



Moldovan women harvest grapes in rural Moldova, 24 May 2021. Agriculture and food production are key economic sectors, generating around 18 percent of Moldova's GDP and accounting for over 50 percent of total exports. However, there are segments of its population that are food insecure and fail to meet the level of per capita daily food recommended by the World Health Organization. (Photo courtesy of the International Fund for Agricultural Development)

# Food Resiliency in Moldova

## Assessment and Lessons from Ukraine

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**M**any lessons have been learned from the ongoing war in Ukraine to include the growing awareness of the need for resilient

civil societies that are prepared to deal with shocks and will likely bounce back after a crisis. NATO's Article 3 states that member countries need to be resilient

enough to withstand and recover from major shocks such as hybrid or kinetic conflicts, natural disasters, or failures of critical infrastructure.<sup>1</sup> During the 2016 Warsaw Summit, NATO renewed its commitment to improving the resilience of its member countries through the following seven baseline requirements for civil preparedness:

- assured continuity of government and critical government services,
- resilient energy supplies,
- ability to deal effectively with uncontrolled movement of people,
- resilient food and water resources,
- ability to deal with mass casualties,
- resilient civil communications systems, and
- resilient civil transportation systems.<sup>2</sup>

The war in Ukraine specifically highlights the importance of securing resiliency of a country's food and water resources. Ukraine is a global agricultural powerhouse and has been coined "the breadbasket of Europe." While the war has not caused widespread food security issues, it greatly disrupted agricultural production and trade, and exposed major vulnerabilities in Ukraine's food supply chains. More specifically, prior to conflict, 95 percent of Ukraine's grain exports were shipped out of ports in the Black Sea. Today, almost all those ports are either occupied by Russia or blockaded by the Russian navy.<sup>3</sup> A recent international agreement has partially restored Ukraine's Black Sea grain exports, but the continuation of trade will be vulnerable to political and military vicissitudes. In addition, efforts to find alternative routes to move large stocks of stored grain out of Ukraine encountered major logistical obstacles such as the differences between the rail gauge sizes in Ukraine and the European neighboring countries. As a result, global prices for agricultural commodities (e.g., wheat or sunflower seed) spiked, which threatens food security in poor grain-importing countries in Africa and the Middle East.

The war in Ukraine also raised concerns about possible spillovers of violence and instability in neighboring nations to include NATO members and other former Soviet Union nations. For example, there have been a series of recent violent incidents in Moldova that have been regarded as possible efforts by Russia to destabilize that country. In addition, Moldova has been receiving large numbers of refugees from Ukraine.<sup>4</sup>

Since its independence from the Soviet Union in 1991, Moldova has made important progress toward becoming a democratic society and a market-based economy and is now a critical part of NATO's security interests on its eastern flank.<sup>5</sup> As evidence of its growing integration with the West, in 2021, the European Union (EU) accounted for 61 percent of Moldova's exports and 44 percent of its imports.<sup>6</sup> Nevertheless, despite these gains, Moldova continues to be Europe's poorest nation, struggles with outmigration and entrenched corruption, and remains heavily dependent on foreign remittances. Furthermore, while recently recognized as an EU candidate along with Ukraine, Moldova continues to deal with the pro-Russia region of Transnistria, which fought a separatist war in 1992 with backing from Moscow. Transnistria, officially the Pridnestrovian Moldavian Republic, is an unrecognized breakaway state that is internationally recognized as a part of Moldova under military occupation by Russia. That territory has been hosting Russian troops since it broke away from Moldova.

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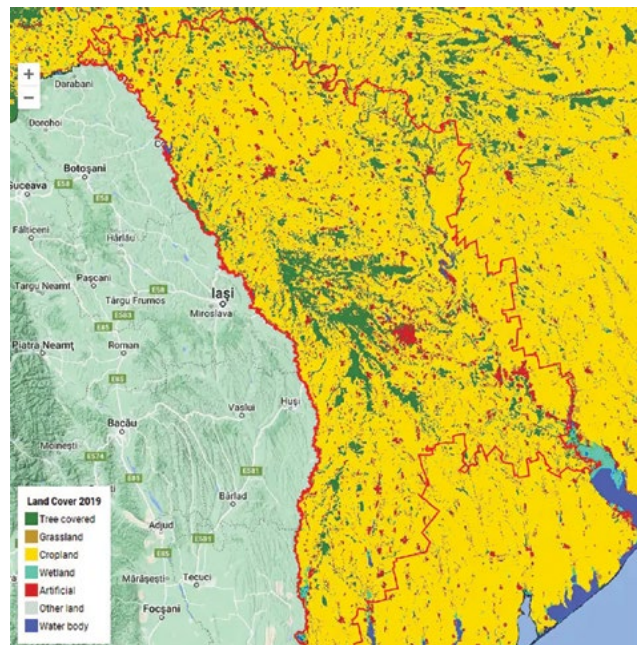


Moldova's GDP and accounted for over 50 percent of total exports.<sup>7</sup> Furthermore, Moldova achieved agricultural trade surpluses and agricultural exports exceeded imports by USD \$183 million in 2020.<sup>8</sup> Nevertheless, when it comes to food security, Moldova presents a mixed picture. Despite meeting most of its food energy requirements and making progress in reducing poverty and severe food insecurity, there are still segments of its populations that are food insecure and fail to meet the level of per capita daily food of 2,500 kcal recommended by the World Health Organization in 2011.<sup>9</sup>

