

# INVESTING

## in Poland



# SECURING EUROPE'S FOOD PIPELINE

The Russo-Ukrainian war was always going to have far-reaching consequences. Ukraine, the Breadbasket of Europe, became a political football as the West imposed sanctions on Russia. The ripple effect on oil production costs and its derivatives – fuel, plastics, clothing, car parts, etc. – led to some uncomfortable conclusions. At the same time, food production, especially fertilizer, came under threat as well. Poland's fertilizer producers have been tasked with striking a fragile balance in an unstable environment.

## PLN 1.7 billion

Is the cost of Anwil's nitrogen fertilizer production line in Włocławek, the company's largest investment to date

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**P**oland, a prominent EU agri-food producer and exporter, annually exports agri-products worth €32 billion, primarily to other EU nations. The government is committed to supporting farmers and fertilizer producers and has contemplated measures such as capping fertilizer prices to ensure food production sustainability. In 2021, nitrogenous fertilizers held the largest share in Poland's production of mineral and chemical fertilizers.

In October of 2022, PLN 3.9 billion was given in subsidies to farmers to compensate for high fertilizer prices. A proposal in December of 2022 to aid fertilizer plants was discussed by the Ministry of Agriculture's Henryk Kowalczyk. The conclusion was that the threat of a disruption to the food supply, and Poland's economic well-being, was a clear and present danger.

Grupa Azoty has recently inaugurated a Biofertilizer Research and Development Center at its Fosfory plant in Gdańsk. Positioned as a key competence hub for the company, the center will concentrate on advancing biofertilizers tailored for sustainable agriculture. As the second-largest producer of nitrogen and compound fertilizers in Europe, Grupa Azoty aims to leverage its expertise in developing environmentally friendly fertilizer formulas. The Gdańsk center will collaborate with other research units within the company, sharing infrastructure and engaging in joint projects. It aspires to set new benchmarks in creating effective and environmentally sound fertilizer formulations.

Anwil recently launched its largest investment in history with PLN 1.7 billion for the construction of its third nitrogen fertilizer production line in Włocławek. The aim is to increase Poland's food security and to help comply with EU regulations.



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### A DISTURBED SYSTEM

Before the Russia-Ukraine conflict, Russia supplied up to 45% of the EU's natural gas imports. By October 2022, due to sanctions and the mysterious ruptures of the Nord Stream 1 and 2 gas pipelines, Russian supply to Europe was reduced to 7.5%, with three out of four pipes were rendered inoperable. The pipeline incidents coincided with the opening of the Baltic Pipe, connecting Poland and Norway through Denmark and bringing in North Sea gas. Western suspicions were that Russia had sabotaged the pipelines, especially given Russia's history of weaponizing energy. Others pointed fingers at the US. Regardless of the cause, Poland found itself in the midst of another crisis.

The conflict between Russia and its neighbor not only disrupted the already unstable global economy but also added another layer of complexity to a world seeking normalcy post-pandemic. The ill-planned invasion had repercussions beyond Ukraine, affecting global trade dynamics. As a result, Ukrainian grain ex-

sizing the importance of "maintaining food security."

Ironically, it was Azoty that had at one time cautioned Anwil, in June 2019, that construction of its third nitrogen fertilizer line in Włocławek in central Poland had the potential to spark a price war in the country. However, neither Azoty nor Anwil could have foreseen the unsettling convergence of the global pandemic and Russia's invasion of Ukraine back in the relatively tranquil days of 2019.

The most recent financial data confirm what market analysts have expected: Grupa Azoty reported a consolidated net loss of PLN 743 million in the third quarter of 2023, compared to a loss of PLN 79 million a year earlier. The company cited energy prices as the main factor behind the alarming figures. Yet, investment projects are being completed on schedule, including a new oxygen compressor valued at PLN 77 million that has just been installed in the Ammonia Department of the Azoty Group in Kędzierzyn. Clearly the stakes are greater than just poor quarterly results.

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ports decreased, and the soaring cost of fertilizer sent ripples through an interconnected, global system.

### PRIORITIZING FOOD SECURITY

The squeeze on fertilizer production hit hard. On August 23, 2022, Grupa Azoty S.A. temporarily shut down nitrogen fertilizer production at its largest plant in Puławy in eastern Poland because of a surge in the price of natural gas. Gas prices almost quadrupled in six months, climbing from €72/MWh on February 22, 2022, to €276/MWh by August 22, 2022. Grupa Azoty attributed the temporary suspension of its nitrogen fertilizer production to the unprecedented surge in natural gas prices, following similar moves by its competitor Anwil in August 2022.

