



Food Security Under Heavy Fire

The Ongoing Conflict Between Israel, the USA, and Iran 7 Days After the Start of the War

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Introduction



“We live in an age of profound global instability. High levels of conflict have become the new normal. Shared rules and values are eroding, while power politics, climate change, geopolitical tensions, and military conflicts reshape our world. However, history has taught us that wars lead to hunger, misery and death” (Kern, M., 2/2026).

Thursday morning, February 24, 2022, the world awakened to a turning of the times. The world was no longer faced with ‘cold war’, but a ‘hot war’, for which the Ukraine is currently paying with its blood and human lives (Kern, M., 2/2026).

Saturday morning, February 27, 2026, the world awakened again to a turning of the times. The world is no longer faced with ‘cold war’, but a further ‘hot war’. Israel and the USA are fighting against the Iran and currently paying with their blood and human lives.

History repeatedly demonstrates that freedom and peace come at a cost.

Wars are fought not only with weapons but also through economic pressure, infrastructure disruptions, and strategic control over essential resources. Among these resources, food systems and food security have become increasingly vulnerable targets and collateral victims of modern conflict.

In this context, the statement *“Food security is under heavy fire”* has become an increasingly accurate description of the geopolitical confrontation involving Israel, the United States, and Iran. The ongoing conflict affects far more than military and political dynamics. It also has profound implications for agricultural



production, food supply chains, trade routes, input markets, and the resilience of food systems both within the region and on a global scale. Military conflicts in strategically important regions such as the Middle East can quickly translate into food price volatility, supply shortages, and increased vulnerability for food-import-dependent countries.

The confrontation between Israel, the United States, and Iran therefore illustrates how geopolitical instability can directly challenge global food security. Ensuring reliable food supplies under such conditions requires not only agricultural productivity but also robust preparedness strategies, diversified trade partnerships, strategic reserves, and resilient food systems capable of withstanding geopolitical shocks.

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Analysis

Iran

Iran, with approximately 91 million inhabitants, is currently facing a severe food security crisis that began in 2026. As of December 2025, the government reported holding around 4 million tons of wheat within a total strategic reserve of 12.1 million tons of grains. These reserves are estimated to cover roughly three to four months of domestic consumption based on typical wheat usage for staples such as bread and other carbohydrate-rich foods. However, when measured in caloric terms, the reserves would suffice for only about two months.

Despite these reserves, citizens are reportedly preparing for a potential war with the United States and Israel and have stockpiled food sufficient for roughly 14 days (Luan, C., February 2026). Food prices are rising daily, and significant shortages have been reported across the country, making adequate and nutritious food unaffordable for large portions of the population. Even farmers in western Iran are experiencing food insecurity due to extremely high production costs and declining per capita income, which reduces overall purchasing power (Mahmoudi, S. et al., October 2025; Mazari, F.B., October 2023).

Several structural factors exacerbate the crisis. Inadequate investment in agriculture, outdated traditional farming technologies, climate change, recurrent droughts, severe water shortages, water-related conflicts, corruption, and increasing soil salinization have significantly weakened agricultural productivity. Crumbling agricultural infrastructure reportedly results in the loss of more than 30 percent of annual crop production (Mazari, F.B., October 2023). Poverty in rural areas is rising, with an estimated 3.4 million people suffering from malnutrition and over 17 million unable to afford healthy food, particularly in rural regions. Food-related protests have been violently suppressed, resulting in thousands of deaths and injuries. Meanwhile, substantial government spending on the military, involvement in regional conflicts, international sanctions, and the global economic fallout from the Russia-Ukraine war have intensified economic pressure on the population. Currently, the government is unable to provide adequate assistance to poor families to reliably meet their food needs.

Aslan, M. (February, 2025) reported: "Food poverty in Iran is severe, with many citizens unable to meet minimum nutritional requirements." Approximately 55 percent of Iranians face food insecurity (less than 2,540 kilocalories per day), of which 60 percent of calorie intake comes from cereals, signaling poor and unhealthy diets. Millions suffer from high blood pressure, obesity, and diabetes, largely driven by excessive consumption of bread and sugar due to the inability to afford healthier food options. Furthermore, 42 percent of Iranians over 60 suffer from osteoporosis caused by a lack of dairy products and calcium deficiency.