In this context, it is unclear how well Moldova would withstand threats to its food resources in the event of conventional military conflict or a proxy war with Russia. This article sheds light on this pressing issue as the war in Ukraine has already disrupted much of Moldova's agricultural production and trade. More specifically, 90 percent of Moldova's imports of seeds, fuel, and fertilizer were normally supplied by Ukraine, Russia, and Belarus. Shortages of these key agricultural inputs are impacting domestic food production. The Moldova Ministry of Agriculture and Food Industry estimates possible drops in production of staple crops such as wheat, corn, and barley of at least 30 percent. The war has also disrupted much of Moldova's fruit exports (e.g., apples) to Russia, a major destination market, and farmers are now dealing with growing volumes of unsold produce.<sup>10</sup> In addition, Moldova grapples with an influx of refugees from Ukraine estimated at over 618,000 since 24 February 2022, with near 92,000 people staying in Moldova. This represents an important challenge to a country of only 2.6 million people with a fragile economy.<sup>11</sup>

## An Overview of Moldova's Agricultural Sector

Moldova's terrain is mostly open and comprised of undulating plains and productive agricultural land characterized by its fertile chernozem soil—a black soil that is capable of producing high agricultural yields. Farmland covers 75 percent of Moldova's territory and is evenly distributed as shown in figure 1 (area in yellow). The northern part of the country has the most fertile soil and is best suited for production of field crops such as feed grains, oilseeds, and sugar beets. The



(Figure from Food and Agriculture Organization of the United Nations)

## Figure 1. Land Cover in Moldova by Use in 2019

central region is hillier with less fertile soil and is dominated by orchards and vineyards. Finally, in southern Moldova, meadows and steppes are more common because of higher temperatures and lower rainfall. Agricultural production there is only marginal in the absence of irrigation.<sup>12</sup>

The agricultural sector continues to be a key sector of Moldova's economy. Farmers and agricultural workers represent over one-fifth of the overall country's employment. Moreover, food exports accounted for 56 percent of Moldova's total exports in 2021 (see the table, page 4). Nevertheless, the weight of Moldova's agriculture sector has however declined over time.

Recognizing the economic importance of agriculture, Moldova's government spends relatively more on this sector than other countries at a similar level of development across Western Europe do. These expenditures take place in the form of investments in infrastructure modernization, financial support, research and extension, and fiscal incentives. Despite these efforts, most farmers in Moldova have limited experience operating within a market-based economy and therefore, agriculture within Moldova remains underdeveloped due to a series of structural issues:

Statistic	Moldova	Region	World Average
Employment in agriculture (% of total employment in 2019)	21.0	9.0	24.3
Agriculture, forestry, and fishing, value added (% of GDP in 2012)	10.4	3.9	11.3
Food exports (% of merchandise exports in 2021)	55.6	14.5	26.9
Food imports (% of merchandise imports in 2021)	13.4	11.0	16.4

(Data from U.S. Agency for International Development)

**Table. Comparative Statistics of Moldova’s Agricultural Sector Relative to Regional and Global Averages**

- Many products do not meet the higher quality and phytosanitary standards required by export markets such as the EU.
- Only a small competent management class exists, lagging in their knowledge of improved production techniques.
- Moldova lacks postharvesting processing facilities (e.g., cold storage).
- The country has poor access to finance.
- Farmers have limited access to irrigation.
- Moldova has been slow to embrace modern agronomic practices and technologies.<sup>13</sup>

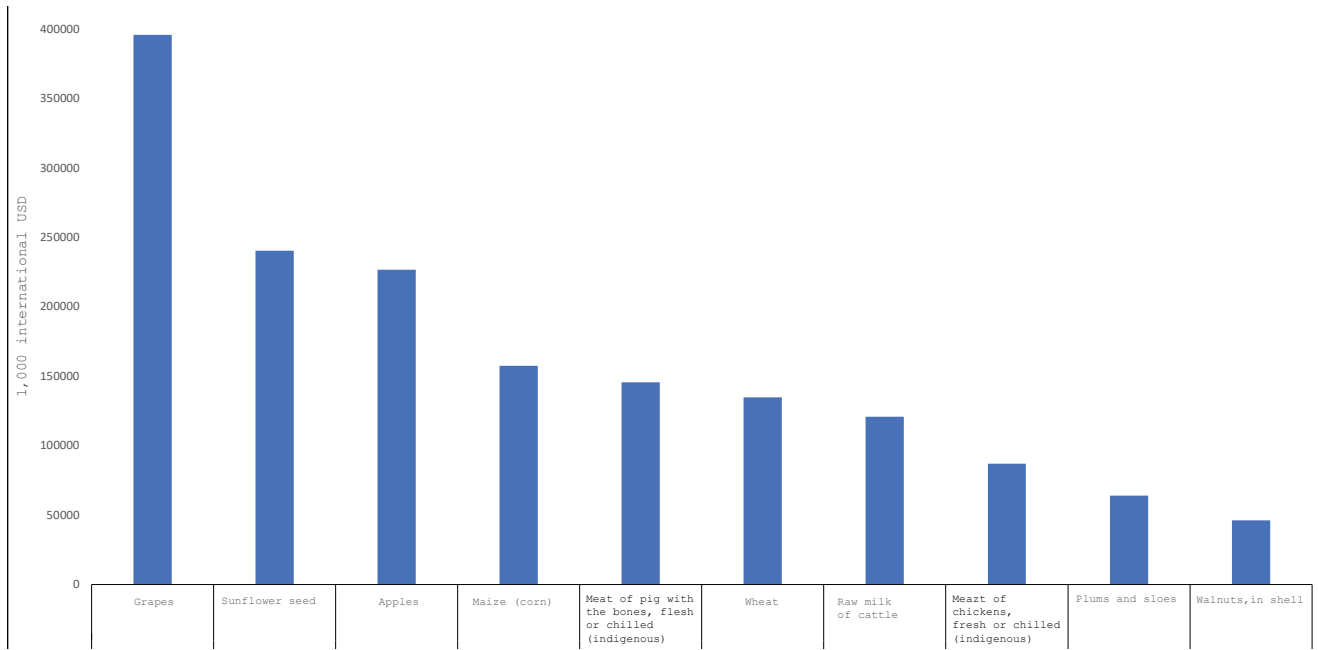
**Grains and oilseeds.** Despite low yields, plant production is the dominant sector in Moldova’s agriculture, in terms of both volume and value.<sup>14</sup> Top grain commodities include corn, wheat, and sunflower seed (see figure 2, page 5). Unsurprisingly, given the geographic proximity and the soil and weather similarities, those same crops are also prevalent in Ukraine. However, in contrast to Ukraine, much of the grain production in Moldova is sold to the domestic market.

