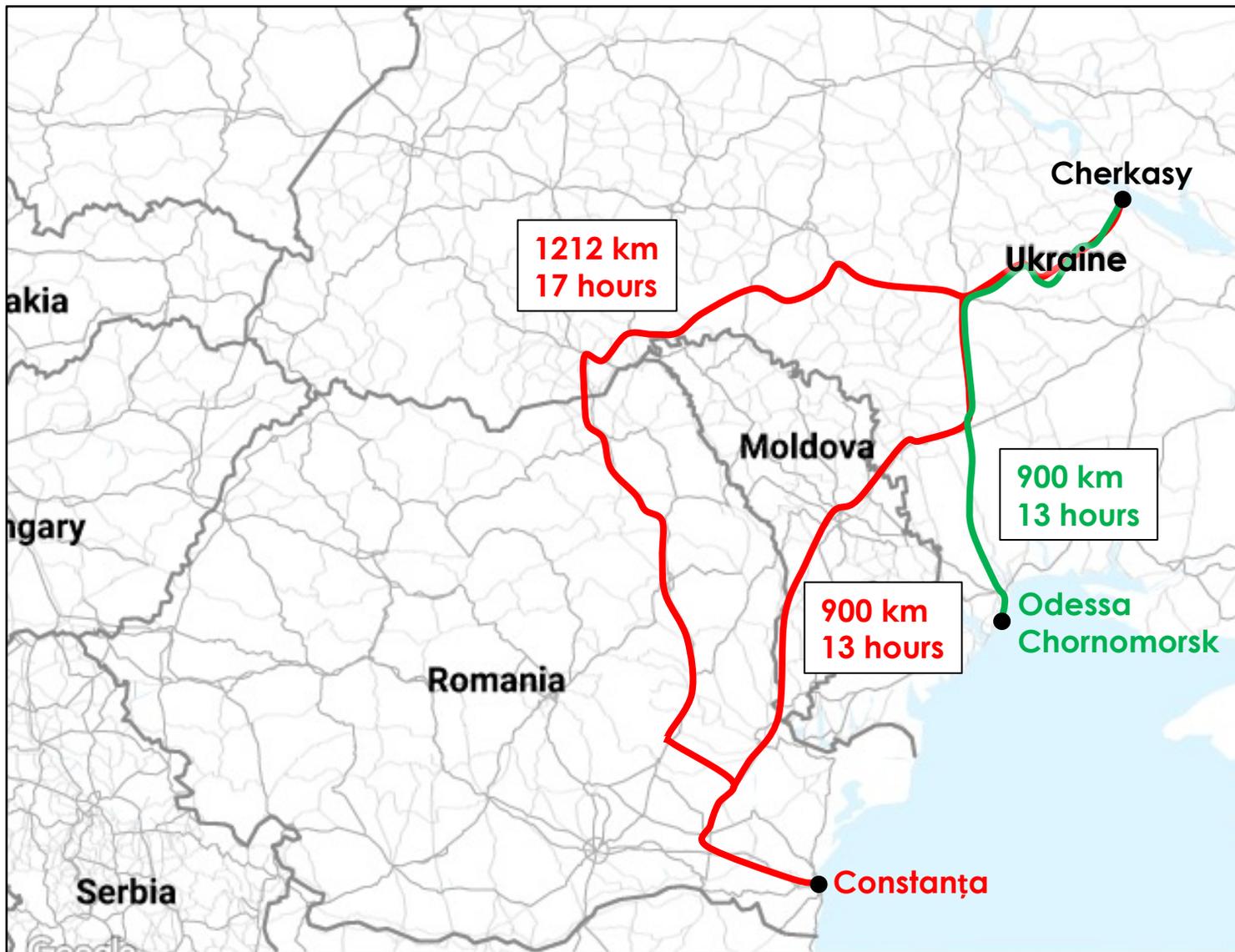
## Export by transport share (%)

■ Sea ■ River ■ Ferry ■ Rail ■ Auto



After the beginning of the full-scale invasion of Russia, the participants of the Ukrainian market quickly adapted to the new realities and the EU is making big efforts to help exports by land and by the Danube. But these trade directions can absorb only 50% of Ukrainian export volumes that were seen in September 2022.

The recovery of sea exports may restrain the growth of exports in other directions, because their popularity was determined primarily by the lack of choice.



Romanian Constanta is the nearest large port of Ukraine's European neighbours. Since the beginning of the full-scale invasion, Constanta has remained one of the key transit routes through which Ukrainian grain enters the international market.

But there are several problems for the successful export of crop via this route. Foremost, Romania is a large grain producer and competes with Ukraine on the world export market. The harvest in both countries appears almost simultaneously, so Constanta is primarily involved in exporting its own grain. So, in addition to a much longer route compared to the usual export through Ukrainian ports (which means additional logistic costs), export opportunities are also limited by the size of the supply in the domestic market of Romania.

## Corn C&F Ravenna (selling price delivered to Italian port) **\$309/t**

### Through port Chornomorsk (Ukraine)

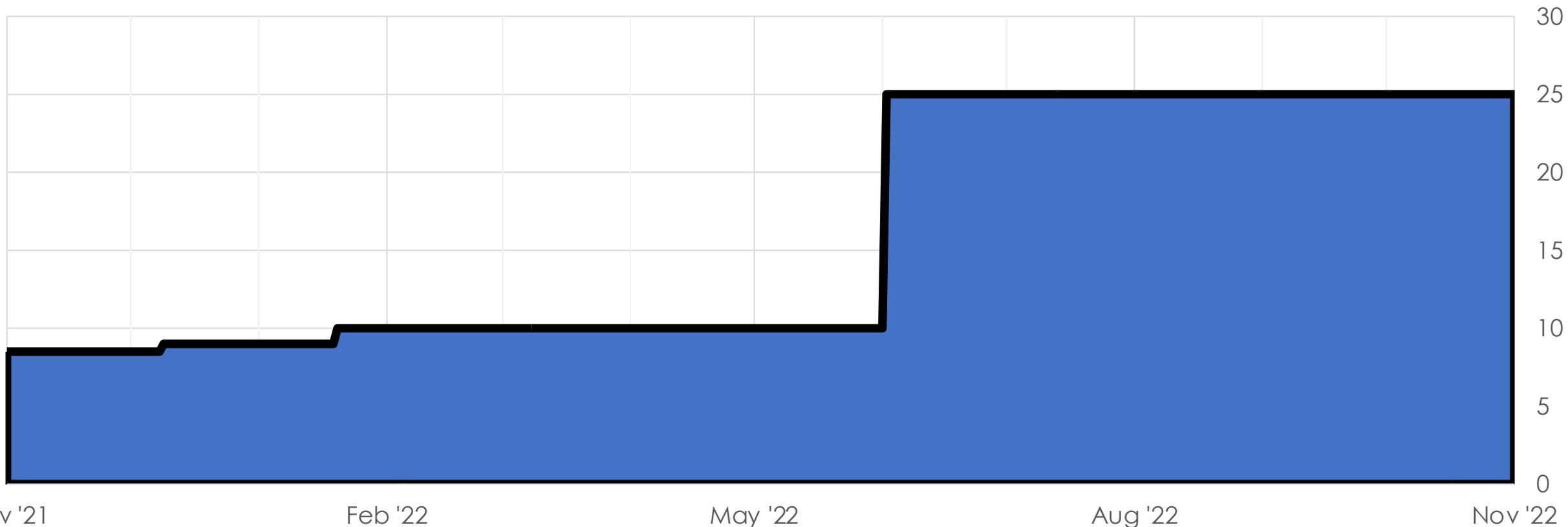
<b>Total logistics costs</b>	<b>\$130/t</b>
Cherkasy-Chornomorsk (railway)	\$45/t
Chornomorsk transshipment	\$25/t
Chornomorsk-Ravenna	\$60/t
<b>Price for farmer</b>	<b>\$179/t</b>
Railcar turnover	10 days
Turnovers per month	3.0
Monthly turnover of 250 railcars	53 kt
<b>Monthly income, exporting by 250 own railcars</b>	<b>\$9,540,822</b>

