



Q3 2024

www.fitchsolutions.com/bmi

Egypt

Agribusiness Report

Includes 5-year forecasts to 2028



Contents

Key View.....	4
SWOT	9
Agribusiness SWOT	9
Industry Forecast.....	10
Grains	10
Rice	18
Livestock	23
Dairy	30
Sugar	35
Commodities Price Analysis	41
Monthly Commodities Strategy: Stellar Performance In April, With Most Sub-Asset Classes Marking Gains	41
Upstream Analysis.....	56
Africa Machinery Outlook: Minimal Uptick In Investment And Sales In 2024	56
Africa GM Outlook: Food Insecurity Makes Strong Case For GM Seeds, But Outlook Plagued By Public Hesitancy	62
Africa Fertiliser Outlook: Lower Prices In 2024 To Facilitate Application.....	70
Downstream Analysis	77
Food	77
Regional Overview.....	81
Five Key Themes For MENA Agribusiness	81
Competitive Landscape.....	90
Egypt Demographic Outlook.....	91
Agribusiness Methodology	95

© 2024 Fitch Solutions Group Limited. All rights reserved.

All information, analysis, forecasts and data provided by Fitch Solutions Group Limited are for the exclusive use of subscribing persons or organisations (including those using the service on a trial basis). All such content is copyrighted in the name of Fitch Solutions Group Limited and as such no part of this content may be reproduced, repackaged, copied or redistributed without the express consent of Fitch Solutions Group Limited.

All content, including forecasts, analysis and opinion, is based on information and sources believed to be accurate and reliable at the time of publishing. Fitch Solutions Group Limited makes no representation or warranty of any kind as to the accuracy or completeness of any information provided, and accepts no liability whatsoever for any loss or damage resulting from opinion, errors, inaccuracies or omissions affecting any part of the content.

This report from BMI – A Fitch Solutions Company is a product of Fitch Solutions Group Limited; UK Company registration number 08789939 ('FSG'). FSG is an affiliate of Fitch Ratings Inc. ('Fitch Ratings'). FSG is solely responsible for the content of this report, without any input from Fitch Ratings.

Copyright © 2024 Fitch Solutions Group Limited.

Key View

Key View: The Egyptian agricultural sector accounts for over 10% of domestic GDP, while also providing about 25% of the labour force with employment, which, in conjunction with its central role in supporting domestic food security and limiting external dependencies, will ensure it continued state support for the foreseeable future. The sector is under a considerable degree of pressure, with population growth-led consumption resulting in the deterioration of its net production positions. Water stress represents a major challenge to cultivation while there is little unused land suitable for agriculture. As a result, Egypt is a major agricultural importer, which resulted in its high exposure to the 2022-2023 tensions across international agricultural markets and lead to a pronounced increase in domestic food price inflation. Moreover, the domestic livestock sector's reliance on imported feed grains meant that elevated import costs in this period saw a contraction in herd and flock sizes.

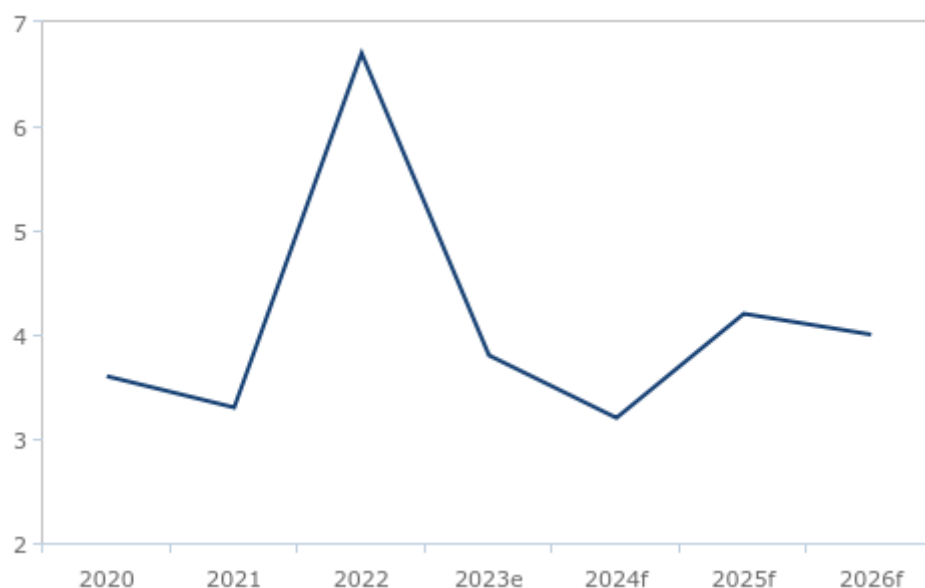
Latest Updates And Structural Trends

1. Macroeconomic Update: Light At The End Of The Tunnel

On March 6 2024, the Egyptian government reached a deal with the IMF that saw its fund programme increase from USD3bn to USD8bn, which was later approved by the IMF Executive Board at the end of the month. The announcement of the expanded programme followed a series of reforms – including increased administered prices, expanded social support, and tighter monetary policies – in Egypt. On March 6 itself, the Central Bank of Egypt (CBE) hiked interest rates by 600 basis points (bps), following a hike of 200bps on February 1 2024, and implemented an exchange rate adjustment that saw the official exchange rate aligned with the parallel rate. Our Country Risk team believe that the CBE will now leave rates on hold for the remainder of 2024, with the overnight lending rate set at 27.25% and the overnight deposit rate at 28.25%. In their view, the cumulative rate hikes of February and March will be sufficient to establish a positive real interest rates – as well as positive yields on government bonds – but nonetheless expect that the inflation rate will hover around 30% throughout 2024.

Growth In FY2023/24 Will Be Shaped By Higher Borrowing Costs And The Closing Of The Official-Parallel Exchange Rate Gap

Egypt - Real GDP Growth, %, y-o-y (2020-2026)



e/f = BMI estimate/forecast. Source: CBE, BMI

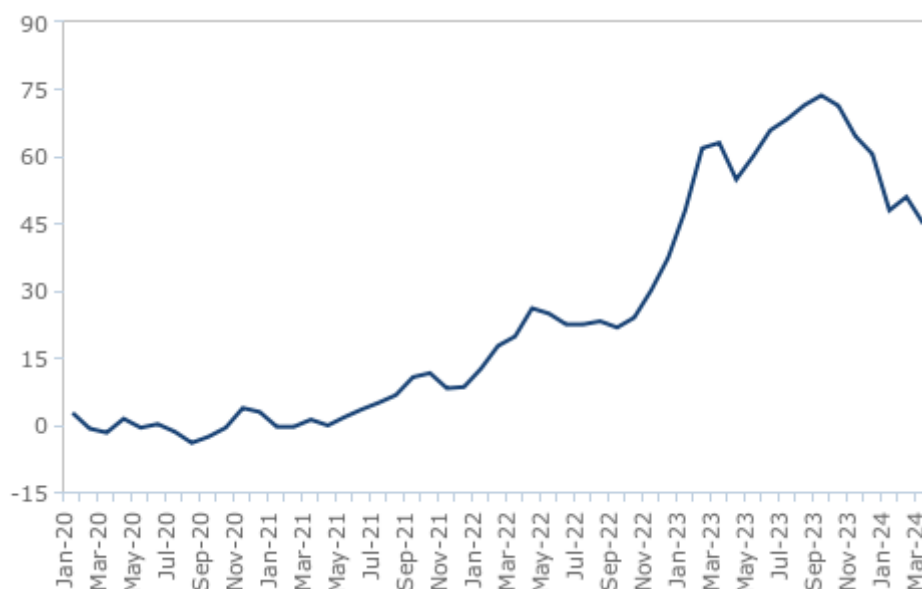
In February 2024, Egypt finalised a USD35bn investment deal with the UAE, the Ras El-Hekma deal, composed of USD24bn of capital inflows and a USD11bn decrease in foreign liabilities. A further USD8bn was secured from the EU while more than USD6bn was also secured from the World Bank. Between March and April 2024, the initial disbursements of the IMF, UAE, and other deals saw Egypt's international reserves climb from USD5bn to USD40.4bn. The inflow of foreign exchange will allow Egypt to cover its external financing needs, which are estimated to be USD15bn per annum and provide support to the Egyptian pound, which will aid the containment of inflationary pressures. In March, prices rose by just 1.0% m-o-m, having risen by 11.4% m-o-m in the previous month, which saw headline inflation in Egypt ease from 35.7% y-o-y to 33.3% y-o-y. In response to this below-consensus data point, our Country Risk team reduced their forecast for average inflation in 2024 from 36.9% to 32.5%. As for economic growth, our Country Risk team believes that the Egyptian economy will slow in 2024, forecasting a deceleration from 3.8% in FY2022/23 (July-June) to 3.2% before seeing a rebound to 4.2% in FY2024/25.

2. Dependence Upon Agricultural Imports Exposed Since Start Of 2022

Egypt is one of the world's largest wheat importers and is also a major international importer of corn and soybean, with domestic grains production able to cover about one half of total domestic grains consumption. The vulnerabilities inherent in this position were made apparent at the onset of the Russia-Ukraine war and the subsequent surge in international grain costs during Q2 2022. The impact of these external shocks in Egypt was mediated and amplified through domestic economic challenges, such as exchange rate pressures and currency devaluations as well as foreign exchange stresses. In consequence, domestic prices for agricultural commodities soared. Wheat is a staple component of the domestic diet while the production cost base of Egypt's livestock sector is highly exposed to international feed costs. The need to meet the requirements of the domestic subsidised bread scheme applied further pressure on Egypt's government's finances and contributed toward a further tightening of foreign exchange liquidity.

Food Price Inflation Has Now Started To Ease

Egypt - Food Price Inflation, %, y-o-y



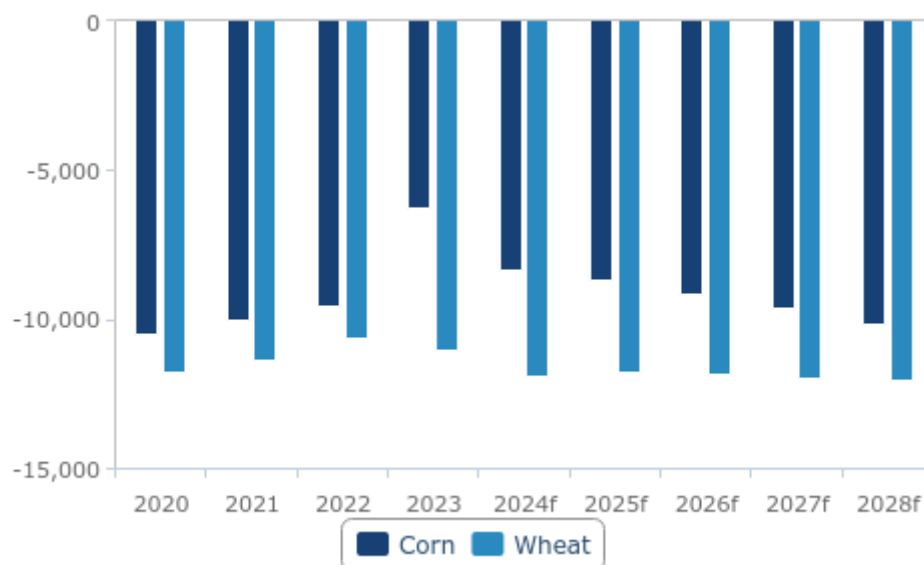
Source: Macrobond, BMI

In response to these events, Egypt's government has renewed its commitment to enhancing domestic agricultural production in order to temper the market's reliance on, and exposure to, international markets. We are cautious as to the scope for the government to increase production in a meaningful sense when compared to domestic consumption, which will continue to rise on

population growth, rising incomes, and urbanisation. Equally, pressures on water supplies and land resources are set to become more acute in Egypt through the medium term, which will require a concerted effort to manage if domestic production is not to fall. As a result, policies are being directed towards such fields as the development of water-efficient rice strains and the design of more efficient irrigation networks. Our forecasts point to the challenge that Egypt's agricultural sector will have in preventing its external dependencies from increasing throughout our forecast period.

Aggregate Net Grains Position Set To Deteriorate Further Through The Medium Term

Egypt - Grain Production Balance, '000 tonnes (2020-2028)



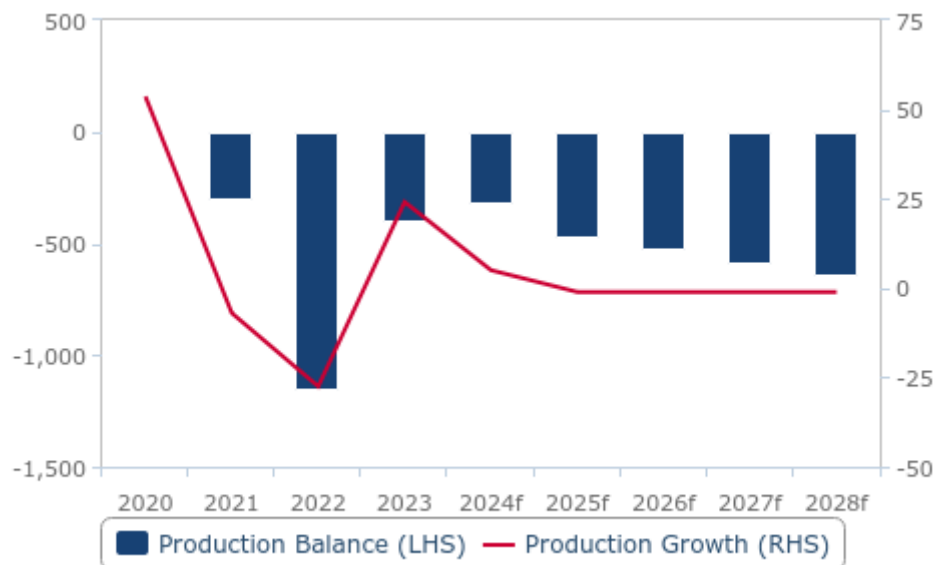
f = BMI forecast. Source: USDA, BMI

3. Grand Ethiopian Renaissance Dam The Latest Strain On Water Resources

We consider water stress to be the principal risk factor clouding agricultural outcomes in Egypt, with the issue set to grow more acute through the medium term in view of climate change, population growth and urbanisation, and the uncertainty surrounding the Grand Ethiopian Renaissance Dam (GERD). According to UN Water, Egypt's renewable freshwater resources amounted to 57.5bn cubic metres in 2018, while total freshwater resources available stood at 64.2bn cubic metres, which implies a water stress ratio of 116.2% (after accounting for an additional 2.6bn cubic metres of environmental flow requirement). In per capita terms, annual water supply is below the threshold deemed to qualify as 'absolute water poverty' by the UN, which has predicted that Egypt could be approaching an 'absolute water crisis' by as early as 2025. The agricultural sector is responsible for about 85% of all domestic freshwater withdrawals, while population growth, urbanisation, and increased demand from non-agricultural sectors have been the major drivers of recent stresses on water supplies. For the agricultural sector, water stresses both constrain the area of land suitable for grain cultivation and depress crop yield growth potential. In this light, the threat posed to Egypt's food security by water stress is clear.

