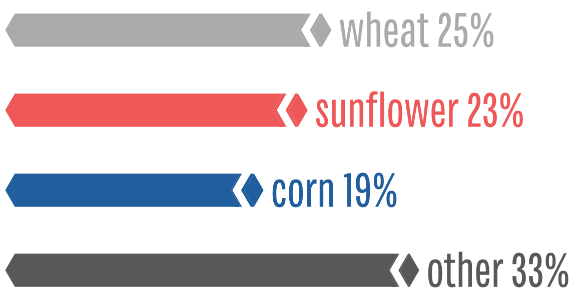
UKRAINE SUNFLOWER OIL PRODUCTION

OCTOBER 2022

Sunflowers in Ukraine's economy

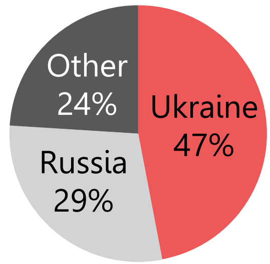
Sunflower is arguably the most important crop to the Ukrainian economy considering the size of the sown area, the value of its products, and the number of jobs it creates.

Total sown area in Ukraine, 2021[4]



In 2021, 6,509,700 hectares of land were given over to sunflower cultivation, equivalent to 23% of all agricultural holdings in Ukraine. Although slightly more land was used for wheat, when the total production (tons) and average purchasing price (UAH per ton) in 2021 are taken into consideration, sunflower represented the most valuable crop in those terms: exceeding the total worth of the corn crop by 12% and the wheat crop by 30%.[4]

In previous years, the majority of harvested sunflower seeds were used in the domestic production of sunflower oil. Since 2012, Ukraine has been the world's leading exporter of sunflower oil with a 47% share of global sunflower oil exports in 2021.[1]