### Through port Constanța (Romania)

<b>Total logistics costs</b>	<b>\$184/t</b>
Cherkasy-Border (railway)	\$89/t
Romanian railway	\$64/t
Constanța transshipment	\$12/t
Constanța-Ravenna	\$19/t
<b>Price for farmer</b>	<b>\$125/t</b>
Railcar turnover	27 days
Turnovers per month	1.1
Monthly turnover of 250 railcars	20 kt
<b>Monthly income, exporting by 250 own railcars</b>	<b>\$2,457,429</b>

Turnover of railcars is three times slower via Constanta than when exporting through the ports of Ukraine. For a farmer in central Ukraine (i.e. Cherkasy), as of September 14, the turnover of railcars through Constanța was 27 days, when through Chornomorsk was 10 days. Thus, the cost of logistics Constanta vs. Chornomorsk as of September 14 was \$184/t vs. \$130/t. The advantage of the grain corridor for a farmer located in Cherkasy is \$54/t. But the most important thing is that due to the faster rotation of railcars when exporting through the Ukrainian port, the profit can be 3-4 times higher than when exporting through European partners. **Grain corridor closing may dramatically and negatively impact the outlook for crop 2023 as profitability will be in the negative zone for many producers.**

## National Bank of Ukraine interest rate, %



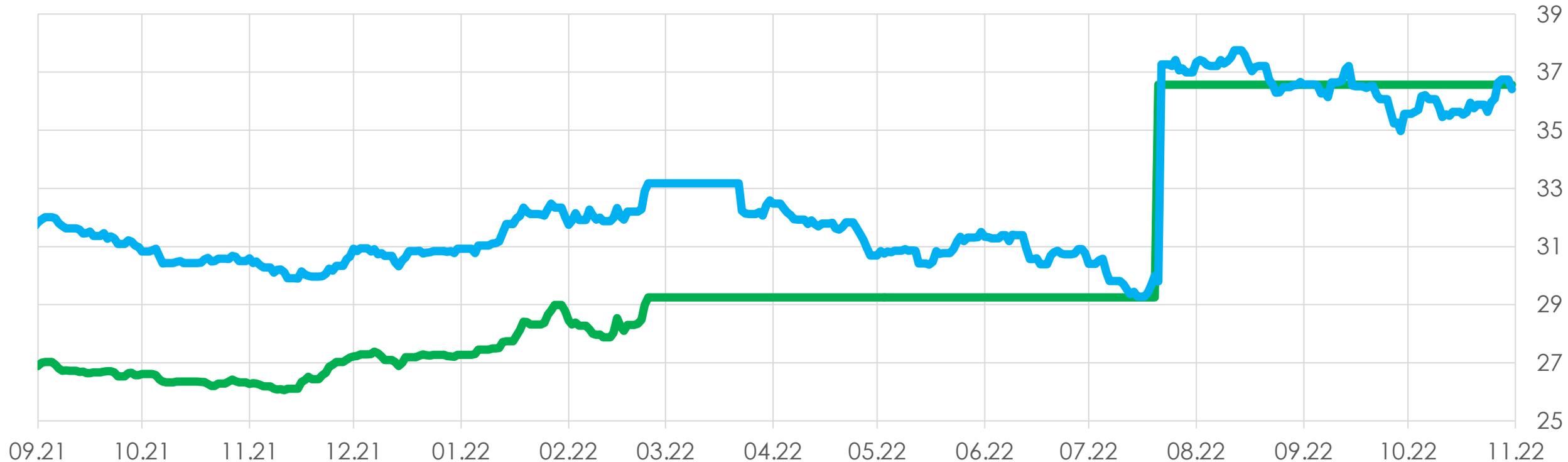
With the beginning of the full-scale invasion, credit limits for agribusiness were significantly reduced, and now farmers have less access to financing. In 2021 interest rates were at the level of 11-14%; in 2022 at 22-27%, while the NBU interest rate is at 25%. The need for funds forces farmers to sell crops even when the price is below the break-even level. This leads to the deterioration of financial capacity and will affect the desire to sow grain crops, which have significantly lower profitability compared to oil crops (per 1 tonne).

As a result, Ukraine has smaller planted areas not only because of Russia's temporary occupation of the fertile southern regions of Ukraine. As of October 31, 13% less winter wheat was planted in the free regions than in the worst season in the last 5 years.

In total, 3.5 mln ha were planted in Ukraine vs 5.6 to 6.1 mln ha at the same date in 2017-2021.

## Exchange rate UAH vs USD and EUR

— UAH/USD — UAH/EUR



Since the beginning of the full-scale invasion, the National Bank of Ukraine has introduced a fixed exchange rate, which has been revised only once, in July. Unfortunately, due to the effects of the war on the economy, the hryvnia rate on the cash market is much higher than the official rate. The difference between these rates puts farmers in front of a choice - to trade officially and fill the country's budget, or to get 10% more profit by selling for cash and have at least some profitability.

Macro-financial assistance from Western partners significantly helps Ukraine, and also reduces the gap between the real and cash exchange rates. In the spring, the gap reached 25-30%, now it is only 10%.

# Ukrainian Exports to Africa

## Can the Grain Deal continue on Nov 19 and help feeding Africa?



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Jeffrey



A child balancing a tray of bread on his shoulder, which he has just bought from a bakery in Cairo  
Copyright: Nasser Nouri

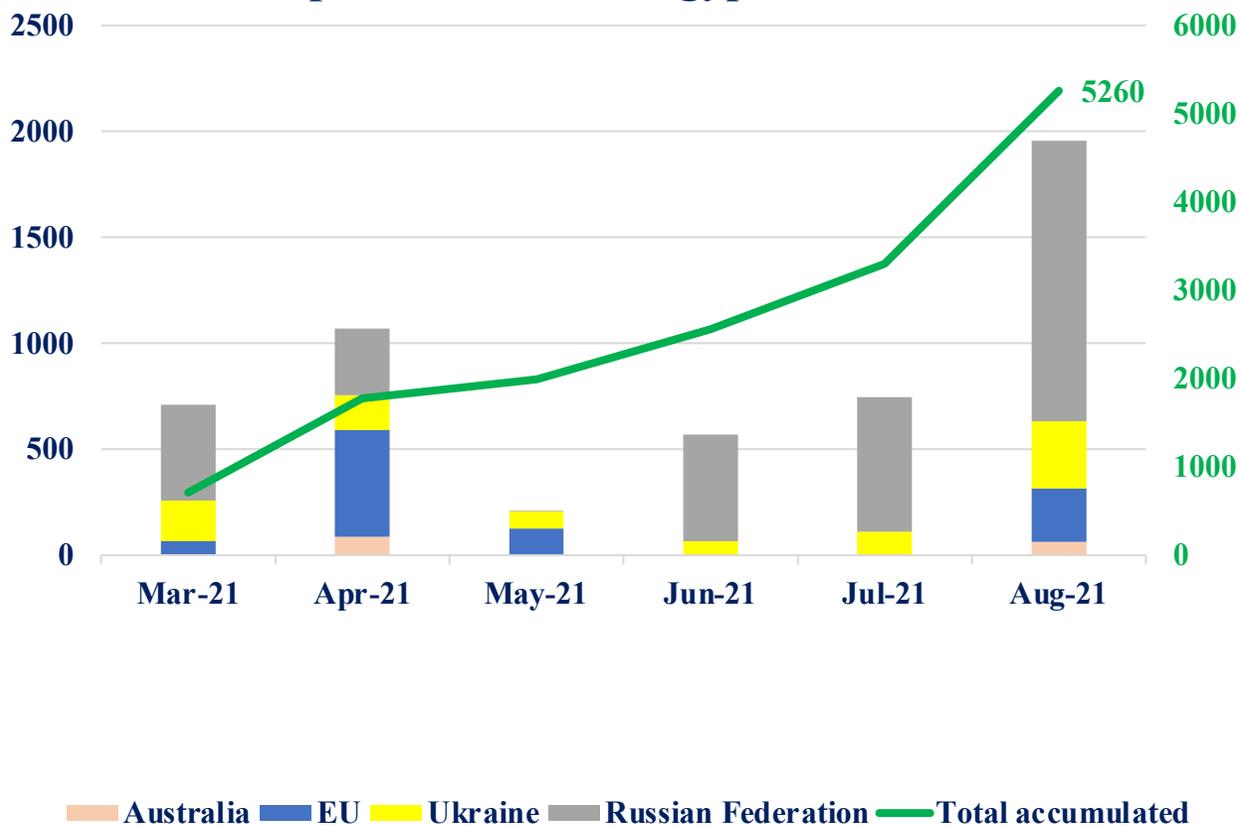
A child eats bread during Sunday School in the Heal Africa Church in Goma, Democratic Republic of the Congo  
Copyright: Paul Jeffrey