Water-Intensive Rice Cultivation Increasingly Ill-Suited To Egyptian Conditions

Egypt - Rice Production Balance, '000 tonnes & Production Growth, %, y-o-y (2020-2028)



f = BMI forecast. Source: USDA, BMI

We note that worsening water stress (at least, the degree to which existing stresses worsen) is not unavoidable and that initiatives aimed at improving domestic water-use efficiency have been launched. The second National Water Resources Plan (NWRP) of 2017 (set to run until 2037) identified four pillars on which Egypt's water situation could be improved: water quality, water conservation, water resources development, and raising awareness. For the agricultural sector in particular, one initiative of note has been the issuance of punitive fines to farmers deemed to be practising inefficient irrigation techniques, often based on flooding and the wasteful use of water resources. State loans have been made available to farmers to finance investment in adaptive techniques and technologies. In addition, calls for further investment in precision irrigation have been made as has the consolidation of smaller farms into larger ones in order to improve resource use efficiency. The NWRP encouraged the rationalisation of crop cultivation in view of the preference for the cultivation of water-intensive crops, such as sugar cane and rice, held by many farmers. The Egyptian government has launched a USD15.3mn project to develop a coastal area of about 400,000 hectares for agricultural use. Other strategies include an increase in the rate of wastewater treatment and investment in water desalination capacities.

The GERD, the construction of which began in 2011 followed by the first phase of filling in 2020, has the potential to pose another threat to water security. Ethiopia plans to fill the dam in five years while the Egyptian government, concerned about a further reduction in water supplies, has requested that it be filled over the course of a decade. The pace of the fill (as well as the frequency of subsequent refills) is a critical determinant of the impact of the GERD on Egyptian water supplies. Another concern relates to the impact of filling the dam in the wake of a drought. In the short term, Egypt has drawn down its stores of water in the Aswan High Dam to make up the reduced Nile River flow but this represents a limited, unsustainable solution to reduced flow rate. In terms of water resources, Egypt is unusual in that it both relies on external water sources and that those resources are concentrated in a single source (ie, the Nile River). The development of the GERD itself has long been controversial, with Sudan also affected by the project. Negotiations mediated by the African Union were launched in 2020, stalled in 2021, and were restarted in 2023 but are yet to deliver a mutual agreement.

Egypt - Key Agribusiness Forecasts (2019-2028)

Indicator	2019	2020	2021	2022	2023	2024f	2025f	2026f	2027f	2028f
Corn self sufficiency, %	42.0	37.9	39.0	43.8	54.3	47.2	46.9	45.9	44.9	43.9
Rice self sufficiency, %	66.7	100.0	93.0	71.6	90.0	92.2	88.9	87.5	86.2	84.9
Wheat self sufficiency, %	41.5	42.2	44.4	48.0	46.2	42.6	43.9	44.0	44.1	44.3
Sugar self sufficiency, %	77.6	84.3	83.2	83.2	83.1	84.7	86.3	87.9	89.6	91.3
Milk self sufficiency, %	146.7	164.6	161.4	161.4	161.4	160.2	159.0	157.8	156.6	155.4
Butter self sufficiency, %	77.3	76.8	74.4	74.3	74.4	77.1	79.8	82.7	85.6	88.6
Cheese self sufficiency, %	111.8	110.7	109.5	108.5	108.3	107.8	107.4	106.9	106.5	106.0
Beef & veal self sufficiency, %	52.3	61.5	55.6	58.8	61.7	67.1	67.8	68.4	69.0	69.4
Poultry self sufficiency, %	96.2	96.8	98.4	97.6	96.9	95.2	93.8	92.6	91.5	90.6

f = BMI forecast. Source: USDA, OECD-FAO, BMI

SWOT

Agribusiness SWOT

Strengths	Weaknesses
<ul style="list-style-type: none"> • Agriculture remains a large source of domestic employment, accounting for more than 10% of GDP, and its continued development thus remains a political priority. • Egypt's location, transportation infrastructure and well-developed agricultural sector (relative to many of its neighbours) implies strong export potential. • Grain yields are high in Egypt, relative to neighbouring states and in the case of some crops by global standards, a result, in part, of the water supply provided by the Nile. • The expansion of the population, rising disposable incomes and dietary diversification have driven robust domestic consumption growth. 	<ul style="list-style-type: none"> • Egypt is dependent on the import of several staple agricultural commodities in order to meet domestic consumption growth. • The majority of Egypt does not qualify as agricultural land, while the agricultural lands it does possess are heavily dependent on the Nile. • The poor state of Egypt's internal collection and distribution infrastructure presents an obstacle to market efficiency and adds to supply chain costs. • Urban migration has weighed on the rural agricultural labour pool. • Water scarcity is an acute issue and is set to worsen, which will weigh on overall agricultural productivity and could see the cultivation of water-intensive crops fall.
Opportunities	Threats
<ul style="list-style-type: none"> • A coastal area of close to 400,000 hectares in upper Egypt has been set aside by the Government of Egypt to be used for agricultural cultivation, following reclamation. • Egypt's population is set to continue to expand through our forecast period, which will support higher levels of domestic consumption of agricultural products. • Favourable demographics will support strong levels of food consumption through the medium term and beyond. • Multinational majors are investing heavily in the market and in the region, improving production facilities and bolstering inter-regional trade flows. • The Government of Egypt has initiated a number of schemes designed to promote food security and to strengthen domestic crop cultivation. • The Government of Egypt is consulting on the introduction of a new ownership model based on the privatisation of state- and army-owned assets, seeking to increase private sector participation up to 65% in the medium term. 	<ul style="list-style-type: none"> • Domestic livestock farmers are dependent on imported grains, which could inflate production costs. • Egypt is heavily exposed to trade disruptions in the Black Sea region, as embodied in the war in Ukraine, upon which it relies for a large share of its imported grains. • Egypt remains a net importer of several staple agricultural commodities, exposing domestic food security to external shocks. • Urbanisation and the spread of urban agglomerations has applied pressure on agricultural land. • Water shortages and scarcity present an acute threat to agricultural production – in the short term, the filling of the Grand Ethiopian Renaissance Dam is set to weigh on water flow from the Nile.

Industry Forecast

Grains

Key View: Egypt is one of the world's largest wheat importers and has recorded increased corn imports in recent seasons on the back of the growth of the domestic livestock sector and an associated increase in animal feed demand. For at least the past decade, average wheat yields in Egypt have stagnated, which has seen production growth achieved on the back of harvested area expansions, a growth driver that has natural limits and could face further pressure from measures designed to tackle domestic water shortages. Extensive bread and other wheat-based product subsidies mean that per capita wheat consumption rates in Egypt are amongst the highest in the world while population growth has contributed to increased total wheat consumption. A significant reliance on imported grains renders the domestic market susceptible to shifts in conditions in international markets, albeit mediated via domestic subsidies.

Latest Updates

- We have left unchanged our forecasts for the production and domestic consumption of grains in Egypt as earlier presented in the previous edition of our Egypt Agribusiness report. With respect to wheat, we forecast that production will decline by 6.9% y-o-y to 8.8mn tonnes in the current 2023/24 (July-June) season – the result of a contraction in harvested area of a similar magnitude – and then increase by 4.0% y-o-y to 9.2mn tonnes in the upcoming 2024/25 season. As for corn, we still expect that output will remain unchanged at its level of the season prior, equivalent to 7.4mn tonnes, in the current 2023/24 season (October-September) and then increase by 2.8% y-o-y to 7.6mn tonnes in the upcoming 2024/25 season.
- On the demand side, we forecast that wheat consumption will increase by 1.0% y-o-y to 20.8mn tonnes in 2023/24 (July-June) and by a further 1.0% y-o-y to 21.0mn tonnes in 2024/25. It also remains our view that domestic corn consumption will stage a noticeable rebound in 2023/24 (October-September), having fallen by 19.4% y-o-y in 2022/23. We forecast that consumption will increase by 15.0% y-o-y to 15.8mn tonnes in 2023/24 and then by 3.6% y-o-y to 16.3mn tonnes in 2024/25. One factor that underpins our assessment that corn consumption in Egypt will increase is the parallel rebound in production activities in the domestic poultry sector in 2024, which had faced severe headwinds in the form of elevated feed import costs in 2022-2023.
- The net result of our forecasts for the wheat sector is that we expect Egypt's domestic wheat production deficit to widen from 11.1mn tonnes in 2022/23 (July-June) to 11.9mn tonnes in 2023/24 and then to narrow to 11.8mn tonnes in 2024/25. The USDA forecasts that Egyptian wheat imports will amount to 11.0mn tonnes in 2023/24, down from 11.2mn tonnes in 2022/23. With respect to corn, our outlook indicates that the Egyptian corn production deficit will widen from 6.3mn tonnes in 2022/23 (October-September) to 8.3mn tonnes in 2023/24 and then to almost 8.7mn tonnes in 2024/25. The USDA forecasts that Egyptian corn imports will increase from 6.2mn tonnes in 2023/24 to 8.5mn tonnes in 2023/24, which remains below pre-pandemic norms.
- In March 2024, Egypt signed an expanded loan deal with the IMF that stands to increase its current programme from USD3bn to USD8bn, which followed the announcement of an investment deal valued at USD35bn signed with the UAE. We expect that this increase of foreign exchange will ease the constraints on grain imports and allow for the release of grains that had earlier accumulated in Egyptian ports in lieu of payment. Nonetheless, the USDA forecasts that Egyptian wheat inventories will decline to 3.0mn tonnes at the end of 2023/24 (July-June), which would represent their lowest level since 2003/04. Meanwhile, the agency forecasts that corn inventories will fall to 1.4mn tonnes at the end of 2023/24 (October-September), a three-season low.
- In March 2024, Feerum Egypt, the Egyptian subsidiary of Feerum, the Poland-based construction active in grain elevators, grain storage facilities, and other post-harvest machineries, announced a USD33mn investment in a new production facility in East Port Said. The facility will be dedicated to the design, manufacture, and construction of grain storage silos and Feerum Egypt has committed to sourcing 80% of the final product within Egypt within three to five years. As of 2023, 75 grain silos were located in Egypt with combined storage capacities of 3.6mn tonnes. In 2021, a national silo programme was launched in view of both Egypt's rising grain import requirements and concerns as to the quality of existing facilities. Increased storage capacities could see domestic grain price volatility reduced.

Risks To Outlook

	Risks
Short term	<ul style="list-style-type: none"> Domestic grain production can be negatively affected by adverse weather conditions, such as drought and periods of intense heat, which can weigh on harvest volumes and necessitate a higher level of imports than would otherwise have been the case. At the same time, these conditions could also reduce domestic feed grain demand. Egypt is one of the world's largest wheat importers and also relies upon international markets for a sizeable volume of corn imports. As a result, the domestic market is exposed to fluctuations in global harvest conditions and international market prices as well as exchange rate and foreign exchange pressures. The emergence or outbreak of pests and crop diseases poses a significant short-term risk to domestic grain production. Locust swarms, for instance, have historically been a threat to agriculture in the region. Wheat rust and other crop diseases can spread rapidly, leading to a significant fall in yields.
Long term	<ul style="list-style-type: none"> Egypt faces significant long-term risks due to water scarcity, which is exacerbated by the increasing demands of a growing population, rising water demand from non-agricultural sectors, and the potential impacts of climate change. Here, too, the operation of the Grand Ethiopian Renaissance Dam could pose a downside risk to water supplies and therefore to domestic grain harvests. The Egyptian government occupies an active and interventionist position in the domestic grains market, via mechanisms including bread subsidies and fixed public procurement prices. As a result, policy changes can have a significant impact on production volumes and domestic consumer market outcomes. The impacts of climate change, including increased temperatures, changes in precipitation patterns, and the potential for more frequent extreme weather events, pose a significant long-term risk to Egyptian grain production. Adaptation measures will necessitate investment in new technologies and agricultural practices, potentially leading to increased production costs.

Source: BMI

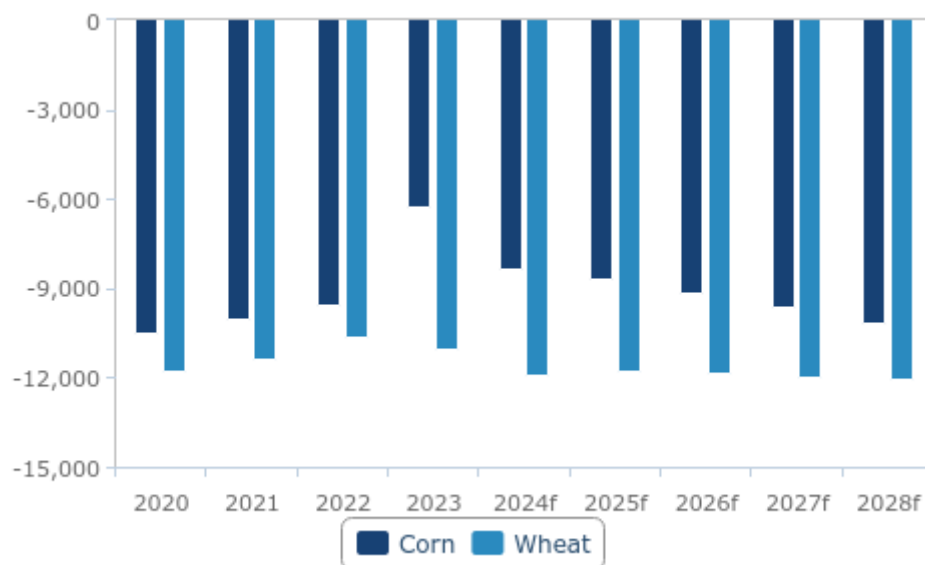
Structural Trends

1. Wheat Demand High And Saturated While Corn Demand Rises On Increased Feed Consumption

Since 2010/11, domestic corn consumption in Egypt has risen at an average rate of 2.9% per annum, faster than domestic wheat consumption, which rose at an average pace of 1.4% per annum. Given the average pace of population growth in Egypt, this points to a divergent trend between the two grains, with per capita demand for the former rising and for the latter falling. While the combined per capita consumption of the two grains increased from 329kg to 338kg between 2012/13 and 2021/22, per capita wheat consumption fell by 15kg, decreasing from 200kg to 185kg over the period. Conversely, individual corn consumption rates increased from 129kg in 2012/13 to 153kg in 2021/22. In aggregate terms, Egypt's combined corn and wheat deficit widened from 16.4mn tonnes to 20.2mn tonnes during this period despite the domestic wheat production deficit holding more or less flat, with average corn production growth of 1.5% per annum and average wheat production growth of 3.1% per annum.

Rising Animal Feed Demand To See Medium-Term Deterioration Of Net Corn Position

Egypt - Grains Production Balance, '000 tonnes (2020-2028)

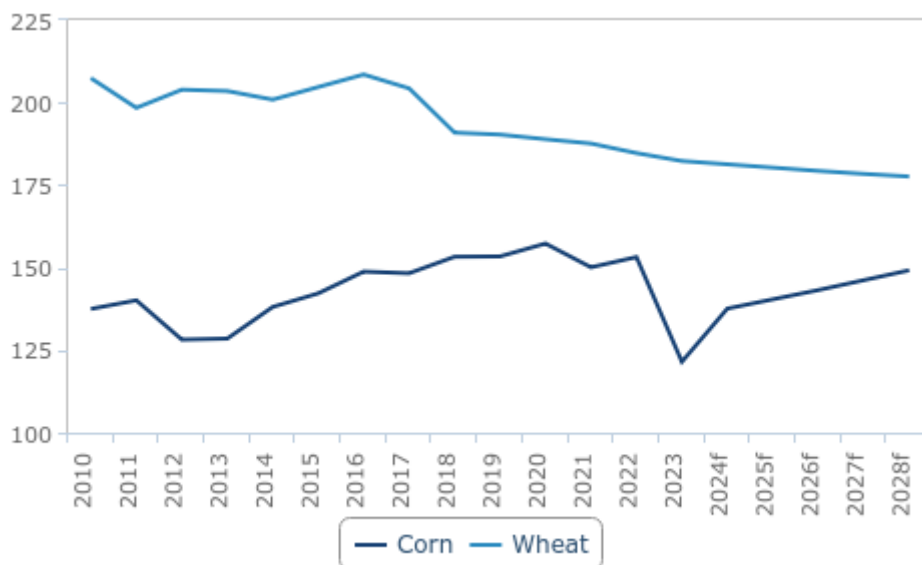


f = BMI forecast. Source: USDA, BMI

Despite recent falls, rates of per capita wheat consumption in Egypt remain high by world standards, reflecting extensive subsidies as are common across the rest of North Africa. According to a 2023 World Bank report, Egypt operates the largest food subsidy scheme in the Middle East and North Africa (MENA) region, with 90% of the population eligible for some measure of support and 72mn people eligible for subsidised bread loaves. In FY2022/23, the cost of Egypt's food subsidies rose to EGP90bn in light of global food price inflation and has been set at almost EGP130bn in FY2023/24, with EGP90bn – equivalent to the total cost of the scheme in FY22/23 – allocated towards bread subsidies. Qualified recipients in Egypt are entitled to five loaves of subsidised ('baladi') bread per day (150 per month), which is sold at a rate of less than one tenth of the actual cost, with Egypt's authorities compensating bakeries for the difference. This amounts to the production of more than 250mn subsidised loaves per day while wheat-based pasta is also made available on a subsidised basis. One initiative designed to reduce the wheat burden has been the introduction of a points systems in which a recipient is able to convert units of bread not consumed into points to use for the purchase of other food and non-food items.