**Fruits and vegetables.** In addition, while Moldova has a long history of fruit and vegetable production, low quality and low yields have been limiting export

potential. Consequently, much of Moldova’s produce ends up in low-value markets such as Kazakhstan, Russia, or Belarus. Despite these issues, Moldova has been increasing its access to Western European markets and has succeeded within certain niche markets, selling products such as walnuts as well as organic agricultural products.

Fruits are mostly grown in the central and northern regions and account for near 40 percent of Moldova’s agricultural production values (see figure 2, page 5; figure 3, page 6). Apples, table and wine grapes, plums, cherries, and walnuts are produced at a larger scale and often exported.<sup>15</sup>

Sugar beet production in the northern region is of strategic importance in Moldova—as it happens in other countries that support and protect domestic sugar production. Nevertheless, acreage of sugar beets has been on the decline, and lack of wide adoption of irrigation practices limits the country’s overall yield potential. There has been a decline in vegetable production in Moldova as well, and main products include onion, tomatoes, cabbage, cucumbers, pumpkins, and green peas. A large share of these vegetables is either sold at open-air markets or directly to food processors, with very little exported.<sup>16</sup>



(Figure from Food and Agriculture Organization of the United Nations)

**Figure 2. Top Ten Commodities in Terms of Gross Production Value in Moldova in 2020 (1,000 International USD)**

**Livestock.** The livestock sector failed to successfully transition from the centrally planned economy to a free-market economy and has struggled to achieve profitability. Consequently, except for poultry, the number of livestock animals has steadily decreased, and now more than half of the country’s needs for dairy and beef are met through imports.<sup>17</sup>

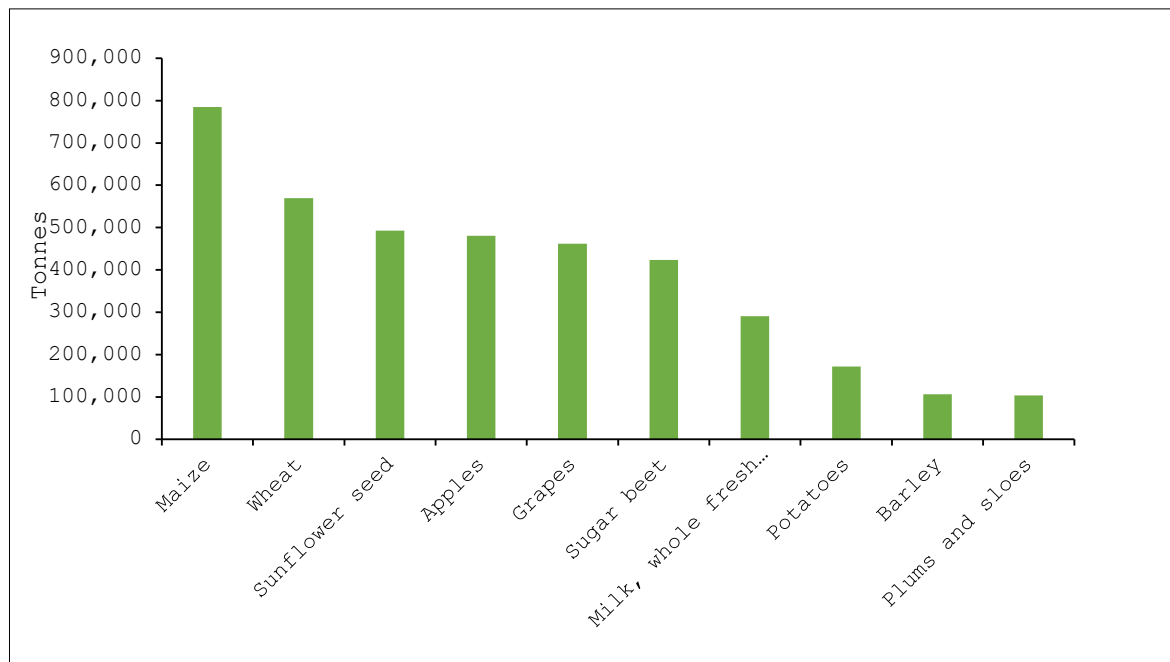
**Impact of war in Ukraine on Moldova’s agriculture.** Because Ukraine was a transit country for many of Moldova’s food exports (e.g., apples or processed tomatoes) to Russia and Belarus, the war immediately disrupted that trade, and those exports came to a halt. Moldova was therefore forced to look for more expensive and complex logistic alternatives. The war also impacted nearly one third of Moldova’s food imports since Ukraine and Russia accounted for about 20 percent and 10 percent of Moldova’s food imports, respectively. This has limited the availability of common food staples such as dairy products, vegetables, salt, and animal feed. Moreover, record energy prices and chemical input shortages could lower production in the coming crop seasons. Lastly, high inflation rates and significant increases in the price of foodstuffs are eroding families’ ability

to meet their basic food needs. To mitigate food inflation, Moldova imposed an export ban for wheat and flour on 1 March 2022. This trade restriction was just recently lifted due to growing complaints by Moldovan farmers who will be soon harvesting their next crop.<sup>18</sup>