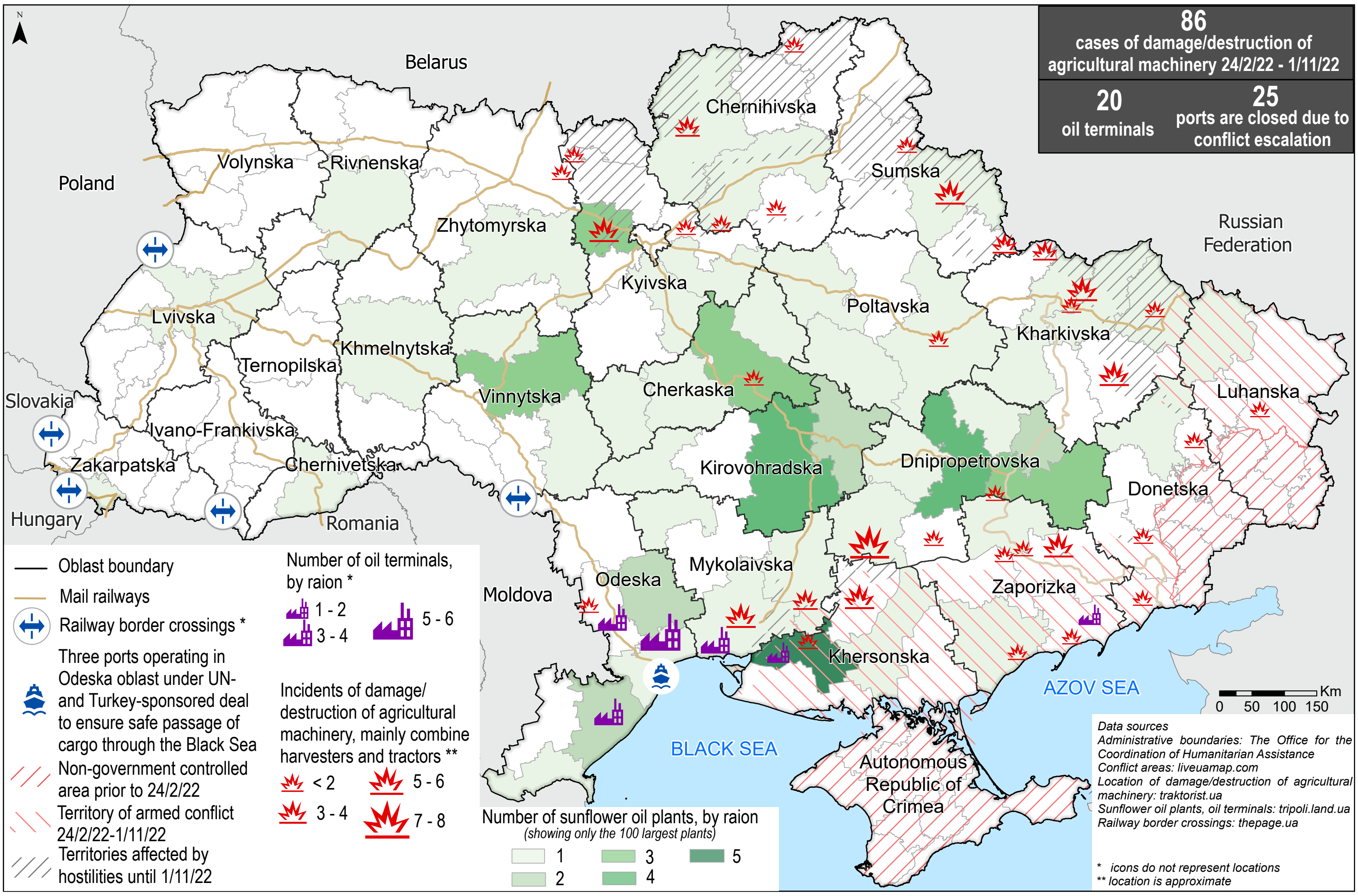


Global sunflower oil exports, 2021/22

In the same year, sunflower, safflower and cottonseed oils constituted 9.4% of Ukraine's total exports, which alone represented approximately 3.2% of nominal gross domestic product (GDP).[2] In terms of job creation, precise figures for sunflower cultivation and related processing and marketing chains are not availale. However, the cultivation of oil seeds and the manufacture of oils and fats generated tens if not hundreds of thousands of jobs in Ukraine in 2020.[3]

Using a supply chain analysis approach, REACH has conducted a secondary data review to understand how the this vital industry has been impacted by the escalation of hostilities since February 2022, compiling findings that can be used to inform early phase recovery programming.

Mapping disruption to sunflower supply chains



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The sunflower oil processing supply chain

Sunflower oil supply chain

Impact of the escalation of hostilities since February 2022

INPUTS

- Surging global oil prices have made fuel more expensive, impacting actors all along the supply chain.
- Global fertiliser prices, which have been on the rise since late 2021, have increased further throughout 2022 as a result of sanctions on Russia and increasing natural gas prices.[5]
- Having relied on fertiliser imports from Belarus more than from any other country in 2021, Ukraine's decision to halt trade with the latter likely further impacted its availability and price.[6]

SOWING & HARVEST

- Sowing usually takes place between 5 April and 15 May, depending on climatic conditions and geographical location, and was therefore severely impacted by the escalation of hostilities.[7]
- As a result of the escalation of hostilities in sunflower-growing regions, there was a 28% reduction in sown area of sunflower compared with 2021.[8]
- From 24 February to 4 October 2022, REACH recorded 72 cases of damage/destruction of agricultural machinery, principally tractors and combine harvesters, with mines in areas that have seen active hostilities posing a particular threat during the harvest season. REACH also recorded a couple of incidents of damage to agricultural machinery which occurred further from the frontline as a result of missile strikes and unexploded ordnance (UXO). Approximate locations are shown on the map on p.1.