Per Capita Wheat Consumption To Maintain Downward Trend

Egypt - Grains Consumption, kg per capita (2010-2028)

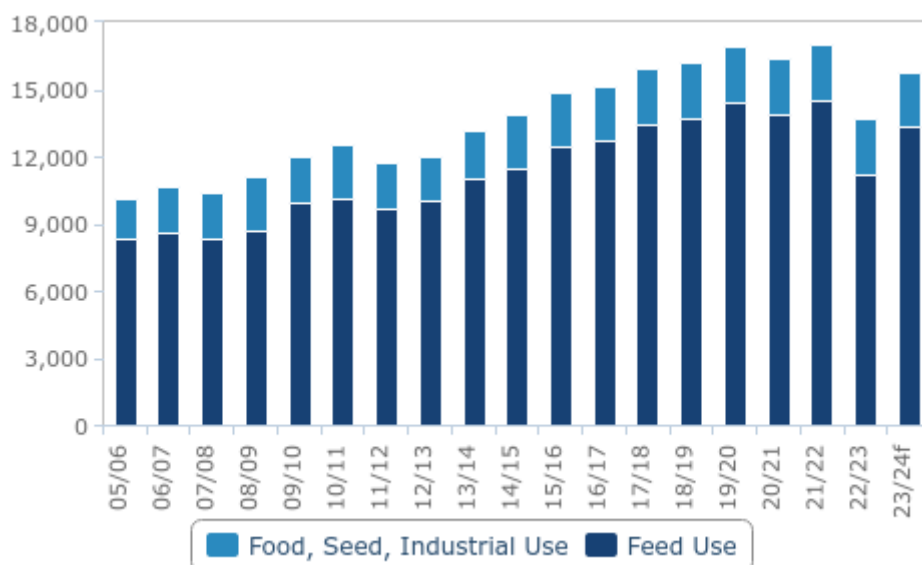


f = BMI forecast. Source: USDA, BMI

Pressure on Egypt's net corn position has come not from the subsidised food scheme but from the growth of the domestic poultry sector, with over 10mn tonnes of corn diverted to feed consumption in each season since 2010/11 with the exception of 2011/12, reaching a new record high of 14.5mn tonnes in 2021/22. This period has been accompanied by a pronounced increase in per capita poultry consumption in Egypt, rising from 10.3kg per capita in 2012 to 18.5kg per capita in 2022, while exceeding 20kg per capita for the first time in 2021. Indeed, the estimated fall in corn consumption in 2022/23 was the result of about half of all domestic poultry producers halting operations in the face of elevated international corn prices and hold-ups in corn deliveries from Egypt's ports during the latter stages of 2022, partly the result of foreign exchange issues.

Domestic Corn Consumption Sensitive To Downturns In Livestock Production

Egypt - Corn Consumption, '000 tonnes



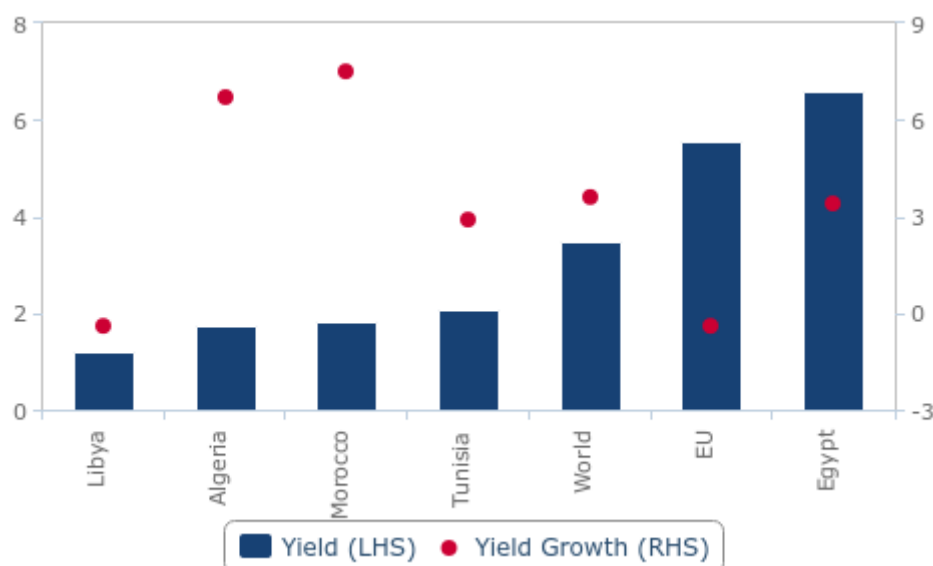
f = USDA forecast. Source: USDA, BMI

2. High Grains Yields Belie Stagnant Productivity Growth

Egypt's wheat yields stood at an average of 6.45 tonnes per hectare during the 2000s and at 6.44 tonnes per hectare during the 2010s while mean corn yields stood at 7.85 tonnes per hectare and 7.35 tonnes per hectare during the same two ten-year periods. Here, we note two points. On the one hand, these yield figures are in line with those observed in the EU through the same period and far stronger than those achieved across the rest of North Africa, a reflection of comparatively abundant water supplies, delivered by the Nile River, as well as favourable climatic conditions for grains cultivation. This makes clear the potential threat to the sector posed by the Grand Ethiopian Renaissance Dam insofar as water from the Nile River has underpinned much of its relative productivity to date. On the other hand, the inertia that characterises these figures has left acreage expansion as the means by which Egypt's grain sector has achieved production growth. This growth model is necessarily subject to an ultimate limit in view of the need to plant crops in suitable areas and is likely to be associated with rising production costs insofar as less advantageous land will be taken into the sector as time passes. In addition, increased water shortages – and the threat of more acute water scarcities in the medium term – has led the Egyptian government to clamp down on water use in the agricultural sector in part via limiting the area of land planted with certain crops.

Nile River Water Supplies And Favourable Climatic Conditions Support Strong Egyptian Wheat Yields

Egypt - Wheat Yield, tonnes per hectare, 2015/16-2022/23 avg. & Growth, %, y-o-y, 2015/16-2022/23 avg.

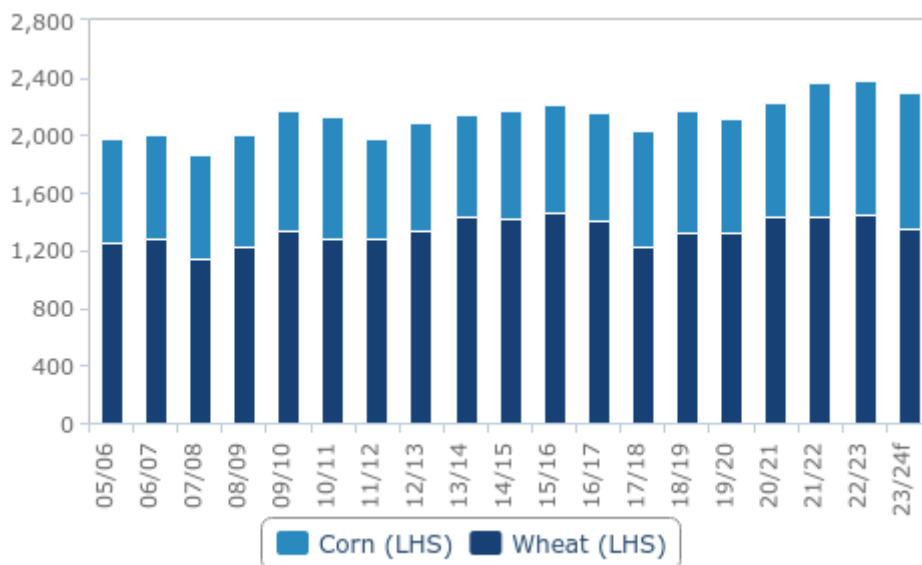


Source: USDA, BMI

The failure to generate sustained, meaningful yield improvements represents a severe challenge to structural output growth over the medium term as the continued expansion of the area of agricultural land will face competition from population growth and urbanisation as well as lead to unsustainable outcomes related to water use, soil degradation, and desertification. Moreover, a 2021 European Commission report on the Egyptian agricultural sector indicated that the prevailing farmer response to heightened land scarcity, that of the overapplication of nitrogen-based fertilisers, served to lower yields rather than increase them. We note that the USDA estimates that a record harvested area for all grains of 3.3mn hectares was achieved in 2022/23 but it remains to be seen how sustainable this increase shows itself to be, motivated as it was by idiosyncratic domestic policy conditions prompted by the onset of the Russia-Ukraine War in February 2022. Of note is the USDA's forecast of a 6.9% y-o-y decline in wheat harvested area in 2023/24.

Recent Trend Of Combined Grains Acreage Signals Constraints On Further Expansion

Egypt - Grains Harvested Area, '000 hectares



f = USDA forecast. Source: USDA, BMI

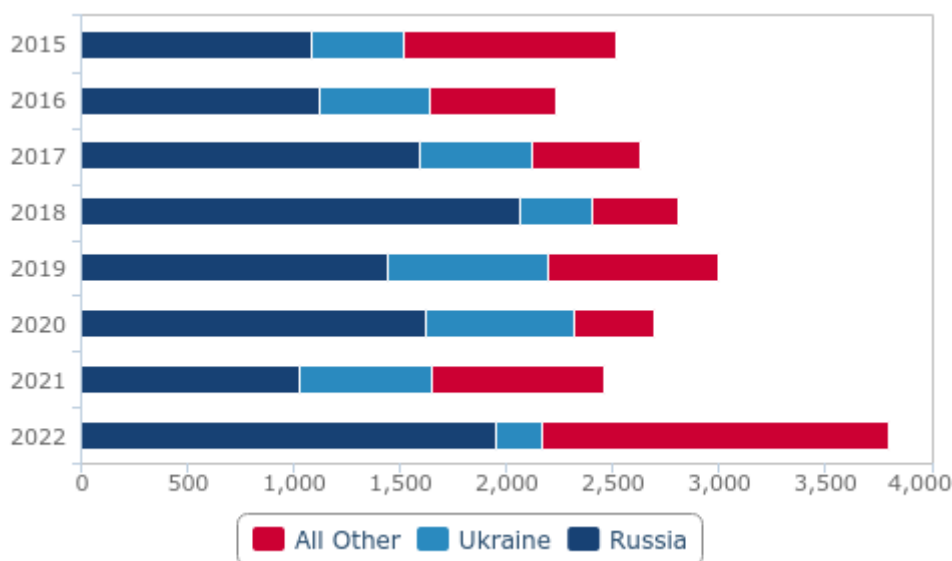
The Agricultural Research Center, a branch of the Egyptian Ministry of Agriculture and Land Reclamation, has acknowledged the upward pressure that is required to be brought to bear on grain yields and has focused its efforts on driving intensive (ie, yield- or unit-driven) output growth instead of expansion-based measures. With regard to wheat, these efforts have included expanding the area of raised bed cultivation in an attempt to lessen the impact of water scarcity and to reduce the number of required seed inputs, expanding the cultivation of novel strains and varieties of wheat plants, expanding the distribution of high-quality seeds to farmers, and expanding the knowledge base of Egypt's grains sector via technical extension services. As for corn, much of the same measures have been applied or are under development, with a particular emphasis on the deployment of higher-yielding, less water-intensive corn varieties and the delivery of training as to the grain's optimal planting and growing conditions.

3. Vulnerabilities Of Import Dependence Exposed By Recent Market Disruptions

Between 2011 and 2021, Egypt was either the largest or the second largest global importer of wheat on all but two occasions. Since 2010, almost two thirds of all the wheat imported by Egypt has been sourced in either Russia or Ukraine, which has rendered Egypt highly vulnerable to disruptions to supplies from either exporter. This being the case, combined with the size of Egypt's domestic wheat deficit and implied import requirement, the onset of the Russia-Ukraine War, following the former's February 2022 invasion of the latter, posed a severe threat to Egypt's grain security. While the Egyptian government introduced a series of measures designed to stimulate domestic grains production growth, such as the introduction or the raising of minimum procurement prices, the introduction of other measures implemented in response to a foreign exchange shortage, such as restrictions on import finance, acted to reduce the availability of grains on the domestic market, contributing to elevated food price inflation. The launch of Egypt's long-heralded Mercantile Exchange in November 2022 was accelerated, at least in part, by a desire to ensure a ready supply of wheat to the domestic private milling sector. Trade diversification has been pursued, with grain imports from Brazil and Romania, amongst others, rising in 2022.

Reduced Ukrainian Exports In 2022 Offset Via Increased Purchases From Russia And The EU

Egypt - Wheat Imports, USDmn (2015-2022)



Source: Trade Map, BMI

As for corn, Egypt's annual imports placed it between fourth and seventh in the world in each year between 2011 and 2021, at the end of which period annual corn imports were valued at USD2,411mn. While Egypt's direct corn trade exposure to the Russia-Ukraine war is less than that of wheat – since 2010, close to 30% of Egypt's foreign corn purchases were made from Ukraine and a negligible amount from Russia – the indirect impact of the conflict on global grains prices nevertheless ensured that its position as a major importer had a significant impact on local availability and prices. It served as a further drain on foreign exchange reserves. According to the USDA, corn imports are set to fall from 9.8mn tonnes in 2021/22 to an estimated 6.0mn tonnes in 2022/23, while payment issues related to foreign currency transactions resulted in delivery backlogs and delays during the latter stages of 2022.