### Food Security and Food Self-Sufficiency in Moldova

**Food security.** While availability of food within Moldova is not a major challenge, yields and food production continue to be highly variable and vulnerable to climate or trade shocks. Furthermore, food insecurity remains a reality to a segment of Moldova’s population that remains poor and highly vulnerable to variations in agricultural production. It is important to note that the highest poverty rates in Moldova are found within the population who directly support agriculture.<sup>19</sup>

Historical data shows that Ukraine and Moldova had similar rates (2.2 percent) of severe food insecurity prevalence in 2016 (see figure 4, page 7). It must be noted that much of the food insecurity in Ukraine was likely caused by the conflict in the Donbas region



(Figure from Food and Agriculture Organization of the United Nations)

**Figure 3. Top Ten Commodities in Terms of Gross Production Value in Moldova in 2020 (Tonnes)**

that started in 2014. While food insecurity prevalence remained stable in Ukraine, the situation worsened in Moldova and reached a 4.5 percent rate in 2019 (see figure 4). Despite macroeconomic improvements over the past two decades, Moldova still deals with wasting and stunting in children under the age of five—during the 2013–2017 period, the rates were 3.0 percent and 6.8 percent, respectively.<sup>20</sup>

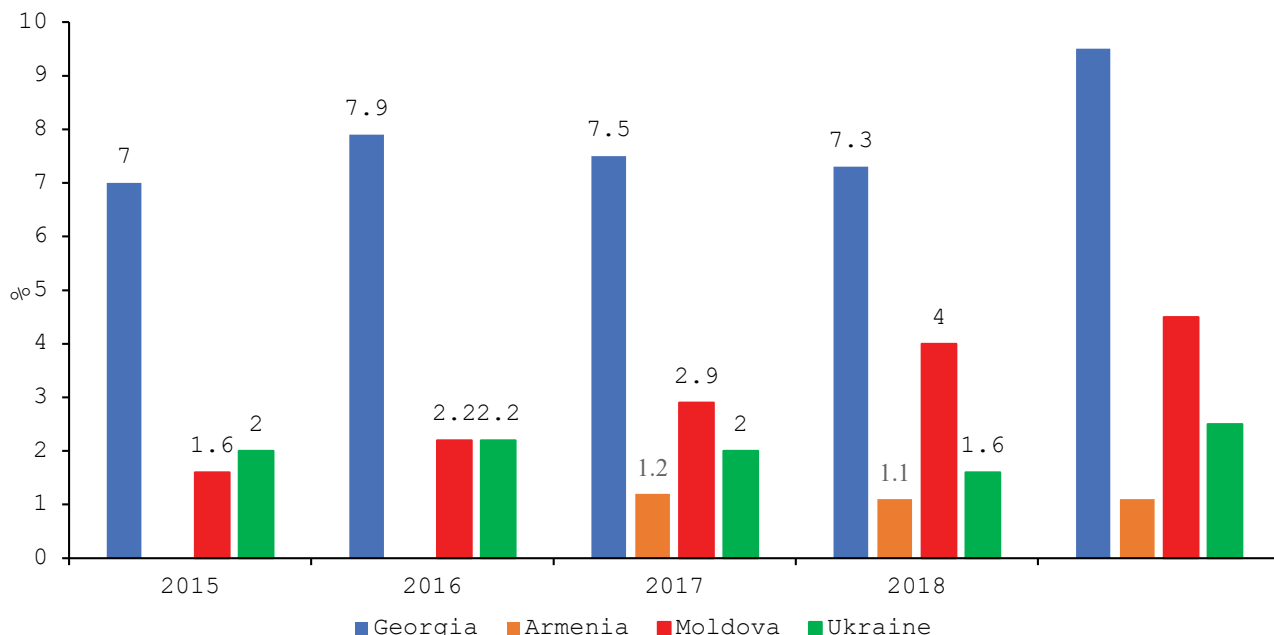
While they may interact at times, food security and food self-sufficiency are two different concepts. For instance, a country may achieve food sufficiency on a national scale but still have segments of its population facing food insecurity, or the need to import certain products to achieve dietary requirements. There are various interpretations of when a country is food self-sufficient, but normally they revolve around a nation’s capacity to produce enough food to meet domestic needs. For instance, the Food and Agriculture Organization of the United Nations generally defines food self-sufficiency as the “extent to which a country can satisfy its food needs from its own domestic production.”<sup>21</sup>

Moldova is a net exporter of cereals and fruits, and some processed food products. That is because

domestic production satisfies domestic demand and allows for large volumes of exports. When it comes to live animals and animal products though (e.g., dairy products), Moldova depends on imports to meet its needs. More specifically, two-thirds of beef, 68 percent of pork, and one-third of consumed milk consumed in Moldova is imported. Lack of investments and know-how has led to a steady decline in livestock production, and backyard livestock operations remain dominant in Moldova.<sup>22</sup> In this context, disruptions to meat and dairy product imports would negate access many Moldovans have to animal-based protein and calorie sources.

**Food self-sufficiency.** One measure of food self-sufficiency is expressed in food supply and consumption data published by the Food and Agriculture Organization. According to this indicator, countries producing over 2,500 kcal per capita per day are categorized as food self-sufficient. In addition, a 2,500-kcal caloric intake is regarded as the threshold of an adequate diet.<sup>23</sup>

As figure 5 (on page 8) shows, Moldova moved above that 2,500-calorie threshold in 2010 but has only achieved modest gains since. By comparison, per capita kilocalorie supply has steadily decreased in Ukraine over



(Figure from Food and Agriculture Organization of the United Nations)

**Figure 4. Prevalence of Severe Food Insecurity in Ukraine, Moldova, Georgia, and Armenia from 2015 to 2019 (in %)**

the past decade, likely due to the conflict in the Donbas region and the 2014 annexation of Crimea by Russia.