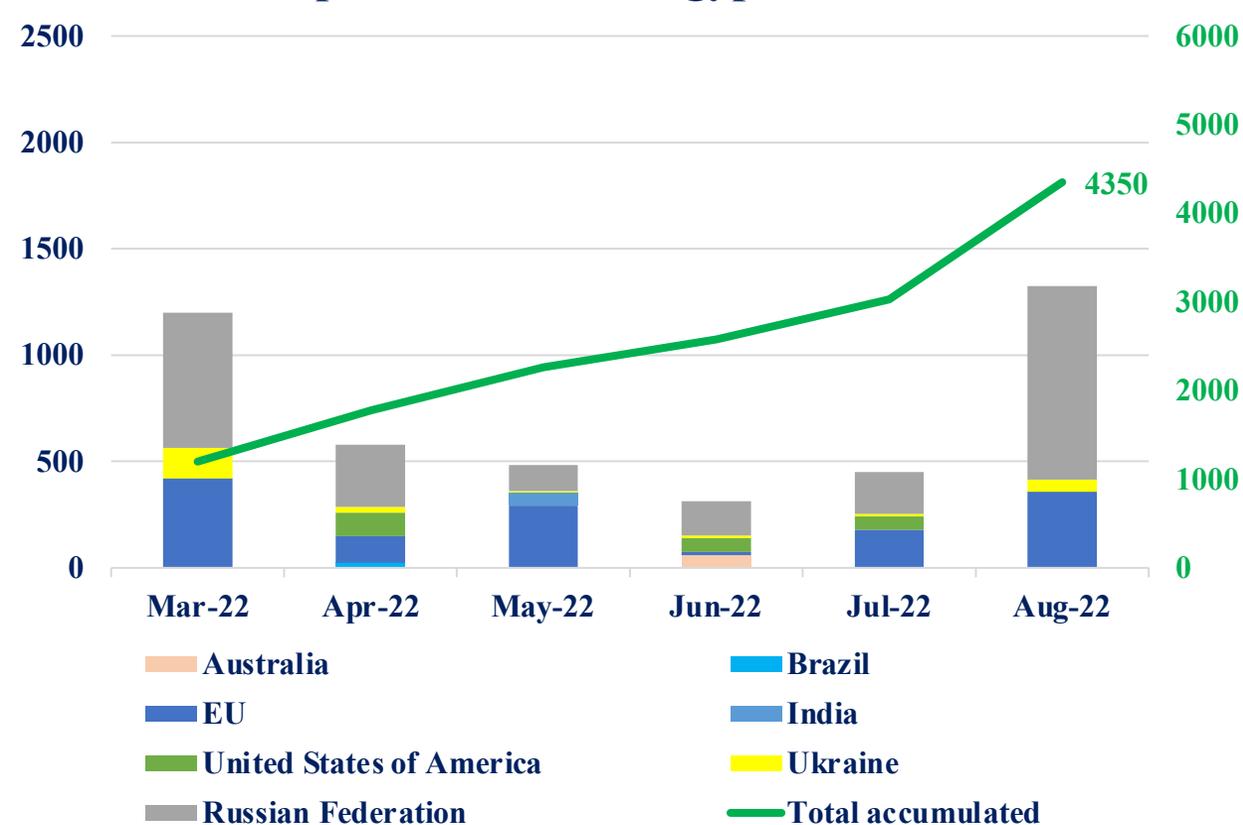
# ANNEX



## Export of wheat to Egypt in 2021, kt

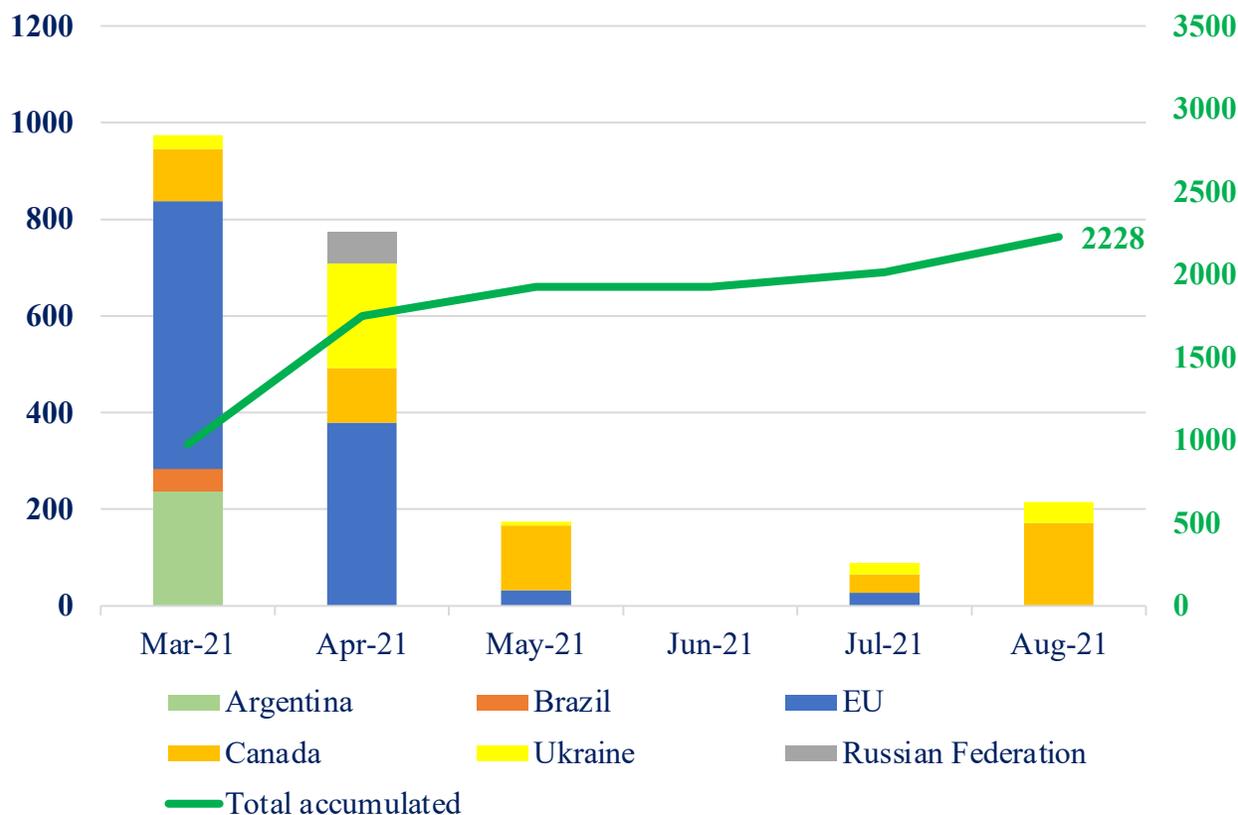


## Export of wheat to Egypt in 2022, kt

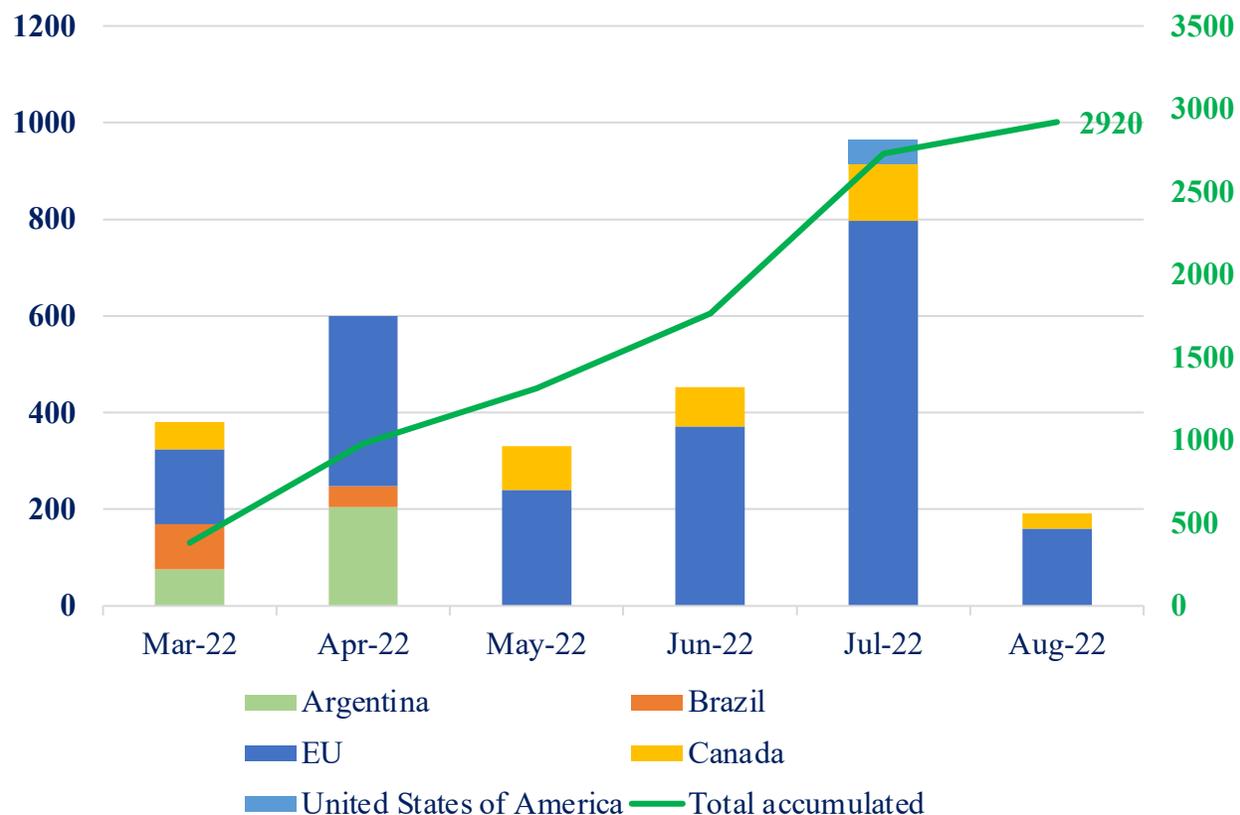


After the Russian attack on Ukraine, Egypt began to look for supplies from more distant countries. This year, Egypt was helped by the increase in its own harvest, because of which Egypt will have to buy 500-800 kt less wheat. Egypt usually buys actively in the summer, when exporters in the Northern Hemisphere will harvest and world prices will sink. However, due to uncertainty in the world market due to Russia's invasion of Ukraine, Egypt began active purchases during spring.