STORAGE & PROCESSING

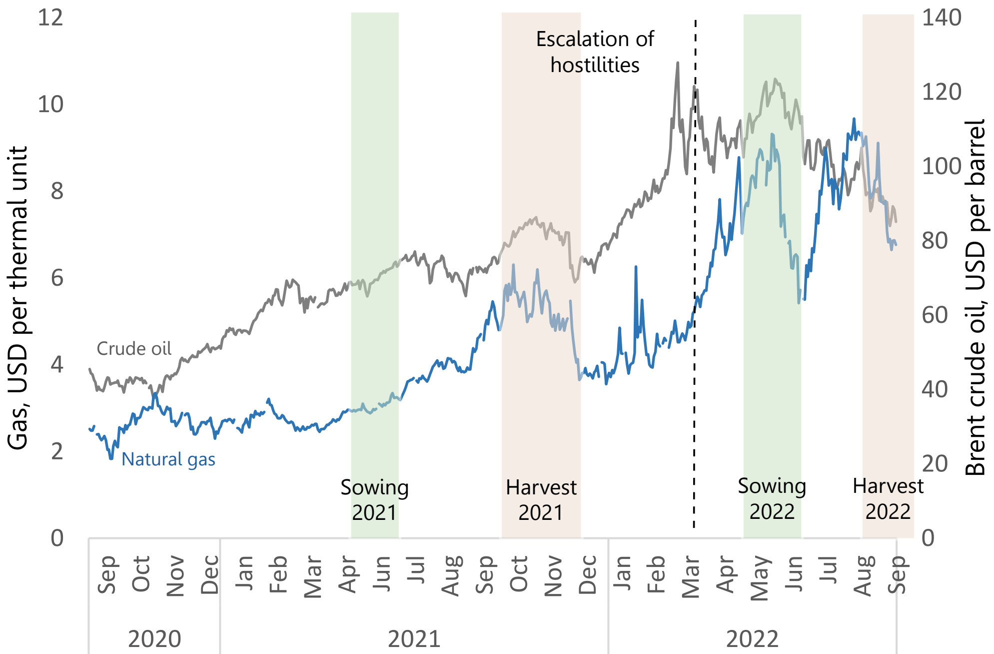
- As of 10 August, it was reported that only 15 of 100 major sunflower oil processing plants were operating, reflecting an apparently deteriorating situation compared to March 2022, when it was reported that 36 of the 70 major sunflower processing plants were operating.[9]
- Some closed as they were located in the territories affected by the escalation of hostilities, some as a result of perceived insecurity, and others due to the recognition of the limited opportunities for oil exports.
- There have also been incidents of oil plants and storage facilities being targeted by aerial bombardment, for example, a processing plant near Mariupol and an oil terminal in Mykolaiv.

EXPORT

- The Black Sea ports closed between March and July 2022 as a result of the escalation of hostilities. Around 96% of sunflower oil was exported through these ports prior to February 2022.[10]
- Exports of sunflower oil by alternative routes, including river, road and rail, from March to July 2022 was approximately 42% lower than during the corresponding period in 2021.
- A much greater quantity of sunflower seeds were exported this year for processing abroad, and correspondingly less sunflower oil (the higher value product).

Global oil and gas prices, 2020/21 & 2021/22 harvest years[11]

Global crude oil prices determine the price of fuel used in vehicles and agricultural machinery. Any changes in the price of this commodity therefore affect actors across the supply chain. In Ukraine, the average price of fuel and lubricants between January-October 2021 increased by 23% compared to the same period in 2020, and a further 54% in 2022.[12] Natural gas is used to produce ammonia, which is then combined with other nutrients to produce fertilisers. Any price increases in this commodity particularly impact farmers. According to a recent Food and Agriculture Organization (FAO) report, 44% of the rural population who rely on crop cultivation have seen 'significant/ drastic' increases (25% to over 50%) in production costs as a result of the escalation of hostilities.[20]



Domestic price monitoring

An increase in global crude oil prices, accompanied by a smaller than expected sunflower harvest in Ukraine due to a relatively low yield, initiated the upward trajectory of domestic sunflower oil prices in 2020. According to one source, seeds accounted for 85% of the cost of oil production by November 2021.[13]

Due to these reasons, sunflower oil prices increased by ten times the rate of the Consumer Price Index (CPI) from June 2020 to June 2021. This in turn raised the price of other products made using sunflower oil, such as mayonnaise and margarine.[14]

As of 2021, enterprises in the oil and fat industry faced multiple challenges: strict quarantine restrictions due to the COVID-19 pandemic combined with increasingly expensive inputs.[15] Despite inflationary pressures and operational constraints, the price of sunflower oil stabilised, and this can most likely be explained by higher yields resulting in a 25% larger harvest in 2021.