Meat consumption has fallen dramatically, from 8 kg per capita per year between 2011–2022 to 4 kg in 2025, with forecasts suggesting a decline to less than 1 kg per capita per year in the coming years. The average wage in Iran is € 400–500 per month. The cost of food for a family of four amounts to approximately 58 percent of the minimum wage. Currently, 26 million Iranians are unable to meet their basic needs, with projections suggesting this number could rise to 32 million (30 percent of the population) in the near future.

Key causes of the crisis include international sanctions, economic mismanagement by the regime, rampant inflation, government corruption, rent-seeking practices (Aslan, M., March 4, 2025), financial and military support of foreign militias, poor water management, declining agricultural yields, falling purchasing power, and



increasing poverty. These factors have placed millions of lives at serious risk, a situation downplayed by the Iranian government. Food poverty is expected to worsen, further destabilizing Iran.

Food prices had surged by more than 55 percent due to currency volatility in 2026 until the beginning of the war (Sohi, G., March 3, 2026).

Since the beginning of the war, the exchange rate of the Iranian currency (IRR) has collapsed to approximately € 0.00000065 per IRR and now has no international value. In fact, people are suffering from hyperinflation.

Habibiazad, G. (BBC Persian, March 3, 2026) reported severe fears of food shortages. People are stockpiling supplies as the duration of the war remains uncertain. Not all shops remain open, and streets are largely empty. Daily life has been reduced to coping with shortages of basic necessities, including food, water, electricity, and medicine. For example, they only can get one case of bottled water or only canned tuna and pasta per person (Shahrabi, S., March 6, 2026). Neighbors share resources and create informal networks to ensure access to essentials. Local merchants sell stockpiled goods at inflated prices. The prices of many food products doubled. “Getting food has become a daily challenge” (Aslan, M., March 4, 2026). Many people are leaving Tehran.

Iran also faces serious food shortages if disruptions to shipping through the Strait of Hormuz continue. Necessary food imports are blocked, deepening the domestic food crisis. In 2025, Iran imported 14 million tons of food commodities. A critical issue is the shortage of feed grains for livestock, which will impact meat supply within approximately two months. Iran holds only small reserves of certain grains (Sebouai, L., March 3, 2026). Exports of all food and agricultural products have been banned “until further notice” (Illya, March 5, 2026), with drastic consequences for the Middle East.

Regional Impacts

Tajikistan: In 2025, Tajikistan with around 10.8 million inhabitants imported food products valued at \$ 484 million, including dairy, fruits, vegetables, nuts, sugar, spices, and tea (Logos Press, March 5, 2026). Iran’s export ban is expected to increase food prices and negatively affect the poorest populations.

Afghanistan: Iran’s ban will severely disrupt Afghanistan’s (43 million inhabitants) domestic food market, disproportionately affecting low-income families (Illya, March 5, 2026). Food shortages are expected to persist for months, creating severe challenges for households. This is particularly concerning given Afghanistan’s ongoing military conflict with Pakistan, which restricts alternative food imports. Millions of Afghans are therefore highly vulnerable.

Gulf States: The Gulf countries’ (61.2 million inhabitants) agricultural sectors cannot meet local demand, relying on imports for over 70 percent of their food, largely via the Strait of Hormuz. While storage facilities in Kuwait, Bahrain, Qatar, and the UAE hold hundreds of thousands of tons of essential grains, reserves can only cover several months. Since the start of the war, widespread hoarding has caused temporary supply dips, intensifying public alarm (Livemint News Desk, March 5, 2026). Long-term, free maritime transport through the strait is critical for the Gulf states; a blockade can only be compensated for a few months.

Israel: Food security in Israel, a country with approximately 10 million inhabitants (around 21 percent Arab and 78 percent Jewish), is generally stronger than in most countries, although it cannot be considered fully guaranteed or entirely sustainable. According to the Global Food Security Index 2025, Israel ranks between 22nd and 24th worldwide. Nevertheless, approximately 2.8 million people – roughly 28 percent of the population –



are classified as food insecure. Vulnerable groups include parts of the Arab population, the ultra-Orthodox community, unemployed individuals, and people with lower levels of education.

Israel performs particularly well in food availability, affordability, and quality and safety, ranking among the top ten countries globally. The country also shows strong performance in natural resource management and resilience (Kimhi, A., January 2024). However, structural risks continue to challenge long-term stability, including the impacts of climate change, labor shortages in agriculture, partially inadequate emergency stockpiles, underprepared food processing facilities, and growing geopolitical tensions. State Comptroller M. Engelman warned in October 2025: “A shortage of essential products is serious and, during an emergency, can damage the functioning of residents and the economy. Without urgent reforms, Israel risks being unprepared to secure food supply for a possible continuation or expansion of the war” (Benson, P., October 2025).