## Export of wheat to Morocco in 2021, kt

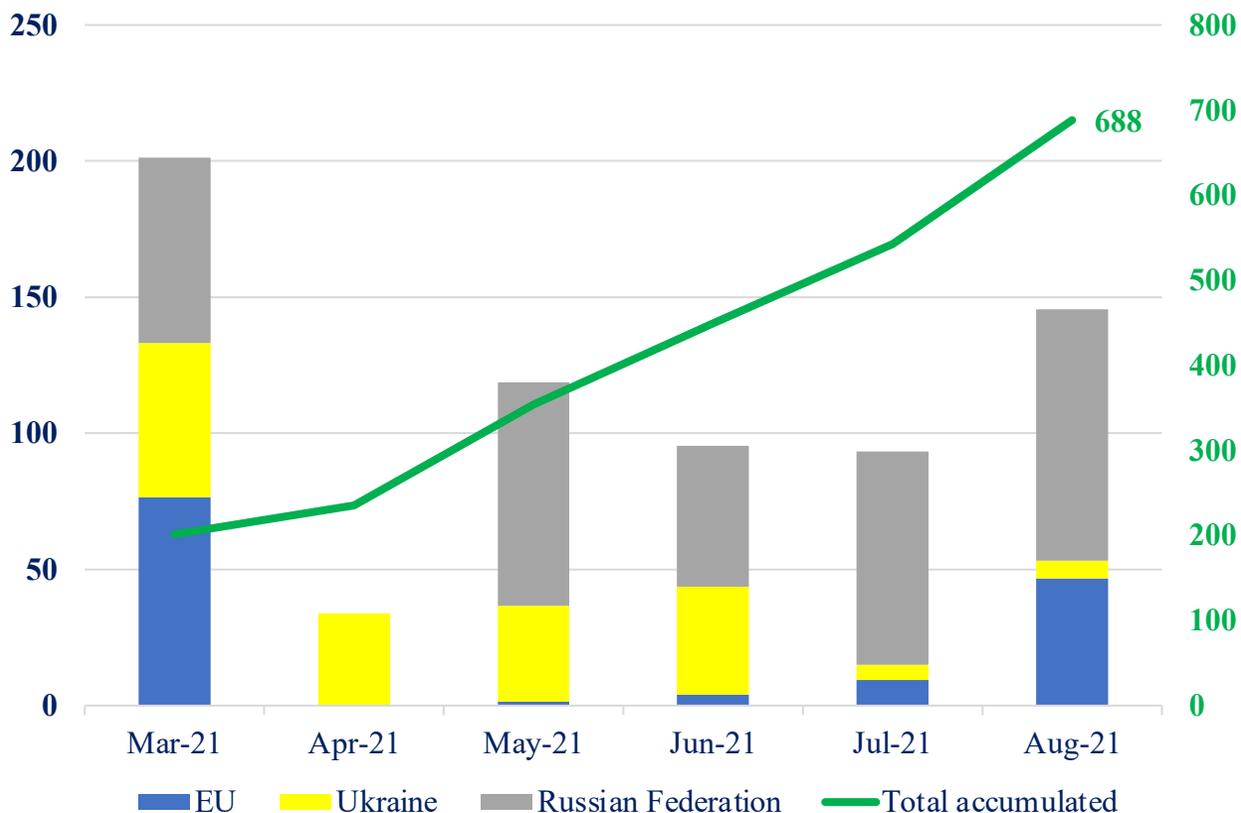


## Export of wheat to Morocco in 2022, kt

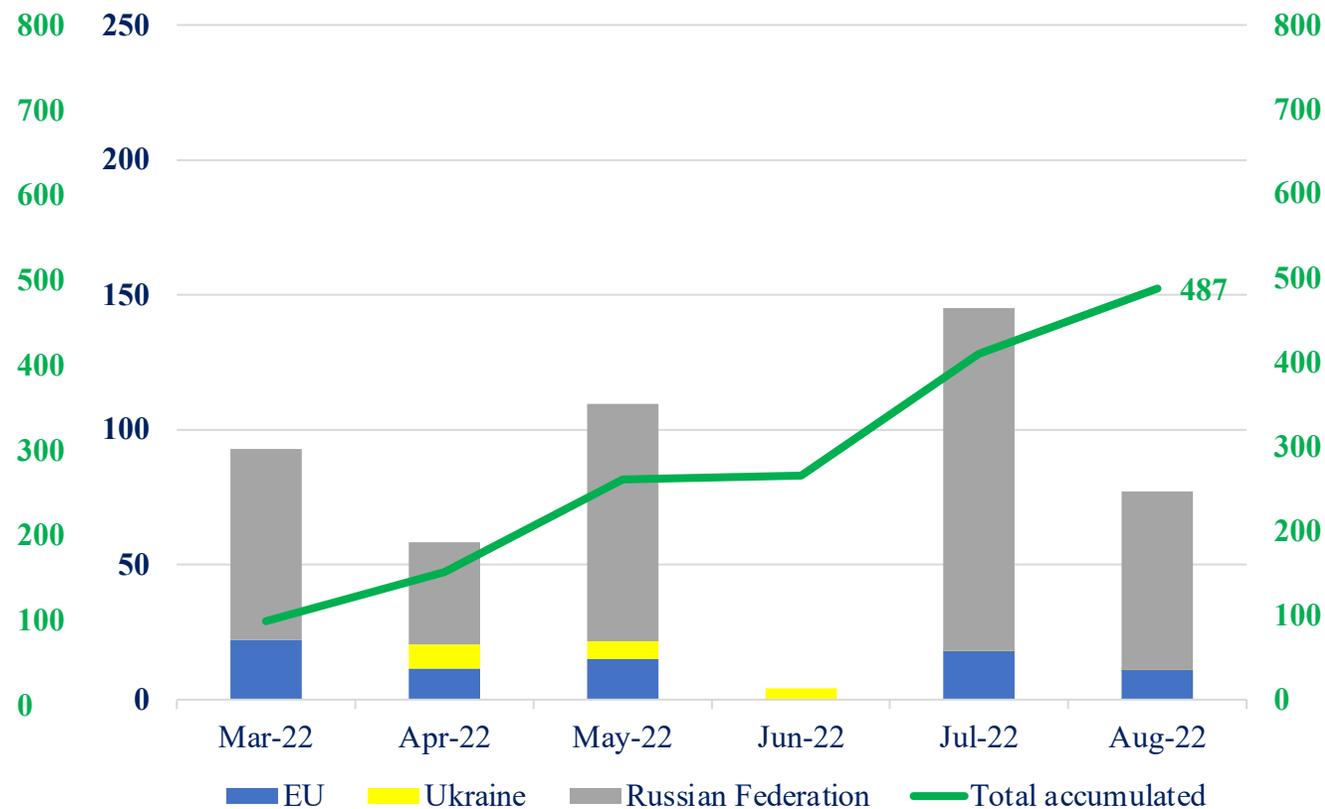


Despite the rise in world prices, Morocco increased its wheat imports during this period, which may indicate efforts to protect against supply disruptions and food security risks. However, if earlier Ukraine was among the main suppliers, since the beginning of the war, the country did not directly import Ukrainian wheat. Instead, supplies from the EU were actively increased.