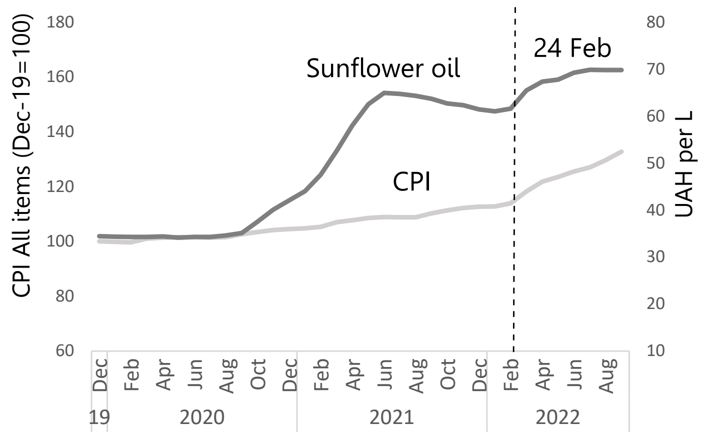
In Ukraine, while the CPI increased by little over

7%

from June 2020 to June 2021, the price of sunflower oil increased by

89%

Sunflower oil price v. CPI (Ukraine),
between December 2019 and August 2022



State Statistics Service of Ukraine, Prices

With the spike in natural gas and crude oil prices following the escalation of hostilities which began in February 2022, along with concerns about conflict-related impacts on harvested areas and processing facilities, sunflower oil prices once again jumped in March/April 2022.

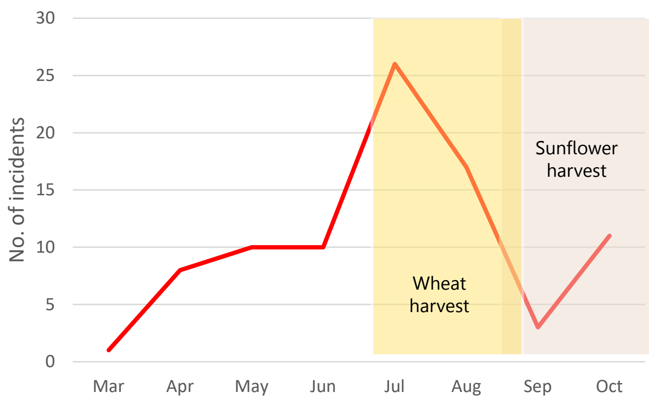
Seed yield and oil production

Active hostilities in important agricultural regions of Ukraine resulted in a reduction of the sown area for the key crops in 2022, also impacting yields, harvests, and processing of agricultural commodities.

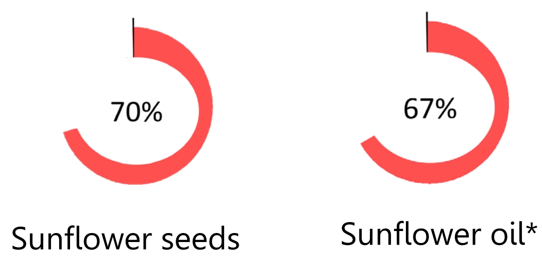
For sunflowers, the total sown area was reduced by 26% compared to the average of the previous three years.[17] According to the same source, the harvest is set to be affected to an even greater extent. A 5% lower yield resulting from wet weather, expensive inputs and hazardous farming conditions in conflict-affected areas has led analysts to forecast a 30% drop against the annual average of the previous three years. REACH observed, for example, an uptick in the number of incidents of damage to agricultural machinery, often mine incidents affecting tractors and combine harvesters, during the harvest season.