Future data will shed light on how this indicator will be impacted by the ongoing war. Another interesting observation is the improvement in food self-sufficiency in Romania, which is one of Moldova’s neighboring countries and a major economic partner. This country quickly converged to levels of food self-sufficiency achieved by Germany—Europe’s largest economy. With almost a 1,000 per capita kilocalorie supply deficit when compared to other European nations, food self-sufficiency in Moldova is more vulnerable to serious shocks to food production or import disruption. Without a reasonable buffer, a military conflict could quickly bring Moldova below the 2,500-kcal caloric intake threshold.

### Assessment of Food Resiliency in Moldova and Comparisons to Ukraine Factors Strengthening Food Resiliency

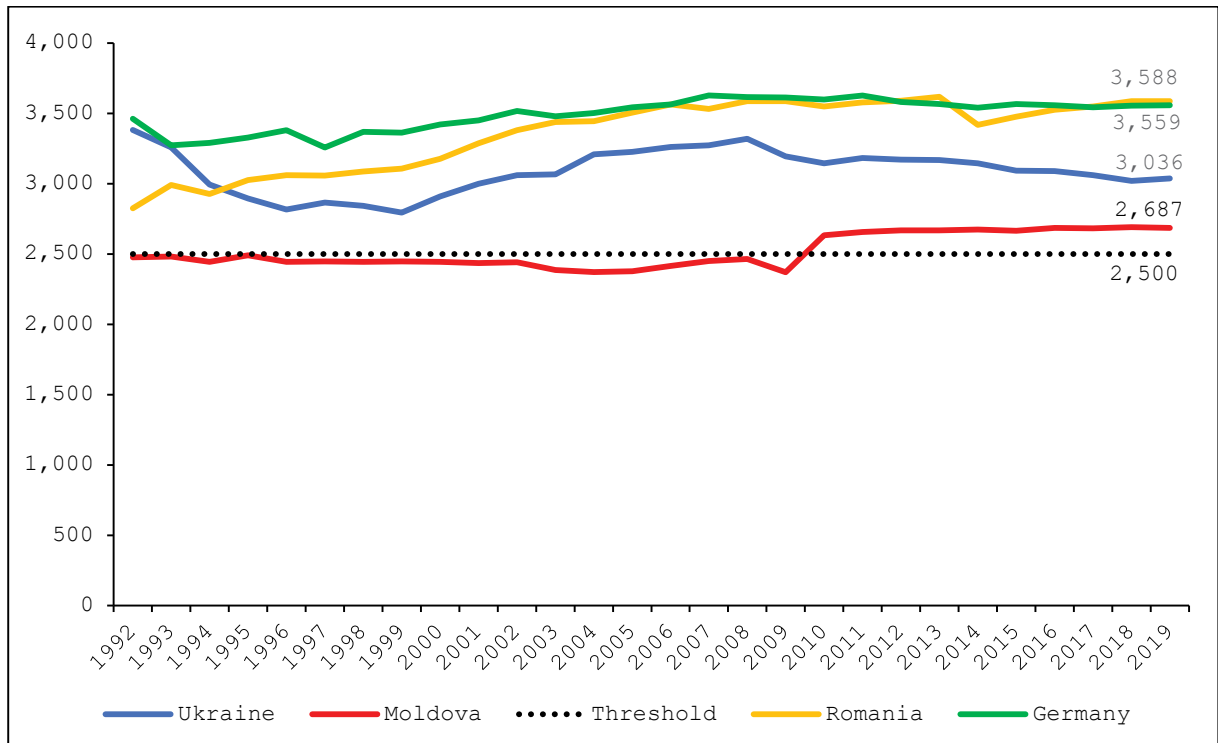
**Reorientation of agricultural trade toward the West.** The ongoing war exposed serious resiliency shortcomings in Ukraine’s food sector and supply chains. The most important vulnerability was Ukraine’s

great dependency on Black Sea ports to export grain crops, which was exploited by Russia when it occupied most of Ukraine’s southern territory. As the current situation shows, this supply chain still lacks viable alternatives to move agricultural products out of Ukraine.

Moldova has been shifting away from its historical dependency on Russia and is reorienting its economic and agricultural sector toward the European Union and other Western markets. The shift was a response to multiple bans on imports of Moldovan agricultural goods by Russia in 2005, 2013, and 2014. These embargos mostly impacted Moldovan exports of wine, fruits and vegetables, and sugar-derived products, and they represented a serious market risk for Moldovan producers.<sup>24</sup>

This market reorientation was supported by the implementation in 2014 of the Association Agreement between the Republic of Moldova and the EU and afterward by the EU–Moldova Deep and Comprehensive Free Trade Area in 2016. The aims of these initiatives were to facilitate trade between Moldova and the EU by removing tariff and nontariff barriers. Due to this trade diversification, a larger share of agricultural trade now runs east to west via roads and rail. The EU





(Figure from Food and Agriculture Organization of the United Nations)

**Figure 5. Per Capita Kilocalorie Supply from All Foods per Day, 1992 to 2019**

share of Moldova’s total exports have increased from 47 percent in 2010 to 69 percent in 2018, which more than compensated for losses in exports to Eastern markets.<sup>25</sup> Thus, Moldova’s food supply chain became less vulnerable to possible Russian blockades—even in a scenario where Russia occupies parts of Ukraine bordering Moldova. Nevertheless, as stated earlier, Moldova’s agricultural sector was still impacted by the war because of traditional and persistent economic ties with Russia, Belarus, and Ukraine. This lingering dependency also involves strategic imports such as fertilizers.<sup>26</sup> Additionally, many Moldovan farmers are yet to meet quality and food safety standards required to gain access to the EU’s market and therefore continue to sell lower quality products to Eastern markets.