Production And Consumption (Egypt 2019-2028)

Indicator	2019	2020	2021	2022	2023	2024f	2025f	2026f	2027f	2028f
Corn production, '000 tonnes	6,800.0	6,400.0	6,400.0	7,440.0	7,440.0	7,440.0	7,649.6	7,756.6	7,865.1	7,975.1
Corn production, % y-o-y	6.3	-5.9	0.0	16.3	0.0	0.0	2.8	1.4	1.4	1.4
Corn consumption, '000 tonnes	16,200.0	16,900.0	16,400.0	17,000.0	13,700.0	15,755.0	16,321.6	16,908.7	17,516.8	18,146.8
Corn consumption, % y-o-y	1.9	4.3	-3.0	3.7	-19.4	15.0	3.6	3.6	3.6	3.6
Corn consumption, kg per capita	153.4	157.3	150.1	153.2	121.5	137.6	140.4	143.2	146.2	149.2
Corn production balance, '000 tonnes	-9,400.0	-10,500.0	-10,000.0	-9,560.0	-6,260.0	-8,315.0	-8,672.1	-9,152.1	-9,651.7	-10,171.7
Corn self sufficiency, %	42.0	37.9	39.0	43.8	54.3	47.2	46.9	45.9	44.9	43.9
Wheat production, '000 tonnes	8,349.0	8,559.0	9,102.0	9,842.0	9,500.0	8,844.8	9,200.0	9,319.5	9,440.6	9,563.3
Wheat production, % y-o-y	-0.9	2.5	6.3	8.1	-3.5	-6.9	4.0	1.3	1.3	1.3
Wheat consumption, '000 tonnes	20,100.0	20,300.0	20,500.0	20,500.0	20,550.0	20,755.5	20,963.1	21,172.7	21,384.4	21,598.3
Wheat consumption, % y-o-y	1.5	1.0	1.0	0.0	0.2	1.0	1.0	1.0	1.0	1.0
Wheat consumption, kg per capita	190.3	188.9	187.6	184.7	182.3	181.3	180.3	179.3	178.4	177.6
Wheat production balance, '000 tonnes	-11,751.0	-11,741.0	-11,398.0	-10,658.0	-11,050.0	-11,910.7	-11,763.1	-11,853.2	-11,943.8	-12,035.0
Wheat self sufficiency, %	41.5	42.2	44.4	48.0	46.2	42.6	43.9	44.0	44.1	44.3

f = BMI forecast. Source: USDA, BMI

Rice

Key View: We believe that a structural production deficit has emerged in the Egyptian rice sector, and that it will continue to widen throughout our forecast period as the issue of water scarcity becomes more acute. With respect to production, the approval of a new water resources law in 2021 that allowed for the designation of authorised rice cultivation areas and bolstered measures to curb illicit cultivation, in view of the water-intensive nature of rice cultivation, has exerted downward pressure on harvested area, which we expect will see production trend lower throughout our forecast period. Here, the development and commercialisation of less water-intensive rice varieties suited to Egyptian conditions – with one new variant set for cultivation in 2024 – poses an upside risk to our production forecasts. On the demand side, we believe that medium-term consumption growth will be tied to population growth.

Latest Updates

- We hold unchanged our forecasts for Egyptian rice production and domestic consumption in the 2023/24 season (October-September) as presented in the previous edition of our Egypt Agribusiness report. As such, we remain of the view that output will increase by 5.0% y-o-y to 3.8mn tonnes and that domestic consumption will increase by 2.5% y-o-y to 4.1mn tonnes. This being the case, our outlook indicates that Egypt's domestic rice production deficit will narrow from 400,000 tonnes in 2022/23 to 320,000 tonnes in 2023/24, a three-season low. Given deficit production, we note that elevated international rice prices pose a downside risk to our near-term outlook for domestic rice consumption in Egypt. Meanwhile, we have also maintained our forecasts for the upcoming 2024/25 season, which point to a decline in output of 1.1% y-o-y and an increase in domestic consumption of 2.6% y-o-y, which will see the Egypt's rice deficit climb to almost 470,000 tonnes.
- In April 2024, the Egyptian Prime Minister Mostafa Madbouly stated both the need for rice cultivation to be contained within designated areas and for the development of less water intensive rice varieties at a ministerial meeting, as reported by Daily News Egypt, a news service. The development of more water efficient rice varieties has been in process in Egypt for some time in light of mounting concerns as to the issue of water scarcities. The Agricultural Research Center (ARC), an Egyptian research institute, has developed, according to USDA reports, early maturing rice varieties with a production time of three months that require 9,000-10,000cu m of water per hectare as compared to 14,000-15,000cu m of water per hectare for other rice varieties. In May 2024, ARC intends to begin cultivating 'Giza Basmati 201' and 'Giza Basmati 11', both of which have been designed to suit conditions in Egypt, after field testing over the past two seasons.
- In December 2023, the Indian government permitted the export of 60,000 tonnes of non-basmati white rice to Egypt, granting an exemption to an export ban on non-basmati white rice under a provision that permitted foreign sales if the export ban itself could be shown to have adversely affected food availability in foreign markets. In 2022, according to UN Comtrade data, Egypt imported more than 110,000 tonnes of rice from India out of a total volume of rice imports of approximately 600,000 tonnes as compared to total rice imports of 327,000 tonnes in 2021. The USDA forecasts that end-of-season rice stocks in Egypt will increase by 25,000 tonnes to 625,000 tonnes in 2023/24. Inventories fell to 600,000 tonnes at the end of the 2022/23 season, their lowest level since 2012/13, having exceeded 1.1mn tonnes in 2020/21.

Risks To Outlook

	Risks
Short term	<ul style="list-style-type: none"> • Due to the water-intensive nature of its cultivation, rice planting is regulated by Egypt's Ministry of Water Resources and Irrigation in collaboration with the Ministry of Agriculture and Land Reclamation, with fines extended to those cultivating rice outside the allocated areas. Therefore, the potential further tightening of these allocations poses a downside risk to production. • In recent seasons, Egypt has become increasingly dependent upon imports to meet domestic rice consumption. As a result, domestic market outcomes have become more sensitive to price fluctuations in

	Risks
	<p>the international rice market as well as fluctuations in the value of the Egypt's pound and the availability of foreign reserves.</p> <ul style="list-style-type: none"> • The Egyptian rice sector is vulnerable to sudden outbreaks of pests and diseases. Examples include the brown plant hopper or rice blast disease, which can significantly reduce yields if not managed promptly and effectively. Risks management measures – as well as reactive measures – could see an increase in production costs.
Long term	<ul style="list-style-type: none"> • Climate change, associated with increases in average temperatures and more variable rainfall patterns, could see water stress in Egypt increase, which poses a downside risk to average rice yields, notwithstanding efforts to develop and commercialise less water-intensive rice varieties better suited to Egyptian cultivation conditions. Meanwhile, increased salinity intrusion in the Nile Delta, where much of Egypt's rice is grown, could also reduce the area suitable for rice cultivation. • Ongoing issues such as soil erosion, nutrient depletion, and salinisation can degrade arable land over time, reducing its productivity. The continuous cultivation of rice without adequate soil management practices can exacerbate these issues, leading to a decline in the long-term viability of rice farming in Egypt. • Water scarcity is an increasingly acute challenge in Egypt and rice cultivation will come under pressure from both a reduction in available water supplies as well as a potential decision to prioritise the cultivation of less water-intensive crops. Increased water stress could also see further contractions in the designated rice planting areas in Egypt.

Source: BMI

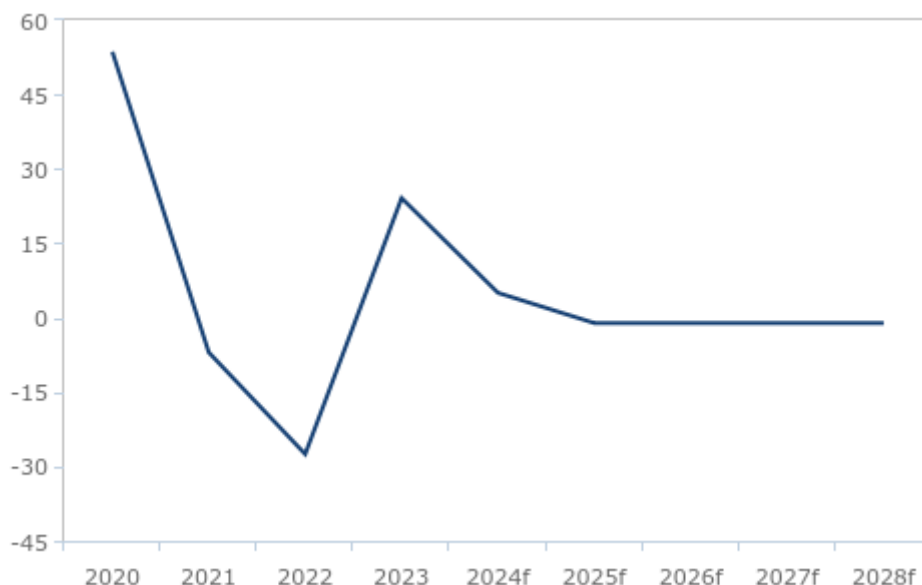
Structural Trends

1. Potential Production Growth Limited By Water Stress

The cultivation of rice is a water-intensive undertaking, which sits at odds with Egypt's progressively more acute challenge of balancing domestic water use with the availability of water resources. This issue has been further exacerbated by uncertainty surrounding Egypt's allocation of water from the Grand Ethiopian Renaissance Dam (GERD). At the end of September 2023, the second round of trilateral negotiations on the issue of GERD water allocations, which included Sudan, ended without tangible evidence of the parties having made substantial progress. In March 2024, the Egyptian Minister of Water Resources and Irrigation of Egypt, Hani Sewilam, described the negotiations as a 'waste of time' according to reports and that further engagement in the negotiation process was not planned. Egypt relies on the Nile for 97% of its total water resources, with per capita water supplies available to Egypt, 560 cubic metres, already well below the international threshold for water stress of 1,000 cubic metres per capita. Meanwhile, climate change is set to further increase water stress in Egypt, which could prompt a shift towards the cultivation of less water-intensive crops, whether at the direction of the state or the result of farmers' decisions. In the short term, population growth and increased water demand from non-agricultural sectors will continue to add stress to domestic water supplies.

Planted Area Contractions And Increased Water Stress Will See Production Trend Lower

Egypt - Rice Production, %, y-o-y (2020-2028)

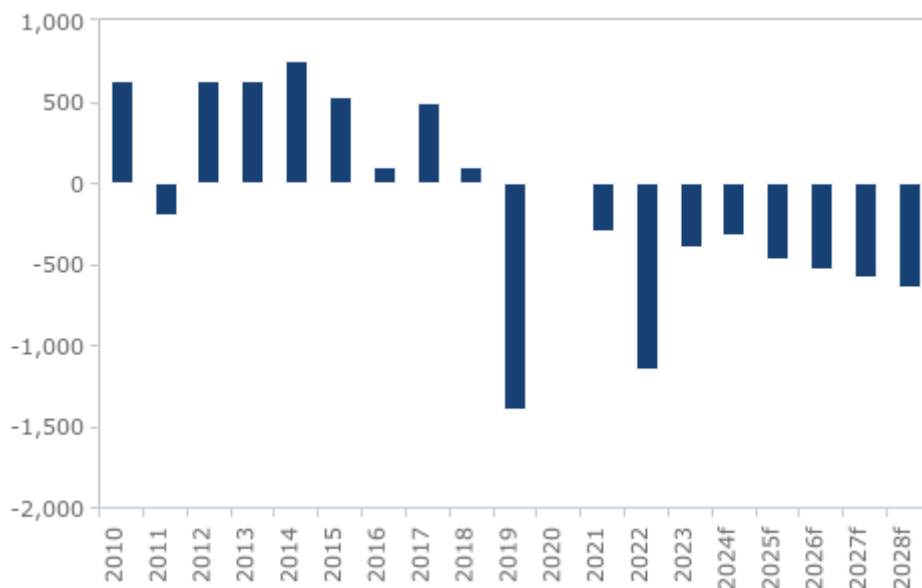


f = BMI forecast. Source: USDA, BMI

Egypt's Ministry of Water Resources and Irrigation, acting in coordination with the Ministry of Agriculture and Land Reclamation, has attempted to set a cap on the area of land under rice, albeit with limited success despite the issuing of fines to farmers that plant rice outside the allotted area. In 2018/19, the allotted rice area was cut to just above 300,000 hectares, which saw harvested area fall from above 750,000 hectares in 2017 to around 460,000 hectares and the generation of record production deficit of 1.4mn tonnes. Here, we note that illicit rice planting (ie, outside the allotted area) remains a fact, which explains how the harvested area in 2018/19 exceeded that designated by officials. Nonetheless, rice production fell by almost 35% y-o-y in 2018/19, which saw imports increase from under 90,000 tonnes the season prior to more than 800,000 tonnes as well as a 40% y-o-y fall in season-ending stocks. As a result, we expect that rice production will start to trend downwards through the medium term, with our forecast pointing to an average rate of decline of 1.1% per annum between 2025/26 to 2027/28, which will lead to the emergence of a structural output deficit. Efforts on the part of Egypt's Agricultural Research Center aimed at developing rice varieties with a higher degree of water efficiency than the varieties planted at present pose a upside risk to our production outlook (see *Latest Updates*).

Output Constraints And Domestic Consumption Growth To See A Structural Deficit Emerge

Egypt - Rice Production Balance, '000 tonnes (2010-2028)



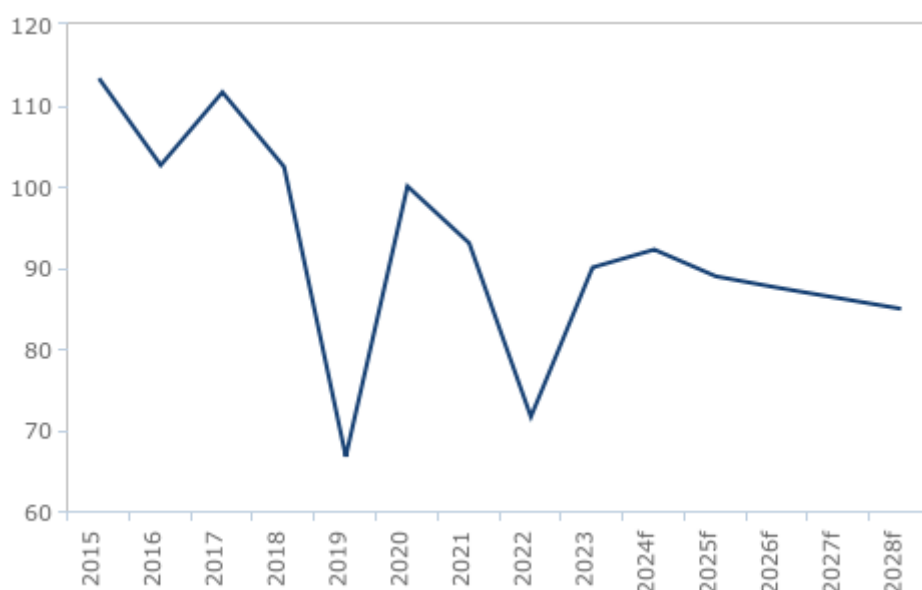
f = BMI forecast. Source: USDA, BMI

2. Domestic Constraints To Fuel Import Demand

Since the start of the 1990s, Egypt has been required to meet more than 10% of its domestic rice consumption with imports on just three occasions, all of which have occurred since 2018/19. Pressure on Egypt's net rice position led to the prohibition of rice exports in 2013, which was then reversed in 2014 before being reintroduced in 2017, after which point exports fell to negligible volumes. In conjunction with trade restrictions, the Egyptian government has turned to mandatory procurement volumes to ensure local supplies to the domestic subsidised food schemes, with non-compliance subject to cultivation bans during the following season, withdrawals of subsidised fertilisers, and punitive fines. The procurement scheme, which is not as extensive as that present in the domestic wheat sector in view of the relative contribution of both grains to domestic food security, has been unpopular at times, with procurement prices sometimes set below those offered by private traders and domestic millers. Unlike the domestic wheat sector, the private sector occupies a leading role in the Egyptian rice sector, which can render production decisions more sensitive to market forces.