Oil giant Orlen's Anwil subsidiary shut down production in August of 2022, stating that gas prices were affecting not only Poland but all of Europe. However, a week later, Anwil resumed production, empha-

### A GLOBAL PROBLEM

In 2022, per the Independent Commodity Intelligence Services (ICIS), surging natural gas prices in Europe led to the shutdown or reduced operation of at least 13.5 million tonnes of fertilizer and chemical capacity. This decline accounted for up to 63% of regional capacity for the most severely affected products. However, the impactful reduction proved to be short-lived.

By October 12, Grupa Azoty had resumed operations at the Tarnów nitrogen fertilizer plant. Still, it soon became apparent that price stability would be challenging, highlighting the need for swift and decisive actions. Economic indicators signaled continued global challenges and an imminent downturn. It became imperative for Poland to implement decisive measures, including planning for a future independent of Russian gas.

As per the World Food Program, fertilizer prices

have more than doubled in 2023 in countries like Nigeria, where almost two-fifths of the 90 million population experience “insufficient food consumption.” The New York Times reported that the crisis, initiated by the COVID-19 pandemic, elevated the cost of transporting fertilizer ingredients. The war in Ukraine and climate change have exacerbated the situation.

In addition, the US Federal Reserve has raised interest rates in order to curb domestic inflation in the last 18 months, resulting in the increased value of the American dollar against many currencies. As fertilizer components are priced in dollars, they have become significantly more expensive in countries like Nigeria.

This begs the question, How secure is our food supply if it depends on oil, natural gas and potash?

## THE FERTILIZER TRIO

There are three types of fertilizer: nitrogen, phosphate (usually sourced from bird or bat guano), and potassium. Not all plants require all types of fertilizers, but several (corn, wheat, potatoes, tomatoes, cotton, rice, and soybeans) require a combination or all types of fertilizers for optimal growth.

As we have seen, nitrogen is made through a process involving natural gas, which can sometimes be pricey. Potassium, however, requires potash or a complex series of other chemical processes to obtain potassium from wood ash or the recycling of agricultural residues and byproducts. Most crops need potassium and a lot of it.

On the other hand, most farmers have been over-fertilizing their fields with potassium for decades, which has, in turn, led to potassium-saturated soils. Because of this saturation, it is possible to sow crops without potassium for years, although eventually, farmers will need potassium-based fertilizers.

Potassium comes from potash sourced from places like Jordan, Israel, Germany, Russia, Belarus, and Canada. Of those countries, Canada is the least problematic with regard to the acquisition of potash.

Mining potash is a major industry in Belarus, but as Poland's eastern neighbor is closely allied with Russia and faced sanctions even before Russia's invasion of Ukraine, buying from Belarus is problematic. Most potash from Belarus flowed through Lithuania, but geopolitical factors have disrupted this supply chain. With control shifting, Russia now oversees the transportation of potash from Belarus. This strategic control provides Russia with a considerable influence over a significant portion of the global potash supply, marking a shift in the dynamics of the industry.

Phosphorus fertilizers are under threat worldwide due to several factors. There is an increasing demand for phosphorus, and, according to the US Geological Survey, estimates are that global phosphorus consumption has increased from 47.0 million tons in 2018 to 50.5 million tons by 2022. Supply disruptions also affect phosphorus supplies as China and Morocco are the top phosphate-producing countries, and China has placed restrictions on exports of phosphate to drive down domestic prices.

And if this wasn't enough, The Frontiers of Agricultural Science and Engineering journal has raised the alarm, declaring an impending crisis in the sustained provision of phosphate fertilizers crucial for worldwide food production. Over the last three years, the projection for the remaining years of rock phosphate supply has dwindled from an estimated 300 years to 259 years, a decline attributed to the surge in demand during this period. If demand continues to rise, we may see the end of supplies by 2040, however unlikely.

## EU COMPLICATIONS

Add to all these issues the complications of EU regulation. The EU Fertilizing Product Regulation (Regulation (EU) 2019/1009) came into effect on July 16, 2022. It established rules for the free movement and product requirements of EU fertilizing products, obligations of economic operators/manufacturers and authorized representatives, the inclusion of recycled and organic materials, and efficiency requirements.

Like many new regulations, implementing the EU rules on fertilizing products has encountered challenges. While fertilizer manufacturers generally endorsed the regulations, they expressed the need for an adaptation period due to the complex and technical nature of the rules. Various obstacles impeded the immediate application of the regulation in 2022, and some are still struggling. Issues include a shortage of accredited Notified Bodies, incomplete harmonized standards, challenges in obtaining detailed information on component materials from global suppliers, and delays in finalizing legal provisions for certain amendments.

Despite many problems plaguing the fertilizer industry, the Polish government seems clear on one issue: food security is a top priority for any country, and maintaining a solid fertilizer production base will go a long way towards achieving this goal. And amidst global shortages, Polish fertilizer producers may turn their current precarious position into a market advantage. ●

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