

POLICY BRIEF
“BREADBASKET TO BREAD LINES”
GLOBAL FOOD SECURITY AFTER THE RUSSIAN INVASION OF UKRAINE

April 1, 2022

Global food prices [were already rising](#) significantly before the invasion of Ukraine. The invasion, however, has set off another round of price increases for basic foodstuffs including grains (notably wheat) and cooking oils such as sunflower oil. As the invasion continues into the spring planting season, pushing many Ukrainian farmers off their farms, the effects could easily become dire: the UN has warned of the distinct consequences of a severe food crisis later this year in many countries around the world, notably in the Middle East and Africa, with millions of people at risk of food insecurity because of higher prices and lack of supply.

The Conference Board first addressed this broad subject of food security on March 15 with a paper asking [“What If Russia/Ukraine Grain Trade Halts?”](#) That paper stated that Russia and Ukraine together “supply 16 percent of global exports of grains” and examined current global “stockpiles that can be tapped for exports, and the capacity of internal infrastructure and labor to facilitate ramped up trade. India, the US, and the EU appear uniquely positioned to step in to feed the world.” However, the paper also noted that “[t]he human suffering of the war in Ukraine could potentially extend out exponentially to the rest of the globe by exacerbating global food insecurity. The armed conflict . . . could seriously disrupt production and exports of grain to very vulnerable countries.”

This Policy Brief supplements that paper as the war has continued and also focuses on several specific issues regarding the serious prospect of global food insecurity, with particularly strong impacts in regions including the Middle East and Africa.

Prospects for planting season and estimates of current crop loss

As the normal planting season has begun in Ukraine, acres planted could [decline by over half](#) (from 15 million hectares to 7 million), according to Ukrainian Agricultural Minister Roman Leshchenko. Of this, Leshchenko estimated that corn production hectareage could be around 3.3 million instead of last year’s 5.4 million. Spring grain could likewise [fall to 4.7 million hectares](#), down 39%, according to an estimate from agricultural consultancy APK-Inform. The consultancy added that it believed up to 2,000,000 hectares of winter crops including winter wheat, barley, and rye could be damaged or otherwise unable to be harvested, leaving only 5.5 million hectares to be harvested, for a 28% loss.

As Ukrainian ports have closed, Dutch bank ING [expects](#) about a 25% loss for the Ukrainian winter wheat crop, with exports of about 18 million metric tons instead of 24 million – and up to a 43% loss for corn, with 18.98 million metric tons instead of 33.5 million metric tons, as much of the unexported Ukrainian corn may not be exported. Even that estimate,

however, may be too high if the conflict continues much longer, with a former USDA chief economist noting that the export figure for wheat could be as [low as 6-7 million tons](#) instead of the [20 million tons](#) USDA currently expects, if Russia [cuts](#) “most of the rail lines down from the main wheat-producing areas to the port, to Odessa and on that side of Crimea.” There have also been reports of [Russian forces blocking ships with Ukrainian grain exports](#) from leaving the Black Sea.

In addition, cold, dry weather in Ukraine (which could itself affect military operations) would have delayed some planting in any event, and the invasion only magnifies the negative effects.

For Russia, the problem is not its production but the impact of the invasion on its reputation and reliability as contractual partner. The Russia’s state meteorological service has [stated](#) that given weather conditions, “the forecast for the harvest of winter crops is good” (presumably including wheat) but provided no actual estimates. Reuters [cites](#) the Russian Agriculture Ministry’s estimate for both winter and spring crops of 123 million tons, in comparison to 121.3 million tonnes in 2021. [USDA](#), in contrast, in a January report prior to the invasion, expected a drop of 12% to a total of 75 million metric tons because of an “ice crusting” event which “can smother the crop and cause large levels of loss” and a small drop in spring wheat yield. Dutch bank ING [expected](#) as of February 17 that about 28% of Russia’s wheat crop remained to be exported, “assuming an export number of 35 [million metric tons] for the full season.” But as a result of the Russian invasion of Ukraine, it expected that the pace of shipments would slow because of “self-sanctioning” by private buyers concerned about either future sanctions or reputational risk, banks unwilling to finance trade with Russia or insurers may not be willing to agree to ships entering Russian ports, or instead charging exceptional high insurance rates.

Impact on World Food Programme

Before the invasion, Ukraine produced [up to half of the grain](#) used in the UN’s [World Food Programme](#) (WFP), accounting for [nine percent](#) of WFP’s total food procurement. Now, WFP has turned to assist people in the country responsible for so much of its grain, [including](#) distributions of bread in Kharkiv, high-energy biscuits in Kyiv, and prepositioned food for citizens facing fighting in major cities – part of an expansion expected to reach up to [4,000,000 Ukrainians](#) by the end of May. Facing food insecurity itself, Ukraine banned wheat exports in early March.

For WFP, the crisis in Ukraine comes on top of major food security emergencies in countries such as Yemen and in Afghanistan following the Taliban takeover of the country in which about half the population “[needs emergency food assistance and three million children are at risk of acute malnutrition.](#)” WFP head David Beasley (a former Governor of South Carolina) warned that the invasion disrupting supply of exported grains will contribute to food

insecurity “[beyond anything we’ve seen since World War II](#)” if Ukrainian farmers “[on the frontlines of fighting](#)” cannot plant because of the war. Already, the agency, which was feeding 125 million people before the invasion, has cut food rations in Yemen because it cannot keep up with costs, in essence, as Beasley said, leaving it “taking food from hungry children to feed starving children.”