Deterioration Of Net Position Will See Domestic Market More Sensitive To International Market Conditions

Egypt - Rice Self-Sufficiency, % (2015-2028)



f = BMI forecast. Source: USDA, BMI

The increasing reliance of the rice sector on imports has exposed the consumer market to the twin risks of international rice price fluctuations and domestic exchange rate volatility, including, in recent times, the devaluation of Egyptian pound. Having generated an average rice trade surplus of USD315mn per annum between 2005 and 2009, Egypt has now not generated a single surplus since 2015, with a cumulative trade deficit of around USD600mn since 2016. Since 2016, Egypt has relied upon India and Mainland China to provide the bulk of its rice imports, which has exposed domestic consumers to India's rice export restriction of 2022 and 2023, which remain in effect as of April 2024, on the one hand, and to China's inconsistent presence in the global export market. Thailand and Vietnam have supplied the bulk of Egypt's remaining imports. The rising preference of Egypt's consumers for higher-value rice varieties, such as basmati and jasmine, has added further pressure on Egypt's net rice trade position, with unit import costs trending upwards in recent years.

Rice Production And Consumption (Egypt 2019-2028)

Indicator	2019	2020	2021	2022	2023	2024f	2025f	2026f	2027f	2028f
Rice production, '000 tonnes	2,800.0	4,300.0	4,000.0	2,900.0	3,600.0	3,780.0	3,738.4	3,697.3	3,656.6	3,616.4
Rice production, % y-o-y	-34.9	53.6	-7.0	-27.5	24.1	5.0	-1.1	-1.1	-1.1	-1.1
Rice consumption, '000 tonnes	4,200.0	4,300.0	4,300.0	4,050.0	4,000.0	4,100.0	4,206.6	4,223.4	4,240.3	4,257.3
Rice consumption, % y-o-y	0.0	2.4	0.0	-5.8	-1.2	2.5	2.6	0.4	0.4	0.4
Rice consumption, kg per capita	39.8	40.0	39.4	36.5	35.5	35.8	36.2	35.8	35.4	35.0
Rice production balance, '000 tonnes	-1,400.0	0.0	-300.0	-1,150.0	-400.0	-320.0	-468.2	-526.1	-583.7	-640.9
Rice self sufficiency, %	66.7	100.0	93.0	71.6	90.0	92.2	88.9	87.5	86.2	84.9

f = BMI forecast. Source: USDA, BMI

Livestock

Key View: In 2022-2023, the Egyptian livestock sector faced acute headwinds that will continue to affect outcome during 2024. The structural vulnerabilities inherent in the sector's reliance on imported feed grains and breeding stock were made clear in the face of international feed cost inflation as well as domestic exchange rate and foreign reserve pressures. As a result of increased production costs, the size of the domestic cattle and poultry flocks contracted, which will necessitate investment in stock re-accumulation. In the near term, the conflict in Sudan, the main source of Egyptian cattle imports, could disrupt cattle stock increases. However, the shorter production cycle and lower investment requirements of the poultry sector will see output rebound to a greater extent than in the beef sector in 2024. In the medium term, we expect that the export growth potential of the poultry sector will continue to attract investment and, therefore, underpin robust production growth. On the demand side, the lower price point of poultry products and eggs as compared to beef products will render consumption more resilient to fluctuations in macroeconomic conditions.

Latest Updates

- We have made an upward revision from 1.7mn tonnes to 2.0mn tonnes to our forecast for Egyptian poultry production in 2024. This revision reflects a faster-than-expected rebound in production activities following the challenges of 2022-2023 when elevated international feed grain costs, the decline in the value of the Egyptian pound, and foreign exchange pressures saw a widespread cessation of operations across the sector. Output fell by 16.8% y-o-y in 2022 and by a further 7.5% y-o-y in 2023, which saw production fall from 2.4mn tonnes in 2021 to under 1.9mn tonnes. However, the consistent decline in international corn prices since their Q1 2022 high has eased production cost pressures, with feed accounting for 75% of total costs, and has facilitated a sharp rebound in production.
- We have held unchanged our forecasts for the production and domestic consumption of beef in Egypt in 2024. As such, we forecast that production will increase by 11.4% y-o-y to 440,000 tonnes and that domestic consumption will increase by 2.4% y-o-y to 655,400 tonnes in 2024, which will see a 30,000-tonne decline to 215,000 tonnes in the size of the Egyptian beef production deficit as compared to 2023. In February 2024, Egypt signed a trade agreement with Brazil intended to affect a simplification of the process of exporting Brazilian livestock products, including beef and poultry, to Egypt. In 2021 and 2022, India was the largest exporter of bovine meat – in the main, water buffalo – to Egypt but Brazil has been the principal supplier of beef to Egypt, accounting for over 55% of total imports in 2020 for example.
- In March 2024, the allocation of over EGP300mn to small-scale cattle breeders was announced under the aegis of a national scheme to support rural development in Egypt. The 'Decent Life' scheme was launched in 2019, with a mandate that sits within the broader 'Egypt Vision 2030' scheme launched in 2016. The March distribution is intended to fund almost 7,000 head of cattle, whether destined for meat or milk production. The scheme also covers veterinary care and breeders, upon the receiving the cattle, will be enrolled in a domestic livestock insurance fund at a reduced rate. According to FAO data, the Egyptian cattle and buffalo herd numbered almost 4.5mn head in 2022, equivalent to a year-on-year increase of 5.4%.

Risks To Outlook

	Risks
Short term	<ul style="list-style-type: none"> • Extreme weather events such as droughts, floods, and heatwaves can have immediate effects on livestock health and productivity. These events can reduce the availability of grazing land and water resources, impact fodder production, and increase the incidence of heat stress in animals. • The Egyptian livestock sector is dependent upon the import market for its supplies of animal feed and breeding stock. As a result, exchange rate pressures have compounded post-2022 tensions in the international feed grain market to stimulate high production cost increases, which could have exerted a downward pressure on flock and herd headcounts.

	Risks
	<ul style="list-style-type: none"> The spread of infectious diseases such as foot-and-mouth disease, highly pathogenic avian influenza (HPAI), or peste des petits ruminants (PPR) can have immediate and severe impacts on livestock populations. Outbreaks can lead to severe producer losses, supply chain disruption, and domestic price volatilities.
Long term	<ul style="list-style-type: none"> Beef remains a premium product in Egypt while the domestic market is dependent upon imports for almost half of its beef consumption. As such, the development of beef consumption in Egypt will be tied to domestic macroeconomic conditions, such as household income growth and inflation, as well as fluctuations in the value of the Egyptian pound. Climate change poses a significant risk to the Egyptian livestock sector. Changes in temperature and precipitation patterns can alter the suitability of land for grazing, reduce water availability, and increase the prevalence of both existing and emerging diseases. In 2020, Egypt's poultry exports were resumed after an enforced hiatus following an outbreak of HPAI saw a loss of foreign market access in 2006. We believe that this development will spur investment in the sector and so drive production growth, which could, however, be reversed if a future animal disease outbreak were to see export prohibitions reintroduced.

Source: BMI

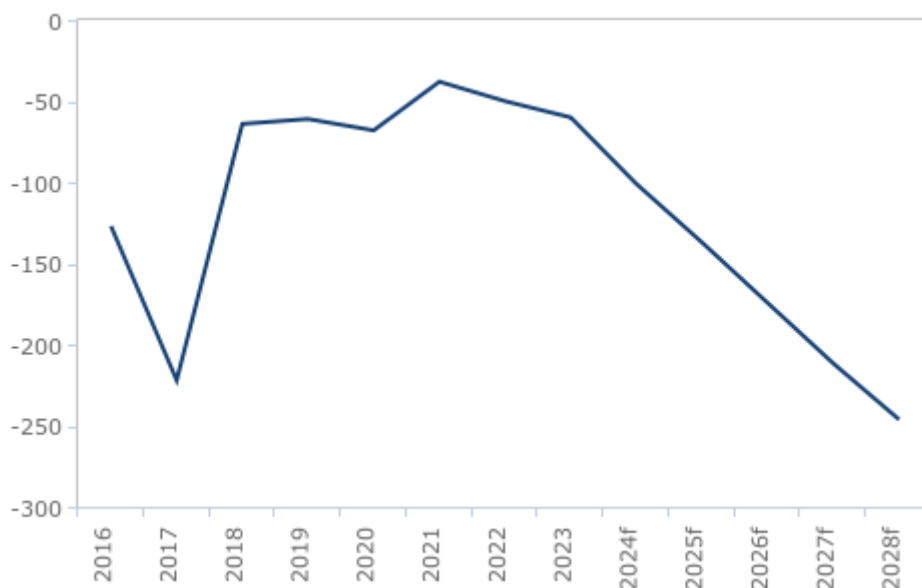
Structural Trends

1. Poultry Sector Set For Outperformance

We expect that Egypt's poultry sector will benefit from continued investment through the medium term, which will result in higher production capacity and the exploitation of greater economies of scale and other sources of operational efficiency. Investment in the sector will be motivated by two factors. On the one hand, the expected increase in poultry consumption within Egypt will drive investment flows and, on the other hand, investment will also be attracted by the sector's potential for export growth. After a 14-year prohibition, prompted by an outbreak of HPAI in 2006, the Egyptian poultry sector was cleared for export by the World Organisation for Animal Health in 2020. Alongside increases in meat production, Egypt's poultry sector has generated robust egg production growth, which rose from 5.5bn in 2010 to 15.1bn by 2020, before disruptions related to the pandemic saw output fall to 10.3bn in 2021. According to the USDA, the sector is self-sufficient with regard to domestic egg consumption, while Egypt's Union of Poultry Producers aims to double table egg production by 2030. Based on current growth trends as assessed over the past decade, egg production would be expected to rise to around 15.5bn by the end of our forecast period in 2028.

Net Poultry Position To Face Pressures Despite Export-Led Production Growth

Egypt - Poultry Production Balance, '000 tonnes (2016-2028)

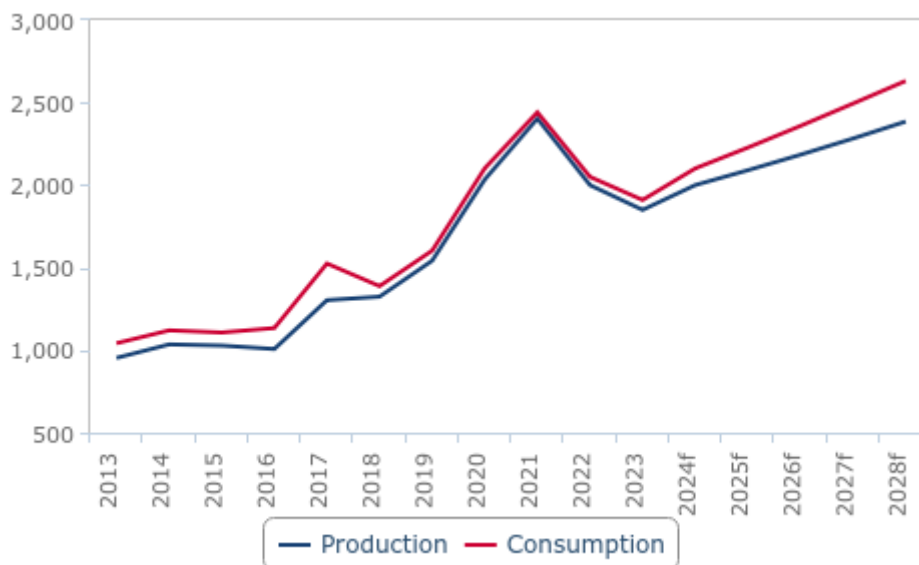


f = BMI forecast. Source: USDA, BMI

Over the past decade, there has been a steady improvement in Egypt's self-sufficiency with regard to poultry production, which rose from 87.2% in 2012 to 97.6% in 2022 in spite of a 1.1mn-tonne increase in annual poultry consumption, equivalent to 117.4% of total demand in 2012. It is our view that local production will not be able to keep pace with expected medium-term domestic consumption growth, which will see the slight erosion of Egypt's poultry position throughout our forecast period. The sector is set to remain dependent upon imported feed grains, which exposes its production cost base to fluctuations in global markets. In 2022 and 2023, for instance, production staged substantial back-to-back declines as producers opted to reduce flock numbers amid a surge in international feed grain costs. Poultry operations retain the capacity to return to full or near-full operational capacity at relatively short notice given the brief conversion cycle of chickens, which has underpinned an expected robust rebound in output in 2024 (see *Latest Updates*). In the near term, elevated output prices, prompted by feed grains costs as well as broader inflationary pressures in Egypt, pose a downside risk to consumption. Nonetheless, we expect that the sector will prove to be more resilient to macroeconomic fluctuations than the domestic beef sector in view of the lower price point of poultry items and eggs.

Poultry Sector To Maintain Robust Growth Through The Medium Term

Egypt - Poultry Production & Consumption, '000 tonnes (2013-2028)

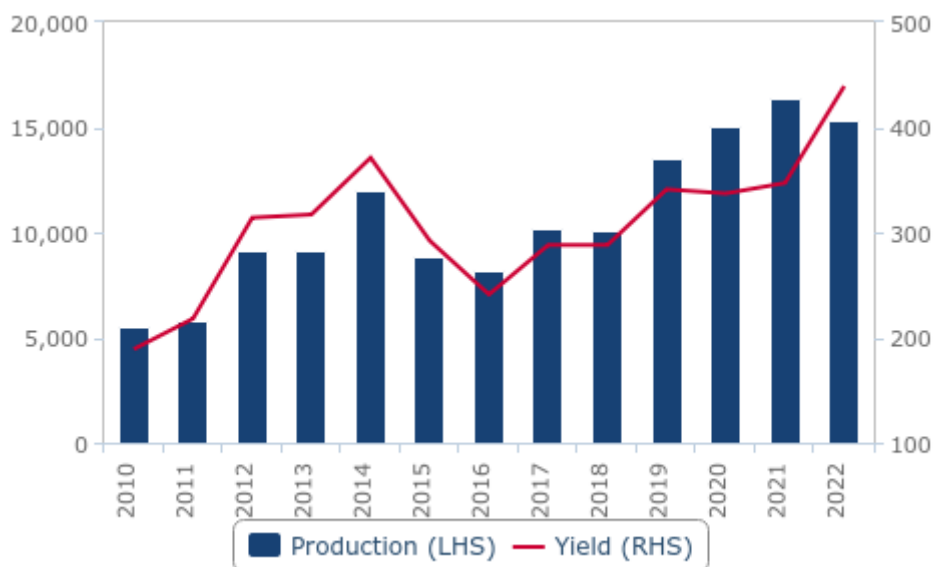


f = BMI forecast. Source: USDA, BMI

At the end of 2020, Saudi Arabia and the UAE became the first markets to clear Egyptian poultry items, including frozen poultry meat cuts as well as table eggs, for imports. Egypt's total poultry exports were valued at USD1.1mn in 2022, almost half of which were destined for sale in the Palestinian Territories, which marked a slight increase on the USD1.0mn exported in 2021. With respect to eggs, Egyptian exports came close to USD1.5mn in 2022, most of which were destined for sale in the Palestinian Territories, up from under USD1.0mn in 2021 and a minimal amount in 2020. We expect that investment will see the number of large-scale commercial poultry farms in Egypt increase, which will be to the benefit of sectoral efficiency. At the same time, Egypt's Ministry of Agriculture and Land Reclamation is set to continue to extend new licences for poultry projects and to provide low-cost financing to small-scale breeders, to accelerate the adoption of efficiency-enhancing technologies.