## Export of wheat to Lybia in 2021, kt

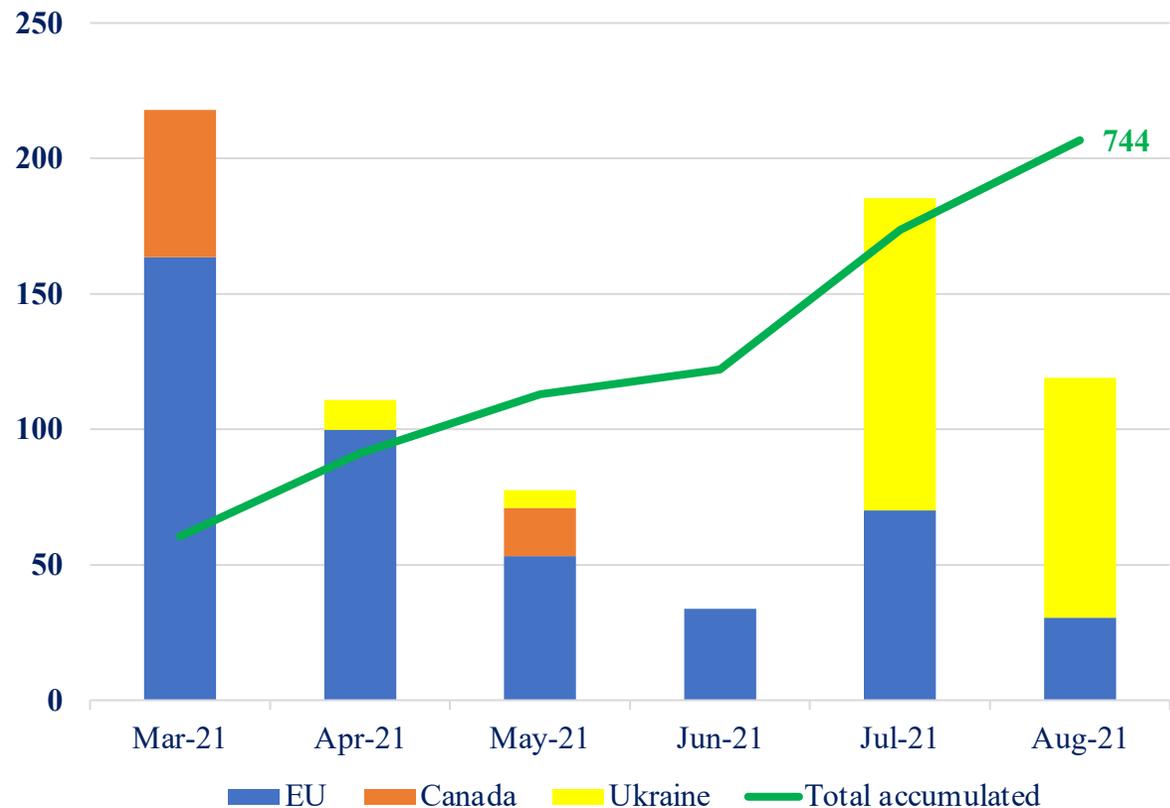


## Export of wheat to Lybia in 2022, kt

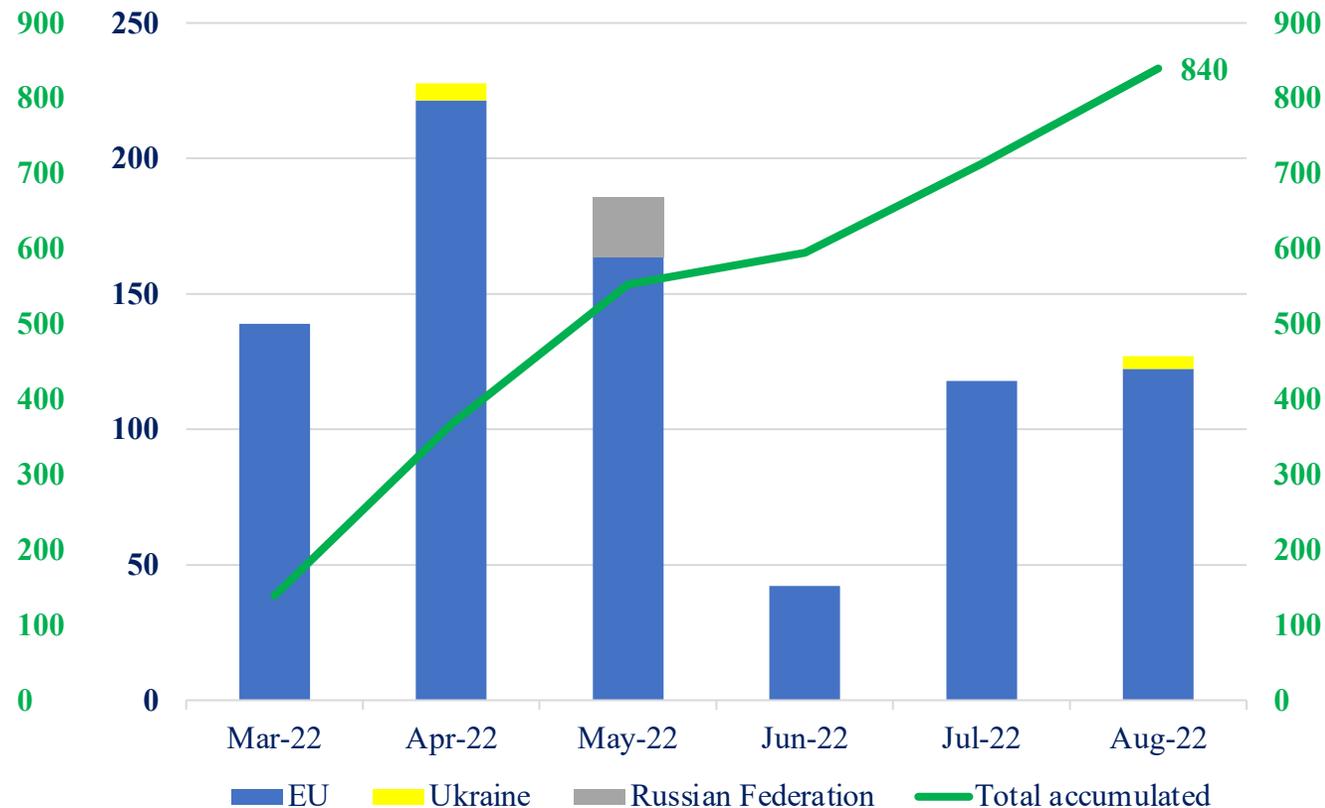


In the period from March to August, Libya reduced wheat imports by 200,000 tons (by 29%) compared to the same period last year. This may be due to both the rise in wheat prices and instability in the country itself. In June, the country imported almost no wheat at all. This comes despite USDA expecting an increase in Libya's wheat imports this season. Thanks to the cooperation of Ukraine and the EU and the establishment of exports through the Danube ports, deliveries to Libya still took place, which emphasizes the need for wheat, including from one of the key suppliers - Ukraine.