Reduced availability and quality of seeds exacerbates other conflict-related challenges for domestic sunflower oil production: in August 2022 it was reported that only 15 of 100 sunflower processing factories were operating.[9] The association Ukroliyaprom predicts sunflower oil production in the marketing year 2022/23 to be at its lowest since 2010/11.[18]

Damage to agricultural machinery in 2022[16]



2022 production forecasts, % of 3-year average



*Figures for oil production relate to agricultural calendar in 2019/20, 2020/21, 2021/22, 2022/23

Exports

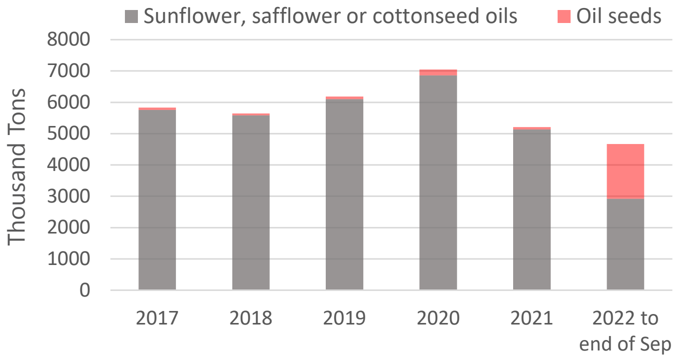
From 2017 to 2021, the vast majority of the sunflower crop was allocated for export, and almost all of it as sunflower oil, which is more valuable than seed and creates tens of thousands of jobs along its supply chain. As noted above, sunflower oil is Ukraine's main agricultural export, representing 3.2% of nominal GDP in 2021, despite a difficult 2020/21 season for farmers that saw decreased oil production and consequently exports in 2021. Mounting difficulties since then will likely result in sunflower oil contributing less to GDP in 2022 in absolute terms. A smaller harvest in the 2021/22 season resulting from the loss of cultivated areas and lower yields, combined with the sale of large quantities of seed to compensate for constrained oil exports, means that there is less domestically cultivated raw material for processing. However, with the signing of the Istanbul agreement on 22 July 2022, which unblocked three Ukrainian ports for exports, there was a reversion toward the status quo ante, with oil exports increasing and seed exports decreasing.

The tendency has been for the relatively small amount of Ukrainian seeds that do go for export to be sold within the region: mainly to EU countries and Türkiye. In 2022 it has taken advantage of the possibilities for transporting this dry product in smaller containers by road, rail and river to capitalise on markets closer to home. In contrast, it has tended to export sunflower oil further afield: India and China were the largest importers of Ukrainian sunflower oil in 2021.[25] Exports via Black Sea ports and oil terminals, which are highly susceptible to conflict dynamics, constitute the only supply routes for the main buyers of Ukrainian sunflower oil. As a result of active hostilities limiting supply and pushing up prices for Black Sea products, as of October 2022, China sourced most of its sunflower oil from the world's second largest exporter, Russia. India has also continued to import sunflower oil from Russia despite international sanctions on the latter.

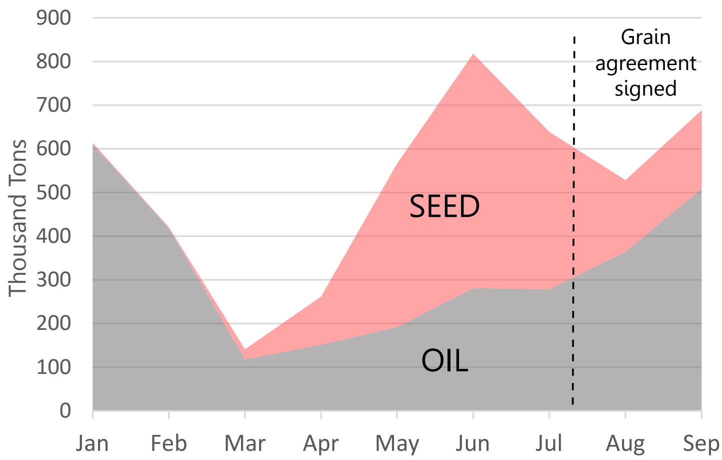
While disruptions to the sunflower oil supply chain may not directly provoke hunger in food insecure countries (the same cannot be said for wheat), such disruptions pose a threat to sunflower oil production in the coming years, potentially leading to higher global prices, a contraction of the Ukrainian economy, job losses, and the loss of agricultural livelihoods. Much depends on the security context in Ukraine. If the situation stabilises in the southern and eastern regions, this could lead to a strengthening of agricultural supply chains by allowing for the safe operation of critical transport infrastructure and storage and processing facilities.