Elevated Feed Costs Saw Egg Output Fall In 2022

Egypt - Egg Production, mn eggs & Yield, eggs per animal (2010-2022)



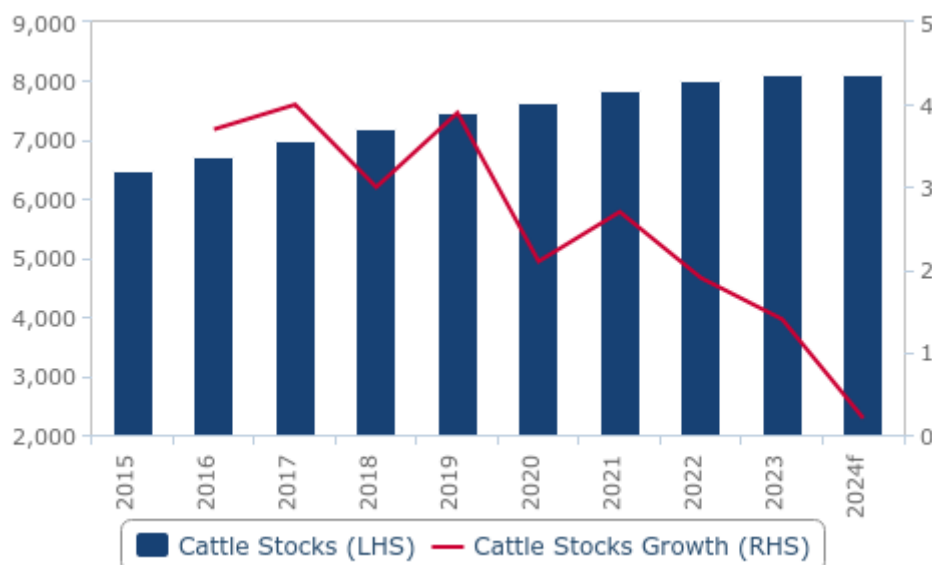
Source: FAO, BMI

2. Beef Sector Faces Headwinds

We have a less positive view on the prospects faced by the Egyptian beef sector than its poultry counterpart. In part, this reflects that beef remains a relatively high-cost food item, which means that rising animal protein consumption is likely to favour lower-cost alternatives, such as poultry products and eggs. As such, our forecasts indicate that annual beef consumption will increase by 9.9% between 2024 and 2025 whereas we expect that total domestic poultry consumption will increase by 25.2% over the same period. We also expect that Egypt's annual domestic beef production deficit will remain above 200,000 tonnes up to 2028, which will render consumption volumes more susceptible to shifts in the cost of imported products. While it remains our belief that the Egyptian beef sector will continue to expand through the medium term, we nevertheless consider the risks to this view to be skewed toward the downside in light of several structural challenges. Firstly, Egypt's cattle herd has faced an elevated feed cost-induced contraction, which started with the pandemic and was then worsened with the start of the Russia-Ukraine war and the associated surge in global grain prices. However, in contrast to the poultry sector, which also saw high feed costs weigh on margins and flock sizes, the restoration of the cattle herd will be a more investment-intensive and longer-lasting procedure. Secondly, cattle are more feed-intensive than poultry, due to lower rates of feed conversion efficiency as well as a longer time-to-slaughter, and so the vulnerabilities caused by Egypt's feed grain deficit and consequent reliance on imported feed grains will remain more acute.

Pace Of Herd Expansion Has Decelerated In Recent Years

Egypt - End-of-Year Cattle Stocks, '000 head (2015-2024)

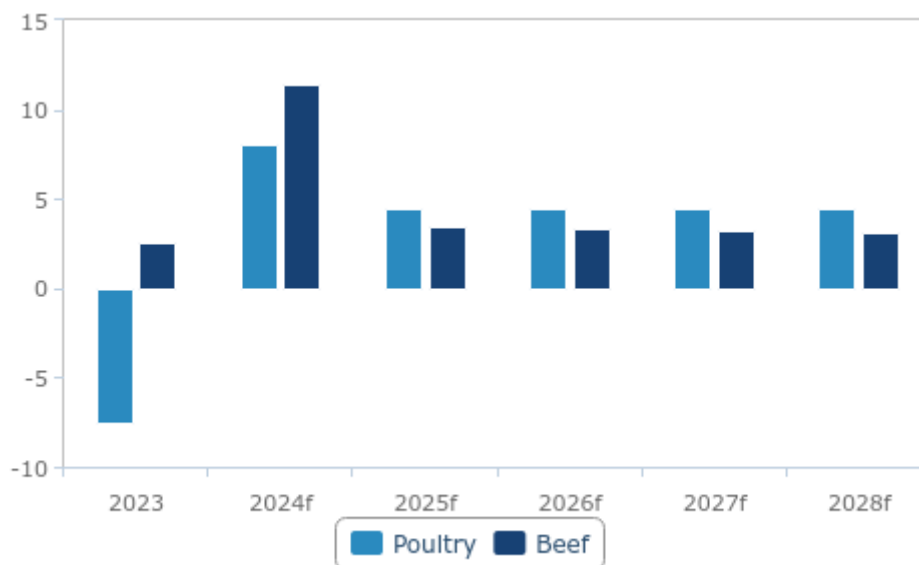


f = USDA forecast. Source: USDA, BMI

The aforementioned status of beef products as relatively high-cost food items renders the evolution of consumer demand in the coming years more sensitive to broader macroeconomic trends. This being the case, investment in the sector necessarily carries a higher risk with regard to future revenues than investment in alternative livestock sectors. This impact is compounded by the higher upfront capital investment required to set up and operate commercial cattle rearing facilities. In 2020, according to the FAO, close to 60% of the Egyptian buffalo and cattle herd was kept in extensive low-input farming operations with limited access to veterinary services whereas over 75% of the domestic poultry herd was reared in intensive systems based on a high-input high-output model. The presence of not insubstantial volumes of imported beef on the domestic market also adds to the competition between suppliers, whether foreign or domestic, which stands to the benefit of large, established, and commercial beef exporting sectors rather than new-to-the-sector domestic operations. Between 2010 and 2022, Egypt met just 7.7% of its domestic poultry demand via foreign purchases, while 44.2% of domestic beef consumption was met via imports. Egypt's two largest foreign beef suppliers, Brazil and India indicate these challenges well. The beef sector of the former is characterised by a world-leading degree of mechanisation, efficiency, and commercialisation while the latter is an exporter of low-cost water buffalo meat. Taken together, therefore, Brazilian and Indian exporters threaten to 'top and tail' the domestic consumer market, leaving a limited niche in which local operators can generate sales. The fact that our forecasts indicate little change in the size of Egypt's structural beef production deficit indicates that international competition will continue to be a challenge for domestic producers.

Beef To Underperform Through The Medium Term

Egypt - Beef & Poultry Production, %, y-o-y (2023-2028)



f = BMI forecast. Source: USDA, BMI

Livestock Production And Consumption (Egypt 2019-2028)

Indicator	2019	2020	2021	2022	2023	2024f	2025f	2026f	2027f	2028f
Beef & veal production, '000 tonnes	373.0	367.0	375.0	385.0	395.0	440.0	455.0	470.0	485.0	500.0
Beef & veal production, % y-o-y	2.2	-1.6	2.2	2.7	2.6	11.4	3.4	3.3	3.2	3.1
Beef & veal consumption, '000 tonnes	713.0	597.0	675.0	655.0	640.0	655.4	671.0	686.9	703.3	720.0
Beef & veal consumption, % y-o-y	7.2	-16.3	13.1	-3.0	-2.3	2.4	2.4	2.4	2.4	2.4
Beef & veal consumption, kg per capita	6.8	5.6	6.2	5.9	5.7	5.7	5.8	5.8	5.9	5.9
Beef & veal production balance, '000 tonnes	-340.0	-230.0	-300.0	-270.0	-245.0	-215.4	-216.0	-216.9	-218.3	-220.0
Beef & veal self sufficiency, %	52.3	61.5	55.6	58.8	61.7	67.1	67.8	68.4	69.0	69.4
Poultry production, '000 tonnes	1,542.0	2,034.0	2,403.0	2,000.0	1,850.0	2,000.0	2,090.0	2,184.0	2,282.3	2,385.0
Poultry production, % y-o-y	16.5	31.9	18.1	-16.8	-7.5	8.1	4.5	4.5	4.5	4.5
Poultry consumption, '000 tonnes	1,603.0	2,102.0	2,441.0	2,050.0	1,910.0	2,101.0	2,227.1	2,358.5	2,494.1	2,631.2
Poultry consumption, % y-o-y	15.5	31.1	16.1	-16.0	-6.8	10.0	6.0	5.9	5.8	5.5
Poultry consumption, kg per capita	15.2	19.6	22.3	18.5	16.9	18.4	19.2	20.0	20.8	21.6
Poultry production balance, '000 tonnes	-61.0	-68.0	-38.0	-50.0	-60.0	-101.0	-137.1	-174.4	-211.7	-246.2
Poultry self sufficiency, %	96.2	96.8	98.4	97.6	96.9	95.2	93.8	92.6	91.5	90.6

f = BMI forecast. Source: USDA, BMI

Dairy

Key View: The Egyptian dairy sector has struggled, and in our view will continue to struggle to match the pace of domestic consumption growth, which has allowed international competitors to establish a firm presence in the Egyptian market. With respect to milk production, the sector remains overwhelmingly small-scale in nature, which has inhibited the exploitation of economies of scale, limited investment in productivity-enhancing assets and practices, and discouraged investment in downstream collection, storage and distribution infrastructures. In addition, the low quality and uncertain supply of domestic milk have weighed on the development of the downstream processing sector, which is evident in the sector's reliance on imported powdered and condensed milks as well as the aforementioned popularity of foreign products with Egyptian consumers. In terms of risks, water shortages – expected to grow more acute in the medium term – could restrict feed and forage crop production and weigh on dairy cattle yields.

Latest Updates

- As in the previous edition of our Egypt Agribusiness report, we forecast that milk production in Egypt will rise by 0.9% y-o-y to 4.7mn tonnes in 2024 and then maintain a growth rate of 1.9% per annum throughout the remainder of our forecast period. On the demand side, it remains our view that liquid milk consumption in Egypt will increase by 1.6% y-o-y to 2.9mn tonnes in 2024 and then maintain a growth rate of 1.6% y-o-y up to 2028, in line with recent historical trends. Imports of concentrated (ie, condensed or powdered) milk and cream dipped from 104,000 tonnes in 2022 to under 99,000 tonnes in 2023, their lowest level since 2017, which could point to short-term demand-side weaknesses insofar as higher import costs will be reflected in domestic prices.
- With respect to processed dairy products, we forecast that butter production in Egypt will increase by 0.4% y-o-y to 100,000 tonnes and that cheese production will increase by 0.9% y-o-y to 530,000 tonnes in 2024. As for domestic consumption, we forecast that butter demand will fall by 3.0% y-o-y to under 130,000 tonnes and that cheese demand will increase by 1.3% y-o-y to surpass 490,000 tonnes. In sum, our outlook indicates that the Egyptian dairy sector will fall to a narrow deficit of 3,000 tonnes in 2024 in regard to butter production and that the domestic cheese surplus will narrow from 40,200 tonnes in 2023 to 38,500 tonnes in 2024. Complete trade data is not yet available as of April 2024 but Egypt's imports of butter from New Zealand, its largest foreign supplier, fell by 40% y-o-y to under 11,000 tonnes in 2023.
- In December 2023, the Agricultural Bank of Egypt launched a new initiative, the 'Dream' initiative, designed to stimulate production growth in the domestic dairy sector and facilitate the development of local value chains. The scheme will support the purchase of imported genetically advanced Holstein cattle, with higher unit milk yields than those available from traditional breeds in Egypt, and automated milking machines via the extension of soft loans with repayment to be made from the production and sale of milk as well as cattle offspring. HealthyMilk Company, the scheme's corporate partner, is set to provide feed, vaccines, and veterinary care as well as milk collection services.

Risks To Outlook

	Risks
Short term	<ul style="list-style-type: none"> Egypt is facing significant water scarcity issues, which are exacerbated by the Nile River's fluctuating water levels and regional disputes over water rights. Water is essential for dairy farming, not just for the dairy cattle but also for the cultivation of feed and forage crops. Short-term fluctuations in water availability can impact the cost and availability of feed, which in turn affects milk production and producer margins. Feed supplies in the Egyptian dairy sector are dependent upon imports, which exposes its production cost base to fluctuations in international grain markets and shifts in the value of the Egyptian pound. A deterioration – from the perspective of dairy producers – in either of these factors would weigh on sector margins and could exert downward pressure on dairy cattle herd numbers. The Egyptian dairy sector is at risk of short-term disruptions due to animal diseases. An outbreak of diseases such as foot-and-mouth disease or brucellosis can lead to a sudden decrease in production. The

	Risks
	<p>impact can be immediate and severe, especially if it leads to culling of infected dairy cattle and restrictions on the movement of livestock.</p>
Long term	<ul style="list-style-type: none"> • A shortage of sufficient high-quality milk has inhibited the development of Egypt's processed dairy product sector and has also served to increase the presence and competitive positioning of foreign brands in the domestic market. This could serve to stunt the medium-term growth potential of both the domestic upstream and downstream dairy sectors. • Changes in climate patterns can lead to more frequent extreme weather events and increased average ambient temperatures, which can negatively affect feed crop production, water availability, and dairy cattle health. The financial burden of adapting to climate change, such as investing in cooling systems for dairy cattle, could be significant for farmers, especially for smallholders. • The dairy sector is subject to government policies and regulations that can impact production costs, market access, and profitability. Risks include potential changes in agricultural subsidies, food safety regulations, and trade policies. Changes to the macroeconomic environment, such as the devaluation of the Egyptian pound, can also alter the economic cost and incentive structure of the sector.

Source: BMI

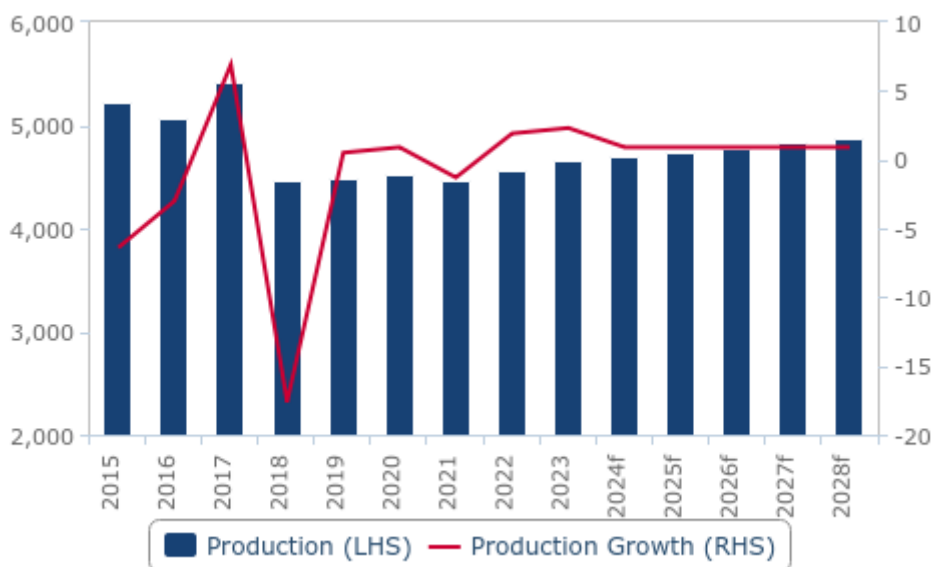
Structural Trends

1. Predominance Of Small-Scale Operators Continues To Weigh On Milk Production, Productivity And Investment

According to the International Labour Organisation (ILO), subsistence-scale dairy farmers account for almost 90% of the Egyptian dairy cattle herd and produce in excess of 65% of total domestic milk production, of which approximately 50% is consumed on-site or on a local, informal basis. This sub-sector is characterised by low productivity – and, in turn, low incomes and limited investment – as well as low-quality output, which limits its use as an input for the domestic processing sector, and inconsistent volumes, the latter of which prevents the establishment of firm, repeat business relationships with milk aggregators and dairy processors. Small-scale operators also face challenges with respect to their access to capital and finance, further inhibiting their growth and progress towards modernisation and scale. The remaining 10% of the Egyptian dairy herd is split almost evenly between small-scale or family-run operations, in which herds number between 10 and 100, and large-scale, modernised dairy farms, in which herd sizes exceed 100 dairy cattle. The first group make up a fraction of domestic milk output, close to 5%, of which a similar fraction is consumed pre-market as that seen in the subsistence sector. The latter group, large-scale farms, of which under 150 are active in Egypt, represent the remaining milk output, of which most is brought to market, except a portion which is reinvested into the operation in order to raise calves. Their output constitutes the input available to the domestic processing sector, after human liquid milk consumption, which is insufficient to meet local demand, hence the import of powdered milks.