Export of wheat to Tunisia in 2021, kt



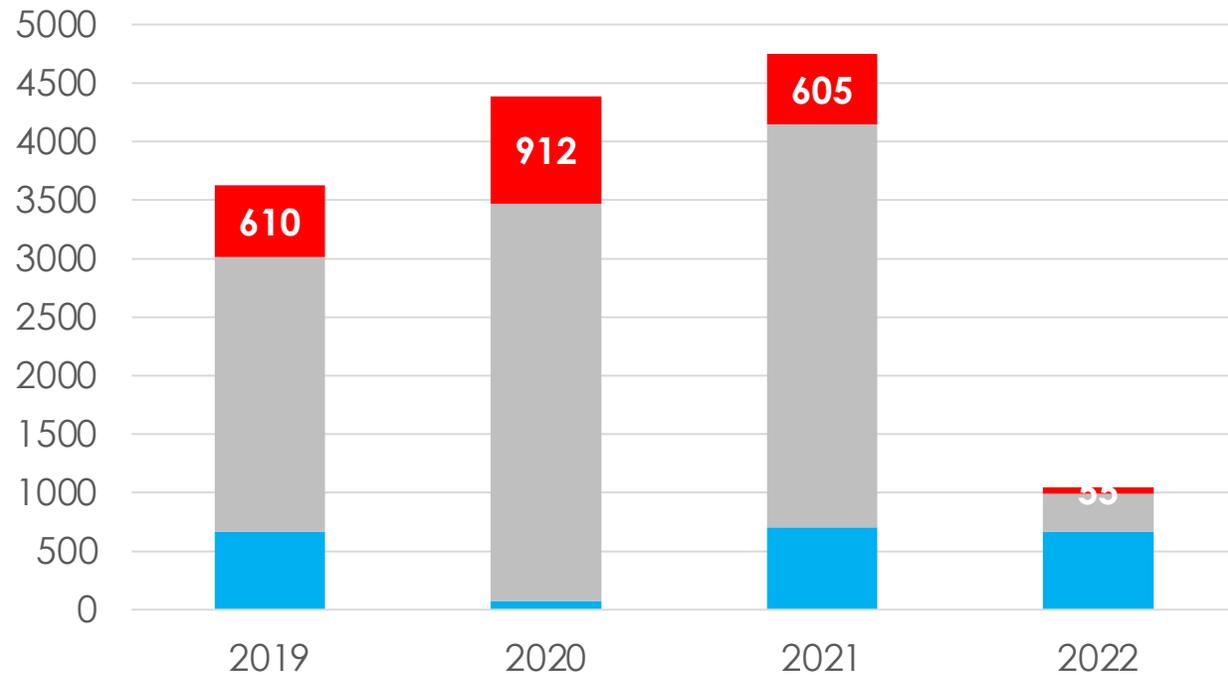
Export of wheat to Tunisia in 2022, kt



During this period, Tunisia increased wheat imports by 96 kt. Imports from Ukraine and Russia practically stopped, instead, EU countries were able to replace these supplies. Change in the seasonality of imports due to Russia's invasion of Ukraine and the blocking of ports is clearly visible. To ensure food security, Tunisia was forced to import not during the summer, when exporters are harvesting, but during the spring, when world prices were still high as a result of the war.

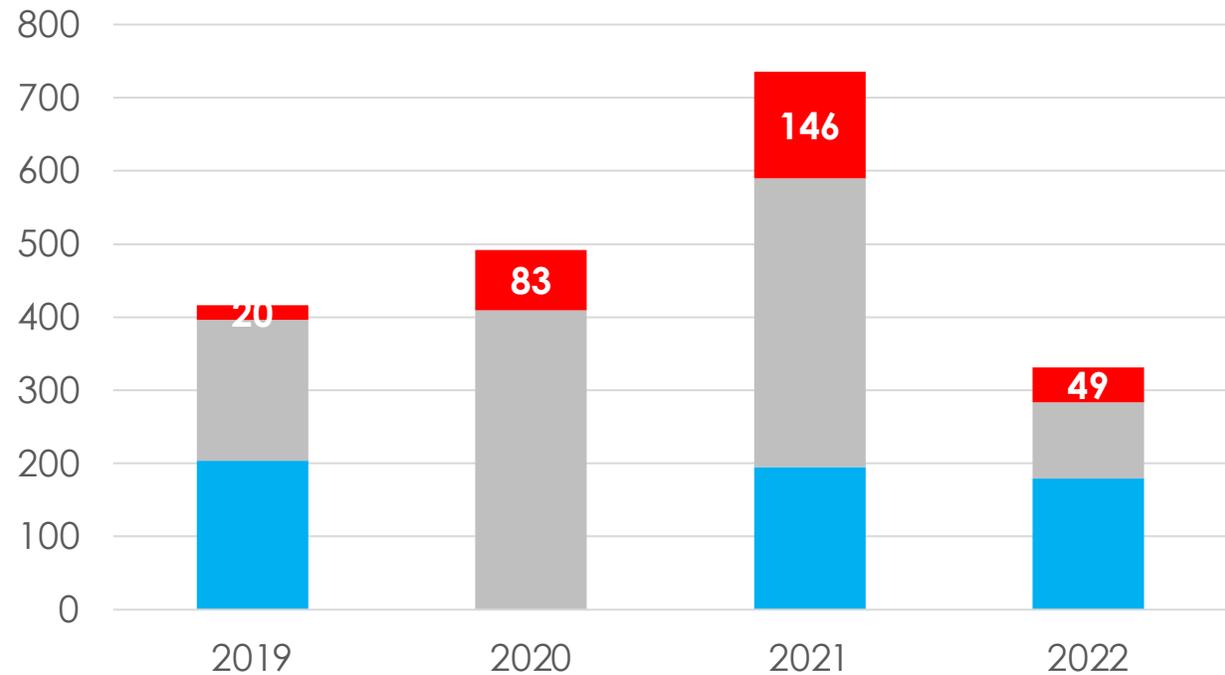
## Export of barley from Ukraine from March to October (kt)