The government has introduced mid- and long-term policies to strengthen domestic agricultural production and food resilience. The Ministry of Agriculture and Rural Development was renamed the Ministry of Agriculture and Food Security, reflecting its expanded mandate. This mirrors institutional developments in Europe, including Germany’s Federal Ministry of Food, Agriculture and Homeland; Italy’s Ministry of Agriculture, Food Sovereignty and Forestry; France’s Ministry of Agriculture and Food Sovereignty; Poland’s Ministry of Agriculture and Rural Development; and the Netherlands’ Ministry of Agriculture, Nature and Food Quality.

In cooperation with other governmental bodies, Israel began implementing its first emergency resources and preparedness plan in May 2025 and launched a \$ 1.4 billion National Food Security Strategy for 2050 (Shimoni, E. and Tziporf, S., September 2024; Benson, P., May 2025). Key measures include the introduction of labor-saving agricultural technologies to reduce reliance on foreign workers.

Israel maintains strategic food and grain stockpiles covering at least three months of national consumption, including wheat, feedstuffs, sugar, and vegetable oils. However, over 97 percent of grain supplies are imported, mainly from Ukraine, Russia, and the United States. Disruptions to maritime supply routes, combined with a shortage of sailors in the merchant fleet, represent critical vulnerabilities.

By including the fact that Israel’s median income is around € 2,600 per month (Iran € 400-500 per month), it can be concluded that people have much higher purchasing power, making food affordability several times greater than in Iran (Haolam.de, March 2026).

Furthermore, it should be mentioned that the existing infrastructure for food supply, or food security, has so far been hardly affected. A food supply crisis in Israel is very unlikely, even if the war were to continue for a longer period.

Global Implications

The disruption of the Strait of Hormuz would raise living costs worldwide, increase political pressure, and disproportionately affect the poorest populations. It could trigger social unrest, riots, further conflicts, and mass refugee movements.

The ongoing conflict between Israel, the United States, and Iran, combined with Iran’s threat to blockade the strait, already imposes heavy burdens on airlines, energy-intensive industries, trade logistics, food processors, and farmers due to rising oil and gas prices.



Agriculture is especially vulnerable. Fertilizer prices have increased by over 25 percent due to disruptions in the strait, which handles one-quarter to one-third of global trade in fertilizer raw materials and about 20 percent of global oil and gas supplies. Fossil natural gas accounts for 60–80 percent of nitrogen fertilizer production. Incidents such as Qatar closing its largest fertilizer facility after a drone attack further exacerbate risks. Around 50 percent of global food production relies on synthetic nitrogen fertilizers, and shortages could dramatically reduce crop yields, driving food prices to unpredictable levels (Partridge, J., March 5, 2026).

In Europe, including Germany, agricultural input costs have skyrocketed while crop prices remain historically low. Governments are advised to implement precautionary measures, such as temporary financial support (“crisis allowances”), to prevent farm closures and maintain national food supply stability.

An actual detailed report of 34 pages titled: *“Is Germany Prepared to Ensure Food Security in Order to Overcome a Serious Crisis or War? What Needs to Be Done, by Whom until When? – An Emergency Call in 2026!”* was published on February 27, 2026 – one day before the war between Israel, the USA and Iran started (Kern, M., February 2026).

Outlook

Iran’s economic infrastructure includes not only energy facilities such as electricity, gas and oil installations, but also important trade and transportation systems like airports, ports, rail networks, roads, and logistics hubs. In addition, vital sectors such as agriculture and water infrastructure – including dams, water treatment plants and water desalination plants – play a crucial role. Attacks on these systems could lead to severe economic and public health consequences, including floods, mass displacement, food shortages and rising prices, water scarcity, pollution, disease, and environmental damage.

All exports of food and agricultural products have been banned “until further notice” by Iran’s theocratic regime. Iran’s ban on food exports will severely affect many countries and will hit low-income families particularly hard.

Independently of this, private household food supplies would likely be exhausted within two weeks. Iran’s national reserves would probably last for about two months, while prices would skyrocket. After that, bread and meat would have to be rationed, and regional hunger situations would increasingly occur. Food poverty would continue to worsen, further destabilizing Iran. If the war were to last longer than six months, severe food supply crises would likely emerge, especially if the damaged infrastructure has not been rebuilt by that time – which is very unlikely.