Limited Upside For Medium-Term Production Growth

Egypt - Milk Production, '000 tonnes & Production Growth, %, y-o-y (2015-2028)



f = BMI forecast. Source: OECD-FAO, BMI

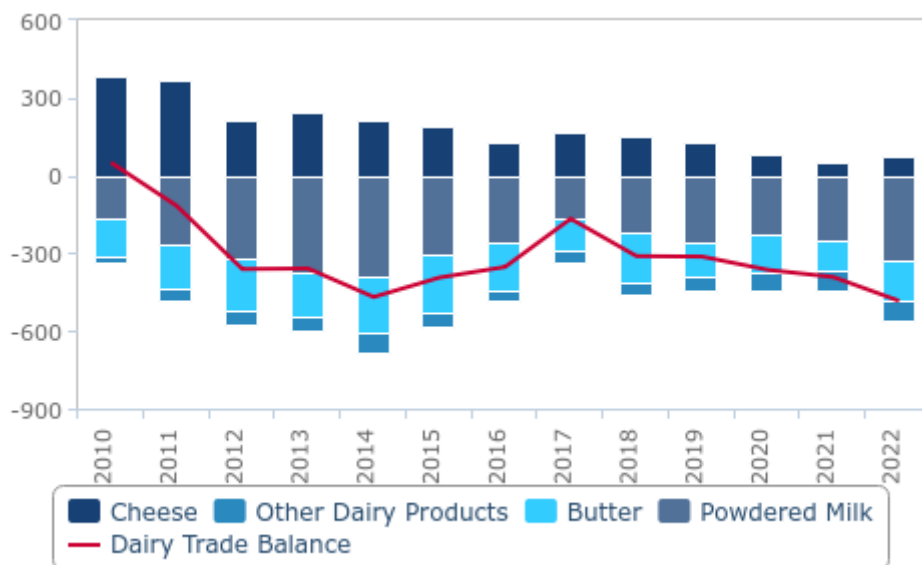
We forecast that milk production per capita will remain broadly unchanged in Egypt between 2024 and 2028, holding just above 40kg throughout the five-year period. In part, this is a reflection of the market share accounted for by small-scale milk producers, whose operations can be characterised by underinvestment in technologies and other yield-enhancing practices as well as a single-digit number of dairy cattle per herd, as noted above. In 2010, the average Egyptian dairy yield stood at 1.95 tonnes per dairy cattle per annum, ahead of North Africa's average (0.73 tonnes) but far lower than that achieved in the EU (6.06 tonnes), where large-scale, commercialised milk production is the norm. Between 2010 and 2021, Egypt's dairy yields increased by almost 10%, rising to 2.14 tonnes per dairy cattle per annum, while EU yields rose by 25.8% and those across North Africa as a whole by 37.8%. As a result, Egypt remains a large net importer of both whole milk powder and skimmed milk powder due to a shortage of milk for non-direct human consumption (ie, as an input to the manufacture of dairy-based products, such as butter and cheese). A secondary factor weighing on milk supplies to the processing sector is the frequency with which milk is consumed on a subsistence basis or distributed locally on a non-commercial and/or informal basis by Egyptian dairy farmers. The variability of supplies from small-scale operators – in terms of both volume and quality – has also served to limit investment in collection, distribution and storage facilities, which has further undermined the incentive to invest in downstream capacities.

2. Structural Reliance On Imports Poses Competitive Threat To Local Processors

As noted above, low domestic supplies of sufficient quality milk to be used in the local processing sector has given rise to a dependence of the domestic butter and cheese sectors on imported products, whether imported in their final form, for example cheese, or imported as raw material inputs, for example powdered milks. This external dependence has also served as a brake on the development of the domestic processing sector, insofar as imports of final processed dairy products can undercut the competitive offering of local operations. We forecast that cheese production growth will average just 0.9% per annum between 2024 and 2028, with growth weighted toward the end of our forecast period, and that butter production will eke out average growth of just 0.4% per annum. In part, this also reflects a shift within the production base toward higher-value items, such as cheese, that also offer export potential. However, we highlight that the robust demand-side fundamentals of the Egyptian dairy sector, such as the increased diet diversification of urban cohorts that has seen dairy consumption increase – and the portfolio of dairy products that are consumed widen – and population growth, has attracted private investment, from domestic as well as international operators, which represents an upside risk to our outlook.

Unmet Domestic Cheese Demand Has Seen Gradual Erosion Of Cheese Trade Surplus

Egypt - Dairy Trade Balance, USDmn (2010-2022)



Source: Trade Map, BMI

During our forecast period, we expect that the Egyptian cheese production surplus will face downward pressure. This fact – in tandem with the shift in consumer preferences to a wider range of cheeses and the existing presence of international brands in the Egyptian market – will weigh on Egypt's cheese trade surplus, which has trended lower for over a decade. Of the major dairy product groups, cheese remains the sole product in which the Egyptian net trade position is positive, but a downward trend is readily observable in the data. While Egypt generated a cheese trade surplus of USD384mn in 2010, this surplus had decline to USD189mn in 2015 and to USD80mn in 2020. In 2022, the most recent year for which full trade data is available, the Egyptian cheese sector recorded a trade surplus of USD72mn. The bulk of Egypt's cheese exports are destined for sale in Middle Eastern and other North African markets. Meanwhile, we expect that Egypt's butter production deficit will narrow as consumption is expected to continue to decline. Between 2018 and 2022, the Egyptian butter trade deficit averaged close to USD150mn per annum. Butter imports continue to be sourced from New Zealand in the main, with smaller purchases from Ireland and India.

Dairy Production And Consumption (Egypt 2019-2028)

Indicator	2019	2020	2021	2022	2023	2024f	2025f	2026f	2027f	2028f
Milk production, '000 tonnes	4,492.0	4,533.0	4,473.8	4,559.6	4,665.0	4,705.1	4,745.6	4,786.4	4,827.6	4,869.1
Milk production, % y-o-y	0.5	0.9	-1.3	1.9	2.3	0.9	0.9	0.9	0.9	0.9
Liquid milk consumption, '000 tonnes	3,062.0	2,754.0	2,772.0	2,825.2	2,890.5	2,937.6	2,985.4	3,034.0	3,083.4	3,133.6
Liquid milk consumption, % y-o-y	0.6	-10.1	0.7	1.9	2.3	1.6	1.6	1.6	1.6	1.6
Liquid milk consumption, kg per capita	29.0	25.6	25.4	25.5	25.6	25.7	25.7	25.7	25.7	25.8
Milk self sufficiency, %	146.7	164.6	161.4	161.4	161.4	160.2	159.0	157.8	156.6	155.4
Butter production, '000 tonnes	98.0	98.9	95.2	97.3	99.6	100.0	100.5	100.9	101.4	101.8
Butter production, % y-o-y	0.5	0.9	-3.8	2.2	2.4	0.4	0.4	0.4	0.4	0.4
Butter consumption, '000 tonnes	126.8	128.7	127.9	131.0	133.8	129.8	125.9	122.1	118.4	114.9
Butter consumption, % y-o-y	-3.0	1.5	-0.6	2.4	2.1	-3.0	-3.0	-3.0	-3.0	-3.0
Butter consumption, kg per capita	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.0	1.0	0.9
Butter production balance, '000 tonnes	-28.8	-29.8	-32.7	-33.7	-34.2	-29.7	-25.4	-21.2	-17.1	-13.1
Butter self sufficiency, %	77.3	76.8	74.4	74.3	74.4	77.1	79.8	82.7	85.6	88.6
Cheese production, '000 tonnes	505.3	509.9	510.0	517.8	525.4	530.0	534.7	539.3	544.1	548.9
Cheese production, % y-o-y	0.5	0.9	0.0	1.5	1.5	0.9	0.9	0.9	0.9	0.9
Cheese consumption, '000 tonnes	452.0	460.7	465.7	477.1	485.2	491.5	497.9	504.4	510.9	517.6
Cheese consumption, % y-o-y	-3.0	1.9	1.1	2.4	1.7	1.3	1.3	1.3	1.3	1.3
Cheese consumption, kg per capita	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Cheese production balance, '000 tonnes	53.3	49.3	44.3	40.7	40.2	38.5	36.8	35.0	33.1	31.3
Cheese self sufficiency, %	111.8	110.7	109.5	108.5	108.3	107.8	107.4	106.9	106.5	106.0

f = BMI forecast. Source: OECD-FAO, BMI

Sugar

Key View: The plateauing of per capita sugar consumption growth will ease the pressure on the Egyptian sugar production balance during our forecast period while recent investments in an expansion of sugar beet processing capacities will underpin production growth. Sugar beet, the rising production of which has driven headline Egyptian sugar production growth over the past decade, continues to benefit from robust industrial demand as well as a more resilient cultivation profile in respect to variable water supplies. If successful, the ongoing development of sugar beet seeds optimised to Egyptian conditions, in contrast to the seeds used at present that are imported from Europe, could see medium-term production growth outperform expectations. On the demand side, a sustained increase in domestic sugar prices throughout 2023 and Q1 2024, caused by conditions in the international sugar market as well as domestic processing constraints, poses a downside risk to short-term consumption volumes.

Latest Updates

- We hold unchanged our forecasts for sugar production and domestic consumption in Egypt in the 2023/24 (October-September) season, which means that we still expect production to increase by 3.8% y-o-y to 2.9mn tonnes and domestic consumption to increase by 1.9% y-o-y to almost 3.4mn tonnes. Between 2022/23 and 2023/24, our forecasts therefore indicate that the Egyptian sugar production deficit will narrow from 560,000 tonnes to under 520,000 tonnes, the latter a four-season low. In March 2024, amid an extended period of elevated domestic sugar prices, the Egyptian Ministry of Trade and Industry announced that a three-month ban on sugar exports last introduced in December 2023 would be extended for a further three months.
- In April 2024, the Egyptian Ministry of Supply and Internal Trade announced that a deal had been completed to import 250,000 tonnes of raw sugar, due to arrive to the subsequent month. This development follows the approval of a 1mn-tonne import quota for 2024 in March 2024, made in response to continued domestic market turmoil. Meanwhile, state-run sugar production companies announced a 33% increase to EGP32,000 per tonne in ex-factory sugar prices in March 2024, as reported by Zawya, a news service, in response to increased production costs due to the liberalisation of the Egyptian pound. In the same month, the MSIT stated that the re-opening of the Abu Qurqas sugar processing facility, which had closed due to insufficient raw materials at the start of 2024, would loosen the domestic market.
- In December 2023, seven food products including sugar were classified as strategic commodities by the Egyptian government under an article of a 2018 consumer protection law. As a result, the withholding of sugar from circulation in the domestic consumer market will be prohibited until mid-2024, unless the classification is revoked. The decision requires producers, suppliers, distributors, and retailers to submit notification of their stocks of the seven commodities to the Egyptian Ministry of Supply and Internal Trade and includes provision for the assessment and setting of a maximum sales price. Domestic sugar prices exhibited robust inflation throughout 2023 and prices remained elevated during Q1 2024.

Risks To Outlook

	Risks
Short term	<ul style="list-style-type: none"> • An outbreak of Rhizomania disease, first identified by domestic sugar beet growers and reported by the USDA in 2023, saw a deterioration in production expectations for the 2022/23 season. The soil-borne fungus that transmits the causal virus can persist in soil for several years while the disease can reduce yields by as much as 50-60%. • Sugar prices in Egypt increased throughout 2023 – a result of international market conditions as well as a fall in domestic supplies from the private sector as farmers sold to blackstrap molasses mills rather than refiners – and remained elevated in Q1 2024 despite the introduction of various measures by the Egyptian government. As such, short-term consumption volumes could underperform our expectations. • The Egyptian sugar sector is sensitive to fluctuations in the value of the Egyptian pound. Producers are reliant upon imported raw material and equipment while processors are often dependent upon imported machineries. On the demand side, Egypt's sugar production deficit means that the domestic consumer market is balanced via the import

	Risks
	market.
Long term	<ul style="list-style-type: none"> Climate change poses a significant risk to the Egyptian sugar sector. Increasing average temperatures, more variable precipitation patterns, and the greater likelihood of extreme weather events could all impact the productivity of sugar cane and sugar beet crops, as well as water supplies available for irrigation. Water shortages are already having a negative impact on the Egyptian agricultural sector. Egyptian sugar beet farmers are reliant upon imported seeds, often sourced in Europe, that are not optimised for prevailing local conditions. Egypt's Sugar Industry Research Institute is actively engaged in the identification of seed variants better suited to cultivation in Egypt, which if successful and then commercialised, poses an upside risk to our outlook for output. Future changes in government policies regarding agriculture subsidies, land use, water allocation and trade could create market uncertainty and potentially increase sugar production costs. Regulatory changes could also affect the balance between domestic consumption and export, as well as competition with other – often less water-intensive – crops for resources.

Source: BMI

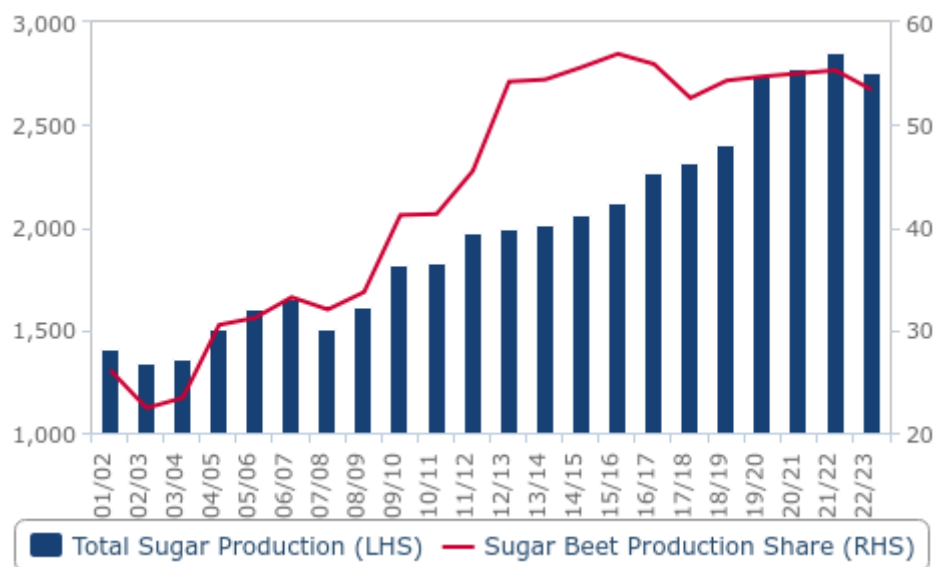
Structural Trends

1. Sugar Beet Expansion Drives Output Growth

Since 2010/11, when domestic output amounted to 1.8mn tonnes, sugar production in Egypt has increased by about 1mn tonnes, with this increase driven by higher levels of sugar beet production, which rose from around 750,000 tonnes to 1.5mn tonnes over the same period. Having stood at 40% in 2010/11, the share of total sugar production accounted for by sugar beet had risen to almost 60% by 2021/22. Conversely, sugar cane production was relatively unchanged between the start and the end of this period – 1.1mn tonnes and 1.3mn tonnes – but season-to-season output fluctuations exhibited a higher degree of dispersion, a reflection of sugar cane's higher sensitivity to the availability of water supplies and to soil moisture conditions. According to FAO data, the major driver of sugar beet output growth has been an expansion of planted area, which stood at 57,000ha in 2000, about 135,000ha in 2010, and more than 140,000ha in 2020, having earlier surpassed 250,000ha in 2019. In addition, sugar beet yields more than doubled between 2000 and 2020, climbing from about 50 tonnes per hectare to almost 110 tonnes per hectare. Beet growers have benefitted from stronger industrial demand than cane growers, which has incentivised acreage expansions and investment in yield-enhancing inputs and technologies. From an industrial perspective, the fact that sugar beets can be stored for some time without incurring a significant loss of sucrose content, which is not the case for sugar cane, allows for the stabilisation of processing supplies and volumes. In 2023, fifteen sugar processing companies operated in Egypt of which eight – all state-owned – processed sugar cane and the other seven processed sugar beet, with four state-owned and three privately owned.