■ Europe ■ Others ■ Africa



## Export of barley from Ukraine in October (kt)

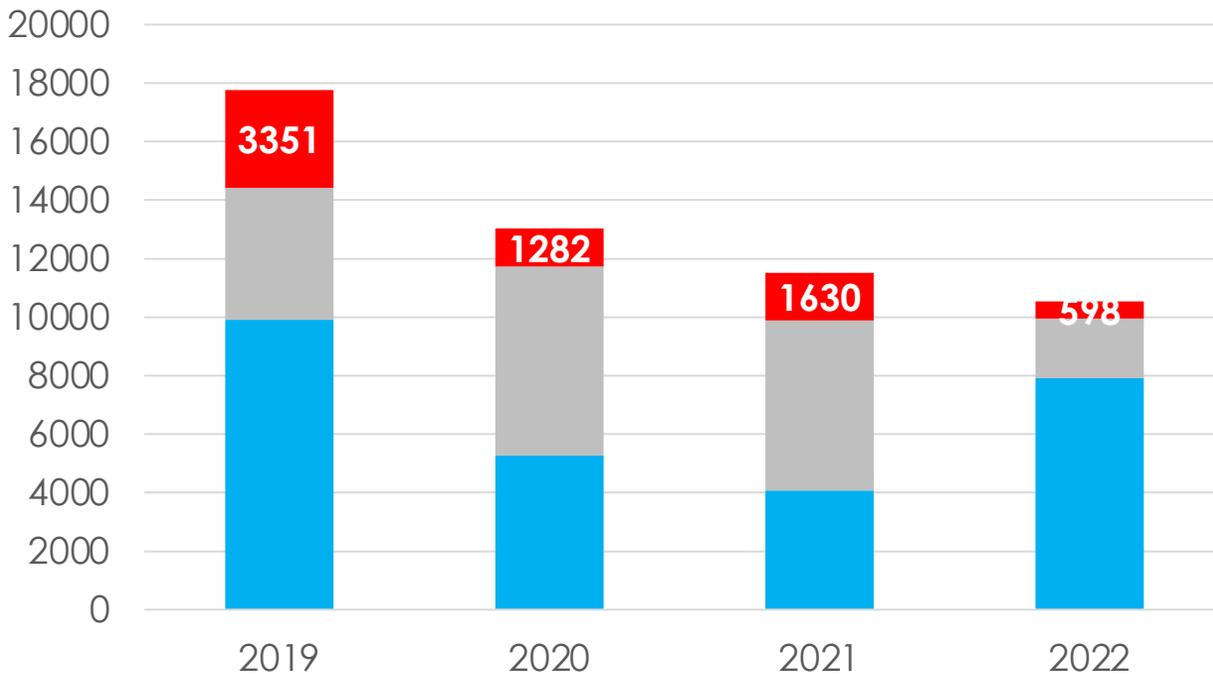
■ Europe ■ Others ■ Africa



In the current season, the export of barley has decreased significantly (including to African countries). Reasons: production almost halved due to Russia's occupation of key areas; the increase in the cost of logistics, which makes the export of barley unprofitable; limited capacity of sea ports, which are primarily engaged in exporting accumulated large stocks of wheat, corn and sunflower oil. Currently, exports to Africa are less than 10% of the normal figures of previous years. Next season, the problem may worsen, as key areas are still occupied by Russia, and due to the inability to sell the old crop, producers are reducing plantings for the next crop.

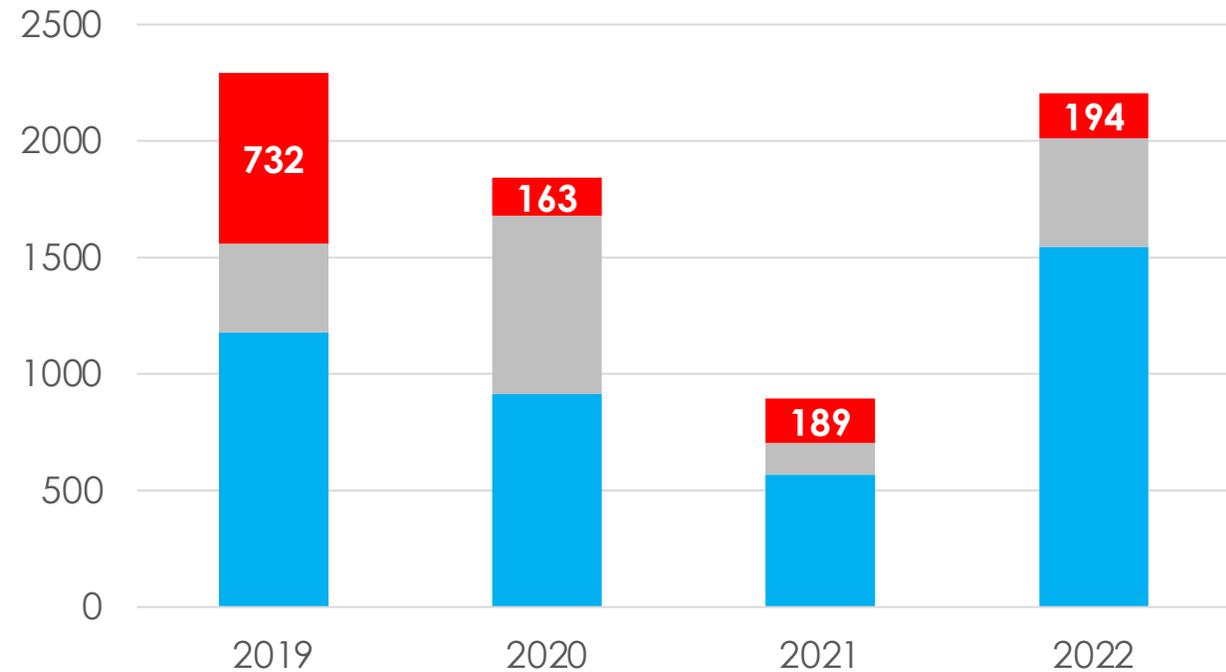
## Export of corn from Ukraine from March to October (kt)

■ Europe ■ Others ■ Africa



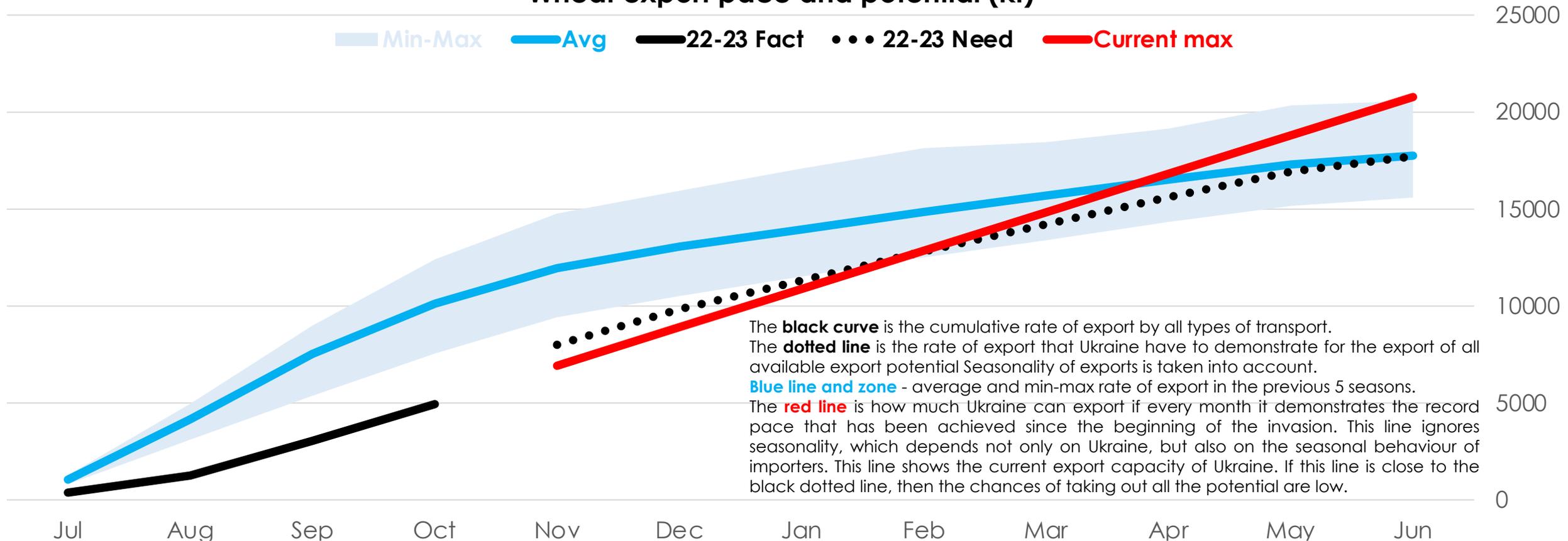
## Export of corn from Ukraine in October (kt)