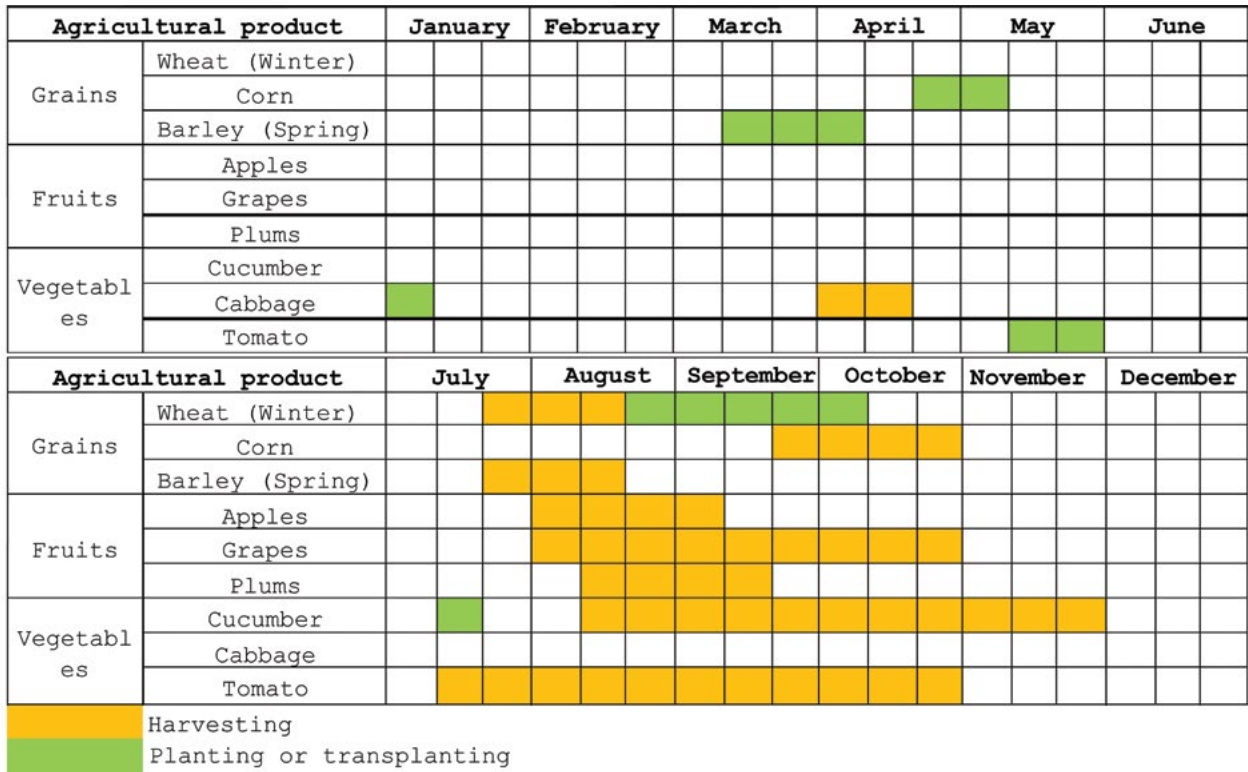
**Market structure of Moldova farming sector.**

Agriculture in Ukraine has been mostly focused on grain production and is well integrated into complex international supply chains. Many farming operations in Ukraine are large, own expensive farming equipment, use large amounts of agricultural inputs (e.g., seeds, chemical fertilizers, diesel, etc.), and require

steady financing to purchase the necessary inputs for each new crop season. In contrast, agriculture in Moldova is characterized by the coexistence of many small farms producing fruits and vegetables for local and regional markets with a smaller number of large farms supplying international supply chains.<sup>27</sup> According to the World Bank, approximately 30 percent of fruit orchards in Moldova are located in farms with less than two hectares that (1) engage in subsistence farming or (2) sell much of their fruits and vegetables in local open markets or at the farm gate.<sup>28</sup> Moreover, 70 percent of walnuts in Moldova are grown on private plots versus 30 percent produced in industrial orchards.<sup>29</sup>

Although the prevalence of small-scale farming and the lack of horizontal and vertical coordination of supply chains in Moldova has negatively impacted productivity and the ability to sell for wholesale or export markets, such a decentralized food system may be better poised to sustain a major shock or military conflict with Russia. This is because, contrary to what we have seen in Ukraine, small farms in Moldova do





(Figure from Food and Agriculture Organization of the United Nations)

