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Inevitable Impact on the Global Food Markets by the Middle East Military Actions

- Potential 2026 Fertiliser Crisis and Grain Supply Trends Since 2022

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Introduction

The latest military conflicts in the Middle East have not only been impacting the global energy markets but also is feared worsen the global food situation.

In addition, fertilizer exports from the Gulf region of the Middle East are expected to decline in the wake of the Israeli-US attack on Iran at the end of February 2026, but what impact is expected on the global food situation?

In the past, food conditions have deteriorated due to supply chain disruptions caused by international conflicts.

After Russia's invasion of Ukraine in 2022, how has the supply and volume of grain to the world, including supplies from Ukraine and Russia, been secured?

1 Potential Fertiliser Supply and Food Crisis Following the Events of February and March 2026

1.1 In a scenario where an attack on Iran by Israel and the United States occurs at the end of February 2026, leading to restricted passage through the Strait of Hormuz, severe repercussions for global food security are anticipated.

1.1.1 Direct Impact on the Fertiliser Supply Chain: The Middle East Gulf region is a global hub for nitrogen-based fertilisers, with approximately 13% of maritime chemical trade passing through the strait. A blockade could result in a significant loss of sulphur supply and another loss of urea supply, causing a chain-reaction shortage in raw materials for phosphate fertilisers.

1.1.2 Price Surges and Structural Cost Changes: In addition to shipping shortages and skyrocketing insurance premiums, rising gas prices will drive up fertiliser costs. As fertiliser accounts for nearly half of the operating costs for corn and wheat, pressure on agricultural management is inevitable.

1.1.3 Spillover Mechanism into Food Production: While the 2022 crisis was characterised by a "reduction in grain itself," the 2026 concern is a "cost and volume shock of input materials (fertilisers)". Reduced fertiliser application leads to lower yields per unit area, potentially triggering global food price increases (agflation) and heightened famine risks through to 2027.

1.1.4 Regional Vulnerabilities: Severe impacts are feared in India, Southeast Asia, and West Africa, which rely heavily on Gulf urea, as well as in Brazil, which has a high dependency on imports.

1.2 Outlook

1.2.1 The potential disruption of fertiliser supplies in 2026 threatens to cause a structural increase in agricultural production costs. The intensity of the impact will depend on the duration of the Strait of Hormuz's dysfunction; however, a prolonged closure could fundamentally undermine the global food security system.

2 Background: The Connection Between Fertiliser and Natural Gas

2.1 The most widely used fertilisers in the world are nitrogen-based fertilisers such as urea and ammonia. Their fundamental building block, ammonia, is produced through the Haber - Bosch process. The feedstock mostly comes from natural gas.

2.2 The Food and Agriculture Organization (FAO) notes that natural gas is the principal feedstock for ammonia[1], which underpins all nitrogen fertilisers.

2.3 Natural gas prices influence fertiliser prices. The higher natural gas prices rise, the higher fertiliser prices go, leading to increased farm production costs and in turn rising food prices.

2.4 "It is not only the fields but natural gas that grows much of the world's food." or "Most nitrogen fertiliser is derived from natural gas, and food production is sensitive to natural gas prices."

2.5 Qatar's QAFCO (Qatar Fertiliser Company) accounts for about 14% of the world's urea supply[2]. Fertilizer exports from the GCC (Gulf countries) account for about 15% of global trade. The increase in global nitrogen fertilizer (urea) production is led by India, Qatar, Saudi Arabia, and the UAE[3].

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[1] "Fertilizer market developments", November 2024, https://openknowledge.fao.org/server/api/core/bitstreams/088cd9fb-4e35-478a-a5ae-52ba70a65ad2/content

[2] https://www.qafco.qa/en/

[3] "Fertilizer market update, June 2025, https://openknowledge.fao.org/server/api/core/bitstreams/0c79f9df-b2eb-43cb-9b84-

2.6 Since fertilizers are used before planting, supply shocks will spread to food supplies in a time difference. There are concerns that a shortage of fertilizers will lead to a decline in grain production and affect import-dependent countries (Asia and Africa).

3 Compensation for Grain Export Reductions Following the 2022 Russia-Ukraine Conflict

3.1 Following the Russian invasion of Ukraine in 2022, concerns arose regarding the decline in grain exports from both nations. However, the world has largely offset and mitigated this crisis through the rise of alternative suppliers, the establishment of new export routes, and structural supply realignment.

3.1.1 Ukraine's Export Diversification: Amid restrictions on Black Sea routes, alternative paths such as the EU "Solidarity Lanes," Danube River ports, and routes via Constanta, Romania, were expanded. From autumn 2023, maritime exports recovered through Ukraine's independent "humanitarian corridor," with monthly export volumes in the 2023/24 period approaching pre-war levels at certain points.

3.1.2 Expansion of Russian Supply: Russia recorded record-breaking wheat exports of over 55 million tonnes in 2023/24.

3.1.3 Rise of Other Regions: Brazil became the world's leading corn exporter in 2023, filling the gap left by Ukraine. Similarly, Australia increased its presence as a key supplier to East Asia.

3.1.4 Price Trends: As a result of these structural realignments, the FAO Food Price Index (FFPI) has fallen by more than 20% from its peak in March 2022[4].

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[4] "FAO Food Price Index", 6 March 2026, https://www.fao.org/worldfoodsituation/foodpricesindex/en/