Russia was the 22nd largest donor to WFP in [2021](#), with contributions of \$62,590,000 (this figure is not divided between cash and in-kind) and has contributed \$10,560,000 thus far in [2022](#); how much beyond this WFP may have purchased from Russia is unclear. Russia has donated in-kind contributions in the past, particularly in [countries](#) of the [former Soviet Union](#) and to other areas such as [Palestine](#). Some contributions are “tied aid” [directly linked](#) to commodity purchases from Russia.

Strong impact in Middle East/Africa

The impact in the Middle East and Africa from food price inflation is another shock to economies already suffering from the effects of the pandemic, a broad [regional drought](#), and civil unrest. (Ukraine supplied [31% of Yemen’s wheat](#) immediately before the invasion.) And, for the Middle East, the food crisis triggers haunting memories of the outbreak of the Arab Spring. [Twenty-six countries](#) in total, most in the two regions, get over half their wheat imports from Russia and Ukraine. In 2020, Ukraine supplied [85% of Egypt’s grain and 81% of Lebanon’s](#) – figures that will be impossible to meet this year. For 2021, the figures were much more heavy weighted towards Russia, with Egypt purchasing [60% of its wheat](#) from there. (Egypt is now buying some [wheat from France](#) and encouraging domestic farmers to plant more in [an attempt to stabilize prices](#).) Even richer countries such as [Turkey](#) import large quantities of Ukrainian grain and cooking oils. [Iran](#) also buys wheat from Russia and Ukraine, as do South Asian countries like Pakistan and Bangladesh.

More broadly, on another estimate, [half of Africa’s wheat supplies](#) come from Russia and Ukraine. A recent UN report [noted](#) that “there is limited scope to replace imports from the Russian Federation and Ukraine through intra-African trade, as the regional supply of wheat is comparatively small [.]”

WFP Administrator Beasley [warns](#) of mass migration from food insecure countries in Africa to Europe, further destabilizing a situation in a continent now welcoming over 4,000,000 Ukrainian refugees. “If we neglect northern Africa, northern Africa’s coming to Europe. If we neglect the Middle East, [the] Middle East is coming to Europe.”

Which countries could potentially replace lost grain supplies?

Much will depend on whether plantings in the US and Canada will be stronger than expected before the invasion – but even if plantings are strong, harvested grain would still have to get to market during a supply chain crisis including ocean freight, and consumers globally

would face higher prices. For the United States, [according to USDA](#), drought had already lowered the size of domestic wheat stocks, lowering the US' current ability to replace lost global supply quickly. By January, [US farmers](#) had planted [34.4 million acres](#) of winter wheat. Regarding the corn supply, some policymakers on both sides of the aisle have suggested that the US should consider reducing repealing the ethanol mandate, since a significant portion of the US corn crop goes to ethanol production.

As the Conference Board report noted, India seems well-positioned to supply additional grain. Australia had a bumper harvest in the Southern Hemisphere fall. The two countries have [increased grain exports recently](#), but Australia has already sold its exports through September. India is [considering exports](#) beyond its immediate neighbors to countries such as Turkey, Saudi Arabia, and African countries. Elsewhere, drought could impact the ability of countries to export grain to make up for global shortfalls.

Among other producers, China has recently [boosted its food reserves](#), which itself contributed to rising global food prices, leading to questions over whether the country could or would release more for export. (USDA estimates that [half the global stockpile](#) of wheat is in China, making the 35.8% stockpile of projected annual consumption seem less reliable as a potential source for global markets if China consumes the wheat it has stockpiled – [more than a year's supply](#). Argentina – which [recently joined](#) China's Belt and Road Initiative – has already locked [95% of its crop](#) in contracts, sharply limiting its ability to surge exports.

Fertilizer

One important factor affecting food prices is the [price of fertilizer](#), which has been rising. Russia is a major exporter of fertilizer, [accounting for](#) 23% of ammonia, 14% of urea, and 21% of potash. As Russia [limits fertilizer exports](#) after having [reduced them last fall](#), global prices rise, making it more difficult for farmers to afford. The impacts this fall at harvest time may be profound. As one academic expert [said](#), “With cheaper fertilizers, it could have been possible to grow our way out of a global food security problem — possibly — but nutrients are anything but affordable or even accessible right now [.]”

Cooking oils

Together, Ukraine and Russia produce [at least 57%](#) of the world's sunflower oil. Rising prices for cooking oils and less supply in importing countries will also negatively impact food inflation, as cooking oils are an important part of the diet in many countries. One German aid organization reports that the price of cooking oil has risen [42% in Bangladesh](#). (Further afield, prices have also been rising for palm oil, which is increasingly used for biofuel; in response, [Indonesia](#) adopted mandatory domestic sales and an heavy export tax).

Can the gaps be filled/A worsening problem through the year?

A variety of factors – drought in various grain producing regions, supply chain challenges on both land and sea, labor shortages, previous contracts for sale of wheat and other grains limiting supplies on the spot market, inflation in fertilizer prices which affects farmers’ decisions to plant crops – and the inability of Ukrainian exporters to use their ports – all contribute to food inflation and supply shortages present a serious risk of a worsening global food supply crisis this year and increased market volatility. The US and Canadian growing seasons, and the ability of exporters such as India to step up rapidly and continue exporting through the summer, will be major factors in determining how deep the global food crisis will become and how many lives it will affect, with potential far-reaching consequences for the governments of affected countries and the potential for famine in a number of countries especially dependent on Ukrainian and Russian supplies.