■ Europe ■ Others ■ Africa



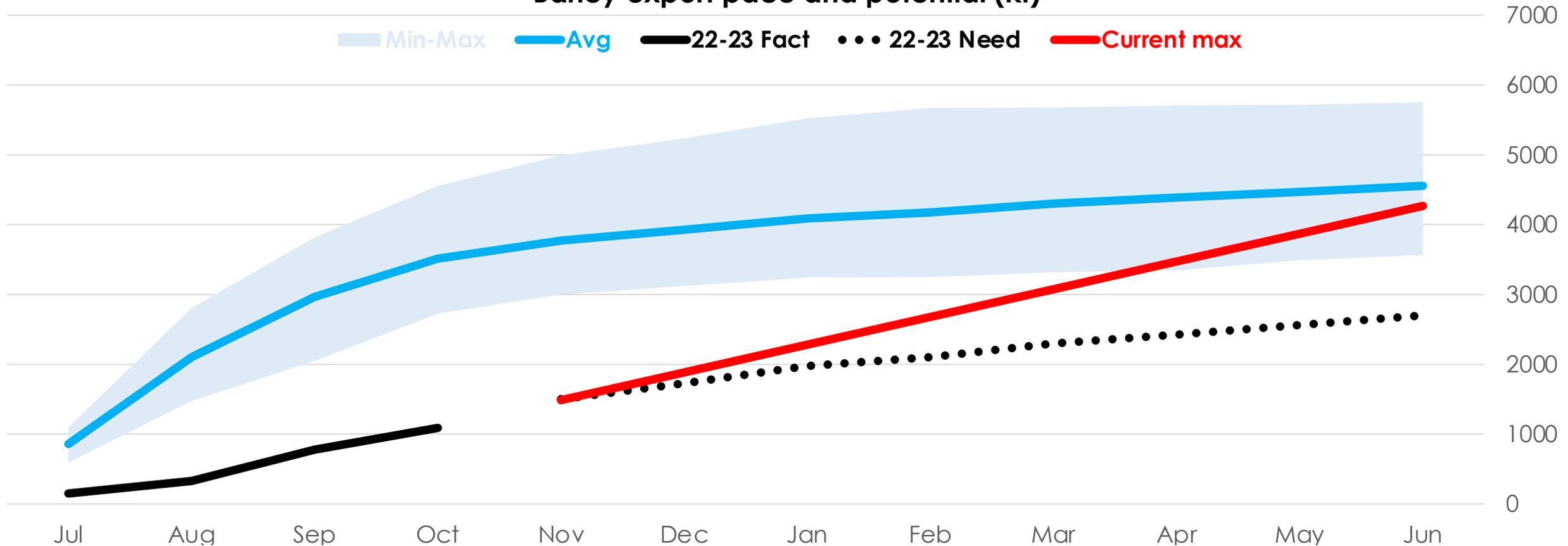
The importance of the Grain Initiative is best illustrated by the example of corn exports. In October, 194 kt of corn were exported to African countries, which even exceeded the figures of the previous two years. This makes it possible to compensate for the absence of Ukraine on the world market from March to July. Along with this, African countries in the current season will have strong competition for Ukrainian corn from Europe, where in the current season there are serious problems with their own harvest. If the Grains Initiative is not extended, the EU will be able to purchase Ukrainian corn at the overland border, while African countries will have to look for other suppliers.

## Wheat export pace and potential (kt)



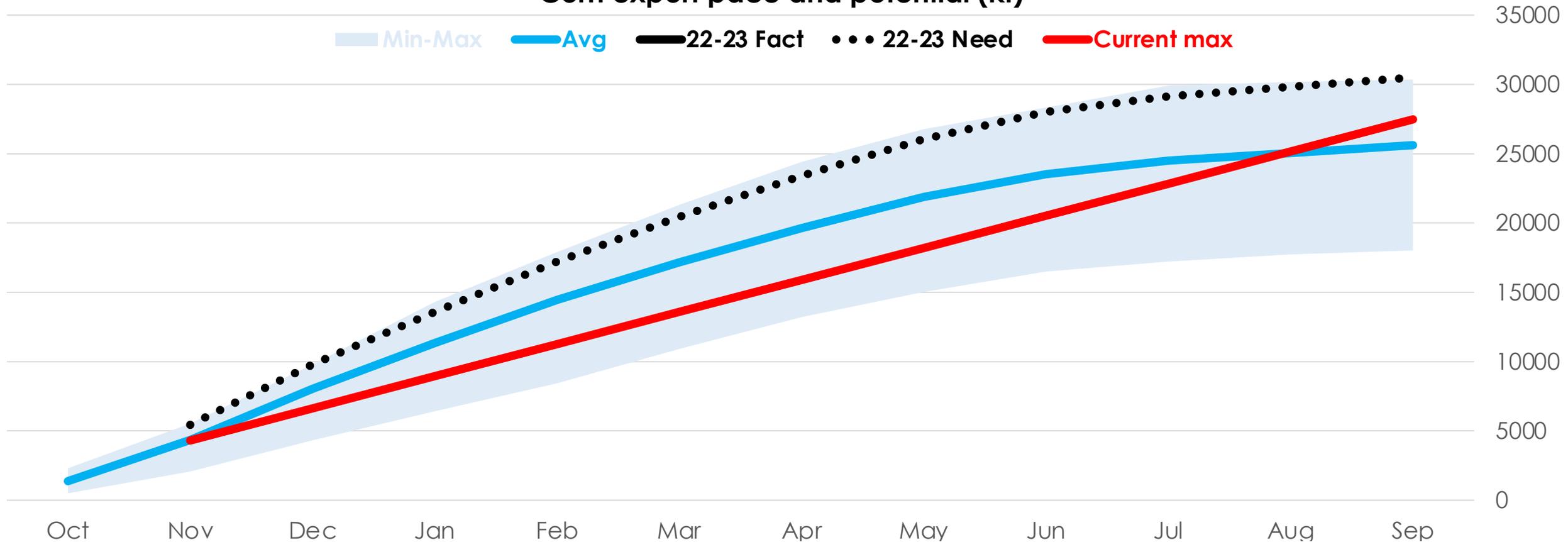
Due to blocked ports, Ukraine missed part of the most important period for exports. In the last 5 seasons from July to September, exports amounted to an average of 7.5 mln t (from 5.3 to 9.0 mln t), and this year it is 3 mln t. A smaller harvest does not mean lower export volumes, because Ukraine have 6 mln t of unsold stocks from season 21-22. Taking into account the export potential and the long-term seasonality of the export rate, Ukraine pace is already behind by 5.1 mln t. Importers will be waiting for the fate of the Grain Initiative to be decided for the coming months. The longer the wait, the more Ukraine will not have time to supply the world market this season. If exports through sea ports stop, most of the export potential will remain in Ukraine, and will not be delivered to countries that need this grain.

## Barley export pace and potential (kt)



Usually, from July to September, Ukraine exported 60 to 75% of its potential. From October to December - 15-30% more. In the last 6 months of the season (Jan-Jun), minor leftovers were exported. So the only positive is that the start of a full-scale invasion caught the barley market just at the final stage of export, when there were almost no volumes left. Thus, Ukraine have low stocks and a low harvest, due to which the export task of 2.8 mln t can be fulfilled almost completely. But only if the ports are functioning - main buyers of Ukrainian barley are and Saudi Arabia. The volume of annual export-import in the World is only 30-36 mln t, so the absence of the Ukrainian supply will be substantial for importers.

## Corn export pace and potential (kt)



In October Ukraine exported 2 mln t of corn. This is a very good indicator, only in conditions of normal year. But the fact is that this corn is mainly old crop (harvest 2021), of which about 9 mln t have not yet been sold due to the invasion. So, even despite the delay in the harvest, there is enough supply. The risks of closing the Grain Initiative and inspection queues have led to absence of contracting activity for November. **At the same time, to fulfil export potential, corn must be exported at record rates every month, which is unrealistic in wartime conditions.**