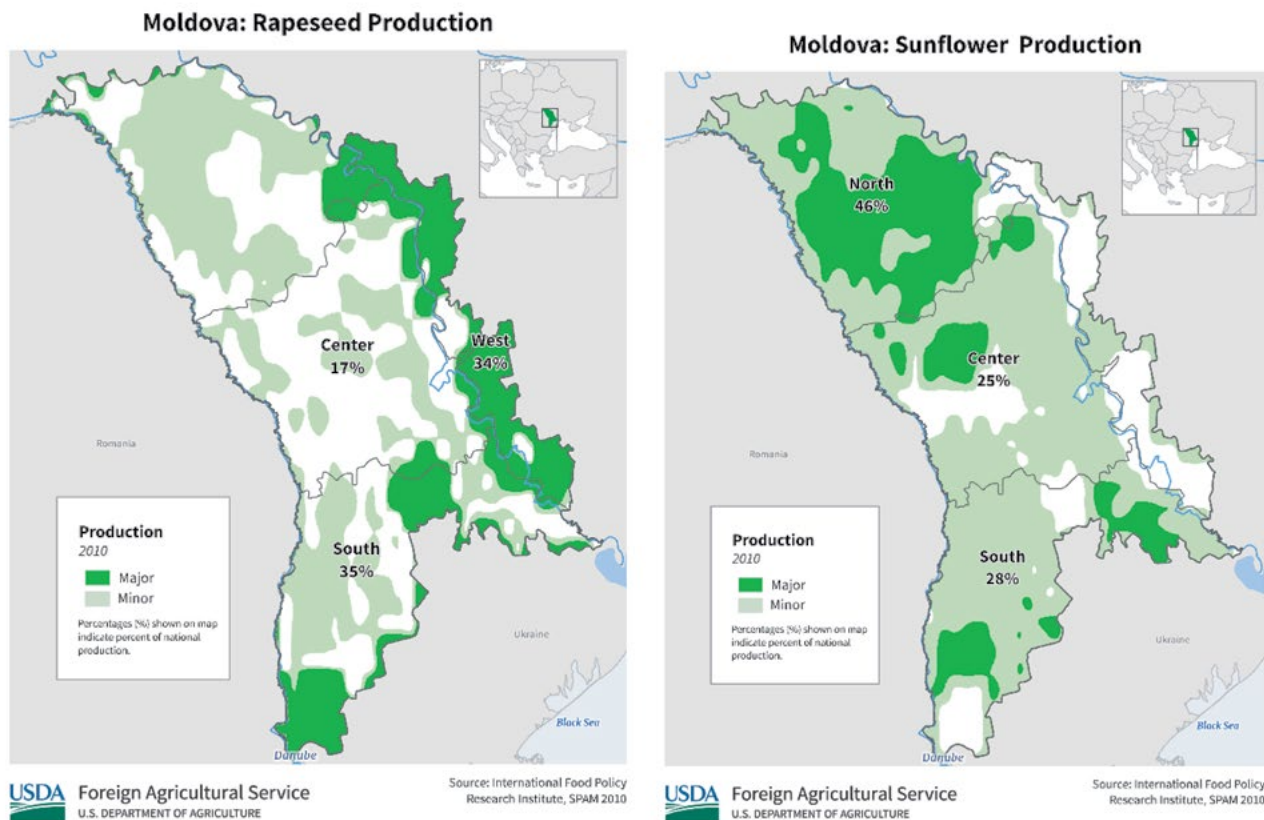
**Figure 6. Crop Calendar for Moldova**

not depend on long supply chains to access international markets or to import capital-intensive inputs such as combine harvesters or chemical fertilizers. In fact, a large share of rural households in Moldova consume and preserve their own food or engage in informal exchanges with their neighbors.<sup>30</sup>

Based on historical precedents, such practices could translate to higher food resiliency as they would allow many Moldovans to sustain a relatively stable food consumption pattern during a military conflict. For example, Moldova was less impacted by the global food price spikes between 2008 and 2010 due to strong domestic food supply from good crop years. However, this resiliency may be partially undermined by higher poverty rates and lower average daily caloric consumption in rural areas.<sup>31</sup>

**Food processing sector.** Moldova has a comprehensive food processing sector that originated from the centrally planned state. This sector includes the processing and preserving of meat products, fruits and vegetables, fish and seafood, dairy products, and vegetables as well and animal oils and fats. This market sector is of great economic importance

to Moldova as it accounts for 37 percent of total manufacturing output as well as 26 percent of employment within the manufacturing sector.<sup>32</sup> Thus, Moldova’s agricultural sector has a built-in resiliency in the sense that it has the capacity to process much of its domestic production—especially horticultural crops such as fruits and nuts. In contrast, many developing nations produce large amounts of raw agricultural commodities only to export them for further processing elsewhere. Like what happens in farming, Moldova’s food-processing sector is comprised of a small number of highly productive and export-oriented businesses and many smaller firms that struggle to compete. In the case of the latter, those firms operate equipment and technologies that are energy inefficient, fail to meet modern standards, lack modern management practices, and are in need of additional investment and working capital.<sup>33</sup> Finally, the resiliency of food processing in Moldova is negatively impacted by the lack of adequate post-harvesting processing facilities. For example, during a conflict, insufficient cold storage facilities would



(Figure from Food and Agriculture Organization of the United Nations)

**Figure 7. USDA Maps for Rapeseed and Sunflower Seed Production in Moldova**

curtail Moldova’s capacity to maintain large volumes of harvested food for longer periods of time.

**Factors Weakening Food Resiliency**

**Cyclical crop seasons and food insecurity.**

Growers tend to harvest at the same time, bringing produce to market within a short window of time. While concentrated harvest time is common in agriculture, it reduces a nation’s ability to supply consistent volumes of food products over time. Moldova is not an exception, and food insecurity in that country follows the cyclical crop pattern with an intensification during off-season (first and second quarters of the calendar year) followed by improvements during harvest season (third and fourth quarters).<sup>34</sup>

Figure 6 (on page 9) shows the planting and harvesting seasons for the main grains, fruits, and vegetables produced in Moldova. While there is variation across different crops, most of the harvest takes place between

July and October. Hence, a military conflict during that time of the year would greatly disrupt agricultural production and negatively impact food security in Moldova. For example, the mobilization of a great share of the population to support a war effort would trigger farm labor shortages during the harvest season. Also, it is important to note that other important production practices such as pruning or seeding are not included in this calendar, but nonetheless would also require a reliable supply of farm workers.