From a humanitarian perspective, the Food Security and Livelihoods Cluster (FSLC) in Ukraine plans to allocate the majority of its nearly 400 million USD budget earmarked for livelihoods support in 2023 to (i) agriculture and livestock inputs and (ii) agricultural infrastructure and supply chains.[19] Even this, however, falls short of the estimated total agricultural damages and losses sustained by rural households. With reference to the period running until September 2022, FAO calculated 1.26 billion USD of damages and losses to the crops sector alone.[20] Increased and additional production costs and the destruction of crop assets account for the majority of such damage and losses. According to the same report, in the regions of Dnipropetrovska and Mykolaivska, which contributed 16% to national sunflower production from 2016-2020,[21] over 40% of rural households have been forced to reduce or completely stop agricultural production due to the escalation of hostilities.

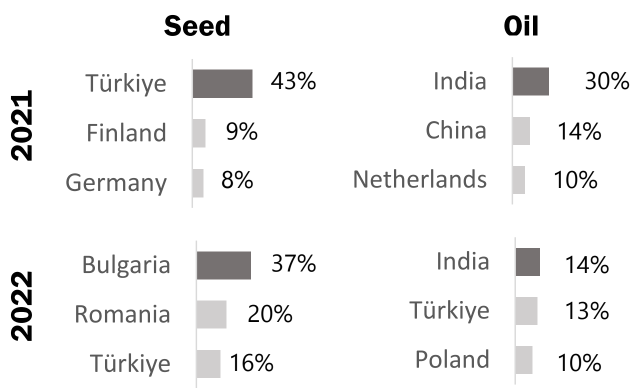
Export of oils and seeds
between 2017 and September 2022[24]



Ukrainian sunflower exports in 2022[23]



Top 3 export destinations, % total exports[25]
in 2021 and 2022



The funding allocated to agricultural livelihoods and supply chains reflects a recognition within the humanitarian system of the rural population's reliance on agriculture, its importance to the Ukrainian economy, and the need to rehabilitate supply chain infrastructure, such as grain storage, and other agricultural assets. However, it should be noted that as of 31 October, the FSLC had only reached around 25% of the beneficaries targeted with the livelihoods support in 2022, and only a handful of partners have so far engaged in the livelihoods activities, with most focusing on food-based interventions.[22] In 2023, the number of beneficaries targeted with the livelihoods support is expected to increase by 134%,[25] which will require the cluster to significantly upscale the resources it dedicates to such activities. However, the quality of interventions will be determined by the quality of evidence used. In support of partners' information needs, REACH will continue to provide holistic analyses of supply chains, enabling action that responds to immediate needs while improving resilience and expediting recovery.

Methodology

This factsheet is part of an ongoing research cycle assessing the impact of the escalation of hostilities which began in February 2022 in Ukraine on agricultural supply chains. The team has so far relied exclusively on secondary data to select supply chains of interest. Export and price data were sourced from the State Statistics Service of Ukraine and Ukraine State Customs Service, and global commodity prices from the Business Insider website. The Ukrainian reportage and the analysis of industry experts have been used to contextualise numbers.

ABOUT REACH

REACH facilitates the development of information tools and products that enhance the capacity of aid actors to make evidence-based decisions in emergency, recovery, and development contexts. The methodologies used by REACH include primary data collection and in-depth analysis, and all REACH activities are conducted through inter-agency aid coordination mechanisms. REACH is a joint initiative of IMPACT Initiatives, ACTED and the United Nations Institute for Training and Research - Operational Satellite Applications Programme (UNITAR-UNOSAT). Visit www.reach-initiative.org and follow us on Twitter at @REACH_info for further information.

Endnotes

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Endnotes cont.

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