Although Iran has also targeted Israeli economic sites such as energy infrastructure, factories, and ports like Haifa with missile strikes, most Israeli infrastructure remains better protected due to air defense systems, military superiority, and support from the United States, unlike Iran’s more vulnerable infrastructure. Israel could ensure food supplies for up to three months; after that, rationing would also have to be introduced, and food prices would rise drastically. After about six months, shortages of bread, meat, and dairy products will likely occur.

Given the Israeli government’s apparent aim of pursuing regime change in Iran, continued attacks on the country’s critical economic infrastructure remain a real possibility, which could have disastrous consequences considering Iran’s large population of around 91 million and its already fragile economic situation.



However, beyond economics, geopolitical risks remain high. A collapse of the Iranian state due to war could generate massive refugee flows to Europe, further intensifying social and political pressures across the region.

Finally, disruption of trade in the Strait of Hormuz of more than 4 weeks risks regional and global food supply chains, particularly for wheat, feed grains and fertilizers. The increasing prices for oil, gas and fertilizer are impacting significantly global agriculture by increasing input costs in agriculture. European agriculture is already under pressure from rising input costs and low market prices, necessitating government intervention to stabilize future food production.

Conclusions

Iran's war-related food crisis is already severe, immediate, and likely to worsen day by day. The deterioration of economic conditions, disruptions in supply chains, and growing pressure on domestic agricultural production threaten the food security of millions of people. If the conflict continues to escalate, the consequences could extend far beyond the military sphere, increasing the risk of widespread shortages, rising food prices, and significant social instability.

From a strategic perspective, the prospects of Iran prevailing in such a confrontation appear extremely limited. A prolonged escalation could impose devastating costs on the country's economy, infrastructure, and population, potentially pushing the state toward systemic collapse. In this sense, further escalation risks becoming a path with catastrophic consequences for the Iranian population.

Should Israel and the United States continue or intensify their military operations and if critical infrastructure – including systems related to food production, storage, and distribution – were to be significantly damaged in the coming weeks, the consequences for Iran's state stability could be dramatic. Severe disruption of the food system could push the country toward conditions commonly associated with a failed state, characterized by economic breakdown, governance failure, and widespread humanitarian distress.

Such a scenario would not only endanger millions of people within Iran but could also destabilize the broader region through migration pressures, market disruptions, and heightened geopolitical tensions. For this reason, the situation underscores the urgent need for de-escalation and diplomatic engagement.

Ultimately, the responsibility lies with political decision-makers on all sides to carefully consider the humanitarian consequences of continued escalation. Prioritizing negotiations and diplomatic solutions could open the possibility for stabilization and a renewed political dialogue that would help prevent further human suffering and protect the livelihoods and food security of millions of people.



Comment: *Opinions* expressed in this contribution are those of the author.



About the Author of this Issue

Dr. Manfred Jakob Kern is a biologist, futurologist, and managing director of agriExcellence e.K. (www.agriexcellence.de), worked in the chemical crop protection industry for Hoechst AG, AgrEvo GmbH, Aventis CropScience AG and Bayer CropScience AG. Over the foregoing 40 years he has held key positions in science and technology, strategy, marketing and communications. He has been running the project "Future of Agriculture: Vision 2025/2050", a comprehensive and still running study on the safeguarding of world food supplies, since 1995. He has more than 200 publications to his credit and has given over 1,200 presentations at international/national congresses, conferences, symposia, and workshops in over 80 countries. He serves on many editorial boards and is a reviewer for several reputed journals published.

In 1999 Dr. Kern finished the "Kern-Seminar on Security Policy" of the Bundesakademie für Sicherheitspolitik (BAKS), (Federal Academy on Security Policy) of the Federal Republic of Germany (the supreme education course of Germany) in Maria Laach, Berlin, Vienna, Moscow and Washington.

He was Lieutenant-Colonel (P.) (Res.) in the Euro-Corps within the German Armed Forces, decorated with the silver medal of the German Armed Forces.

Dr. Kern was awarded by different organizations for significant accomplishments in the field of innovations in agriculture. In 2007, the secretariat of UNCCD (United Nations Convention to Combat Desertification) recognized Dr. Kern by upholding his title as "Eminent Person".

In 2023, Dr. Kern received the Lifetime Achievement Award from the IFSDAA and the AASF (Afro-Asia Studies Promotion Association) in Göttingen, Germany, in recognition of his worldwide acclaim and outstanding contributions to the life sciences, people, societies, and humanity.



Manfred Kern



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