Figure 7 (on page 10) presents maps published by the U.S. Department of Agriculture showing the geographic location of rapeseed and sunflower production in Moldova. The northern part of the country accounts for most of the sunflower seed area while rapeseed is heavily concentrated in the west and the Transnistria region. Military operations in those regions would greatly disrupt production of these crops.

Shortcomings in irrigation infrastructure. Most of Moldova's agriculture is rain fed with only 10–20 percent of farmed land irrigated, and much of the irrigation infrastructure is in poor condition and low performing. Consequently, agriculture accounts for only 5–8 percent of total water usage in Moldova.<sup>35</sup>

The lack of irrigation limits production and yield potential, especially for high-value horticultural products, and makes Moldova's agriculture vulnerable to drought cycles. Because of its geographic location, Moldova is prone to volatile weather conditions that result in fluctuations in agricultural production, especially in the case of rain-fed crops such as wheat, maize, sunflower seed, or sugar beet.<sup>36</sup> For example, in 2007, Moldova suffered its worst drought in modern history that caused \$10 billion worth of economic damage. Later in 2020, the country was impacted by another severe drought that led to a decline of over 26 percent in agricultural production and significant job losses in the sector.<sup>37</sup> The likelihood of droughts in Moldova also leads farmers to adopt practices that result in lower yields. For example, due to the high risk of drought, farmers tend to apply suboptimal amounts of chemical inputs to reduce their financial losses during bad crop years.<sup>38</sup>

Climate change is expected to further intensify the severity and frequency of these weather patterns that, in turn, will deteriorate the resiliency of Moldova's food resources and the overall economy.<sup>39</sup> To strengthen the resiliency of agriculture to weather shocks, Moldova's government is developing programs and implementing reforms that include incentivizing climate-smart agriculture practices, improving current agriculture insurance programs, and investing in irrigation infrastructure. To address erratic rain patterns and reduce water evaporation, the government and international development organizations working in Moldova should also promote the adoption of low- or no-tillage crop production.

Moldova's agriculture is also vulnerable to threats to its irrigation systems by external actors such as Russia—especially in the eastern parts of the country bordering Transnistria where there is a high concentration of irrigation.<sup>40</sup> Such actions would not be unprecedented in the region. Following the annexation of Crimea by Russia in 2014, Ukraine dammed the North Crimean Canal, cutting off the source of nearly 90 percent of

the peninsula's fresh water and jeopardizing its agricultural production—Crimea has an arid climate and most farming operations there use irrigation. Following Russian occupation of the area north of Crimea, the canal was quickly reopened, and water began to flow again back to the peninsula.

**Shortages of agricultural labor.** Currently, larger-scale farmers face difficulties finding enough manpower to work in the fields, especially during the harvest period.<sup>41</sup> Shortages of seasonal farm workers would be greatly amplified by Russian military aggression as much of Moldova's adult male population would join the war effort. In that scenario, farming operations would face crippling labor shortages unless Moldova's government exempts citizens engaged in the agriculture sector from military operations during planting and harvest periods. Such a policy was enacted by Ukrainian authorities in 2022 to ensure the continuation of vital agricultural production in areas not directly impacted by the war.

**Dependency on foreign remittances.** Like the reality in other poor nations, many Moldovan households depend on remittances sent back to them by more than one million people who had emigrated to either West European nations or to Russia. Dependency upon foreign remittances is more prevalent amongst rural populations as they represent a complementary source of income for most farmers.<sup>42</sup> The war in Ukraine has already disrupted the flow of remittances sent by the estimated 250,000 Moldavans working in Russia following Western Union's decision to suspend its operations in Russia and Belarus. Money transfers from Russia to Moldova are no longer possible in foreign currencies such as the U.S. dollar or the Euro.

These remittances are vital not only to the country's economy, as they represent near 15 percent of its GDP, but they also allow many families to meet their most basic needs such as food and shelter. Thus, it is anticipated that further declines in the influx of remittances will negatively impact food security in Moldova, especially amongst the more vulnerable and rural segments of the population.<sup>43</sup>

## Conclusion

The vulnerability of Moldova's food resources to outside shocks arises from a variety of factors. Additionally, the war in Ukraine brought a renewed sense of urgency for that country to improve the

resiliency of its national food supply. Moldova is also dealing with a large influx of refugees from Ukraine, which is putting stress on Moldova's limited resources. Fortunately, multiple UN agencies and several international nongovernmental organizations are on the ground assisting and providing refugees with humanitarian aid and supporting the nation's food resiliency.<sup>44</sup>

Agriculture is a major economic sector in Moldova, and the country is a food net exporter. However, an assessment of the resiliency of its food resources presents some strengths and shortcomings. For example, its domestic-focused and fragmented agricultural system offer Moldova some protection against shocks and external threats. However, while many Moldovan families may be able to continue with subsistence farming during a conflict, food insecurity and poverty is more prevalent amongst rural populations, making them more vulnerable to shocks. Furthermore, Moldova is barely above the recognized

threshold of food self-sufficiency of 2,500 kcal per capita per day today.

The next steps to increase food resiliency in Moldova should include the intensification of local food production, adoption of climate-smart farming practice (e.g., drought-resistant seeds), reduction of postharvest losses and food waste, and the strengthening and integration of local and regional markets. These are, however, long-term goals that will take time and resources that Moldova and its population may not have. It is also important to recognize that such policies cannot be successful without access to additional inputs such as larger quantities of fertilizers, quality seeds, and a steady supply of farm workers. Improving food resiliency will require a much more holistic approach and reforms to prepare the country's food supply chain against external threats. European partners and the United States should support ongoing and future efforts to prepare Moldova's food supply against external threats. ■

## Notes

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