Strong Industrial Demand Has Resulted In Higher Sugar Beet Prices And Driven Output Growth

Egypt - Sugar Production, '000 tonnes & Sugar Beet Share Of Production, %

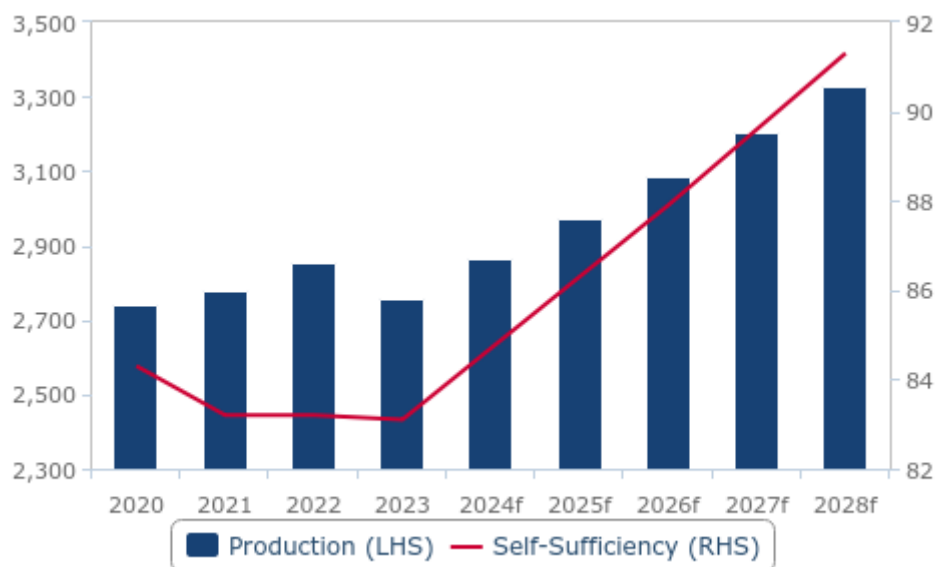


Source: USDA, BMI

In May 2022, Canal Sugar, an Egypt-based company in which the UAE-based Al Ghurair Group owns a controlling stake, announced the commencement of operations at a new USD1bn sugar beet facility, described as the 'largest sugar production plant' in the world, with a reported capacity of 900,000 tonnes of white sugar per annum. Canal Sugar cultivates reclaimed land of 75,000ha of which two thirds is to be irrigated, growing sugar beet, in a volume sufficient to meet half of the capacity of the new plant, as well as corn and wheat. The project falls under the umbrella of the 'Egypt 2030' scheme, a component of which is Egypt's achievement of self-sufficiency across several agricultural commodities, including sugar, by the end of the decade. We note, however, that contractions in the sugar cane harvested area in Egypt, the result in part of weaker industrial demand as compared to sugar beet, mean that the impact of increased sugar beet production will not result in a one-to-one increase in total sugar supplies. The closure of the Abu Qurqas sugar cane processing facility, announced at the start of 2024 but reversed several months later, was described as the result of insufficient raw material supplies, which could indicate reduced domestic sugar cane cultivation as well as the increased sale of sugar cane to blackstrap molasses mills instead of sugar refiners on economic grounds.

Improved Self-Sufficiency Contingent Upon Development Of New Production Facilities

Egypt - Sugar Production, '000 tonnes & Self-Sufficiency, % (2020-2028)



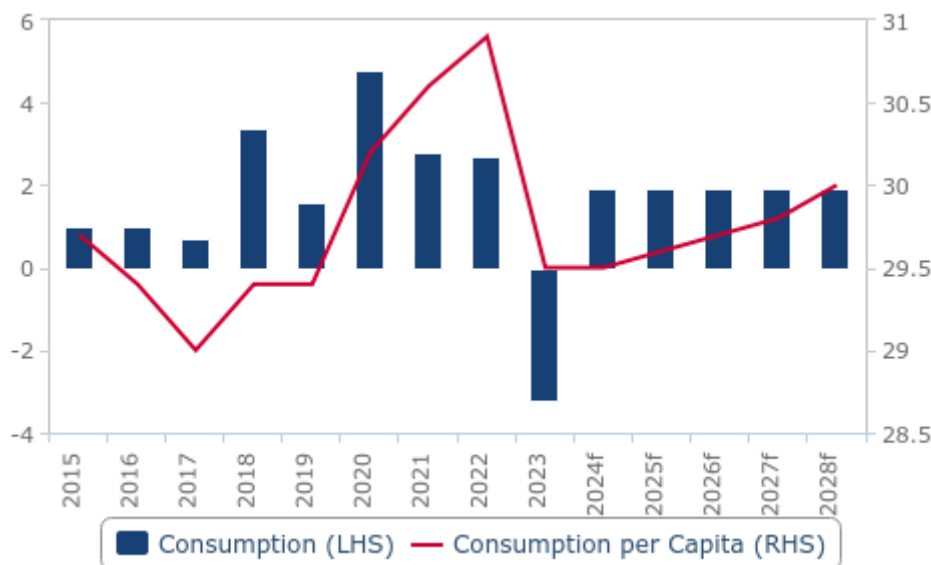
f = BMI forecast. Source: USDA, BMI

2. Population Growth Leads Domestic Sugar Consumption

The OECD-FAO estimate that per capita sugar consumption in Egypt stood at 33.4kg in 2010 and forecast that it will sit at 35.2kg in 2030, an increase of 5.4% over two decades. Our estimates point to a lower level of per capita sugar consumption in absolute terms but match the OECD-FAO's outlook insofar as we anticipate relatively muted per capita consumption growth during our forecast period. This being the case, sugar consumption growth in Egypt will reflect population growth, which is forecast to average 1.5-1.6% per annum between 2023 and 2027, with an absolute increase of close to 7mn people over this period. In our view, structural sugar consumption growth in Egypt during our forecast will rest at 1.9% per annum, which points to per capita demand growth of under 0.5% per annum. Subsidies, which allow for holders of the national state ration card, to purchase 1kg of sugar (lowered from 2kg at the start of 2023 in light of import price inflation) at below-market prices, continue to provide support to lower-income consumers while rising sales of sugar-based confectionery will support future demand growth for manufactured products.

Slowing Per Capita Consumption Growth Will See Population Growth Drive Sugar Demand

Egypt - Sugar Consumption, %, y-o-y & kg per capita (2015-2028)

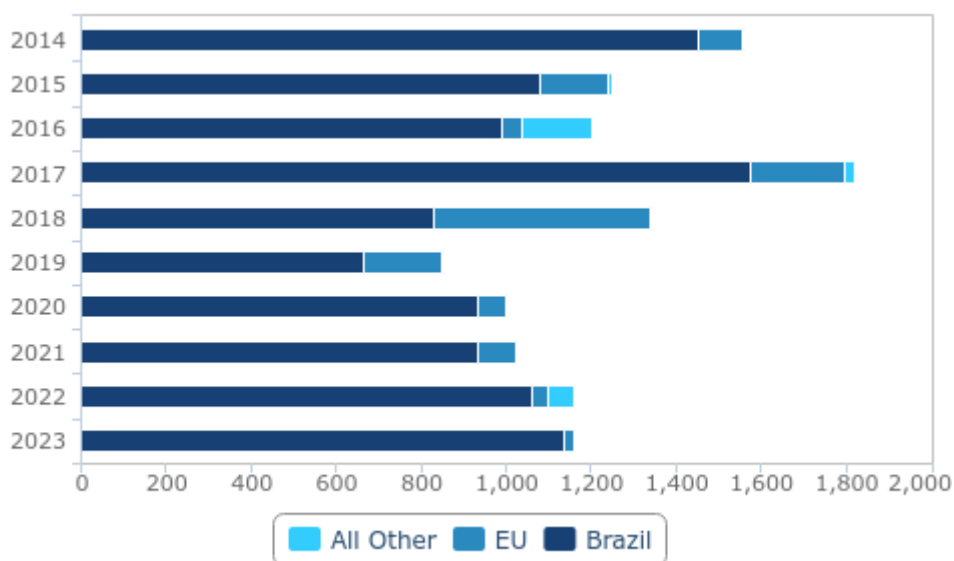


f = BMI forecast. Source: USDA, BMI

Our forecast points to an improvement in Egypt's sugar self-sufficiency of over 5% between 2023/24 and 2027/28, which, in conjunction with our sugar production forecast, will serve to depress import demand, notwithstanding the Egyptian government's potential desire to rebuild inventories. During the 2010s, mirror trade data indicates that Egypt imported 1.3mn tonnes of sugar per annum on average, with little indication of a directional trend during this period. In 2022 and 2023, Egypt imported 1.2mn tonnes, which was overwhelmingly sourced in Brazil. While Egypt has exported sugar in the past, valued at about USD150mn per annum over the past five years, the Egyptian government introduced a three-month export ban in March 2023, which has since been renewed several times, most recently in March 2024. While our forecasts point to an improvement in Egypt's sugar self-sufficiency over the next five years, we believe that the risks to this view are tilted towards the downside in view of water supply risks.

Imported Volumes Have Inched Up In Recent Years

Egypt - Sugar Imports, '000 tonnes (2014-2023)



Note: Based on mirror data. Source: Trade Map, BMI

Sugar Production And Consumption (Egypt 2019-2028)

Indicator	2019	2020	2021	2022	2023	2024f	2025f	2026f	2027f	2028f
Sugar production, '000 tonnes	2,405.0	2,740.0	2,780.0	2,855.0	2,760.0	2,864.9	2,973.7	3,086.7	3,204.0	3,325.8
Sugar production, % y-o-y	3.7	13.9	1.5	2.7	-3.3	3.8	3.8	3.8	3.8	3.8
Sugar consumption, '000 tonnes	3,100.0	3,250.0	3,340.0	3,430.0	3,320.0	3,382.4	3,446.0	3,510.8	3,576.8	3,644.0
Sugar consumption, % y-o-y	1.6	4.8	2.8	2.7	-3.2	1.9	1.9	1.9	1.9	1.9
Sugar Consumption, kg per capita	29.4	30.2	30.6	30.9	29.5	29.5	29.6	29.7	29.8	30.0
Sugar production balance, '000 tonnes	-695.0	-510.0	-560.0	-575.0	-560.0	-517.5	-472.3	-424.0	-372.7	-318.2
Sugar self sufficiency, %	77.6	84.3	83.2	83.2	83.1	84.7	86.3	87.9	89.6	91.3

f = BMI forecast. Source: USDA, BMI

Commodities Price Analysis

Monthly Commodities Strategy: Stellar Performance In April, With Most Sub-Asset Classes Marking Gains

Commodities displayed a stellar performance in April 2024 thus far, in general, with more sub-asset classes now seeing price appreciation in the year-to-date than not.

In the main, renewed US dollar strength as markets continue to push back expectations for US Federal Reserve (Fed) rate cuts has failed to substantially pressure commodities priced in the greenback, as sentiment over improving demand outlooks on the back of positive economic data surprises has driven investor flows into commodities, propelling prices upwards. Tensions in the Middle East have also benefited a limited number of commodities, as have fresh sanctions on Russian metals.

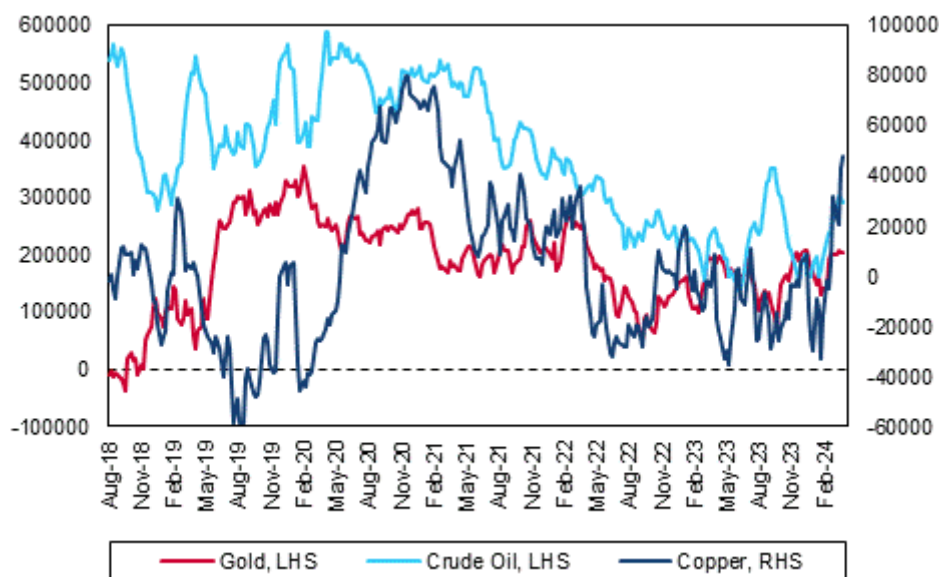
Nickel and aluminium, the two main metals produced by Russia made large individual gains in April, with a month-to-date (between April 1 and April 25) rise of 13.1% and 11.4%, respectively, for third-month LME futures of each metal. These have been driven by sanctions on Russian metals, imposed by the US and the UK, prohibiting the delivery of Russian copper, aluminium and nickel produced from April 13 to the LME and the Chicago Mercantile Exchange.

Additionally, the wave of positive investor sentiment towards the health of the global economy has benefited cocoa and copper the most in April, with second-month cocoa futures on the ICE gaining an unbeatable 14.6% and LME 3-month copper prices gaining 8.7% in the month-to-date as of April 25. In April 2024, as a group, industrial metals have gained the most, at 11.9% in the month-to-date, also due to positive sentiment over a limited pick up in Mainland China's March manufacturing PMI print and tighter supply.

Sanctions, economic data surprises to the upside and fundamentals aside, geopolitical tensions in the Middle East have benefited gold, which reached a new historic high of USD2,431.5/oz on April 12. In contrast, the Middle East tensions have sparked a limited rally in Brent crude prices, despite the commodity making large gains in 2024, having gained 16% in the year-to-date (from January 2) as of April 25. Winners aside, we note agricultural grains and natural gas continue to underperform, hammered by abundant production forecasts for the former and oversupply for the latter. Indeed, natural gas has made the biggest losses since January.

Sentiment Towards Key Commodities Gearing Up

Bloomberg CFTC CMX & NYMEX Net Non-Commercial Futures Positions Of Copper, Gold & Crude Oil



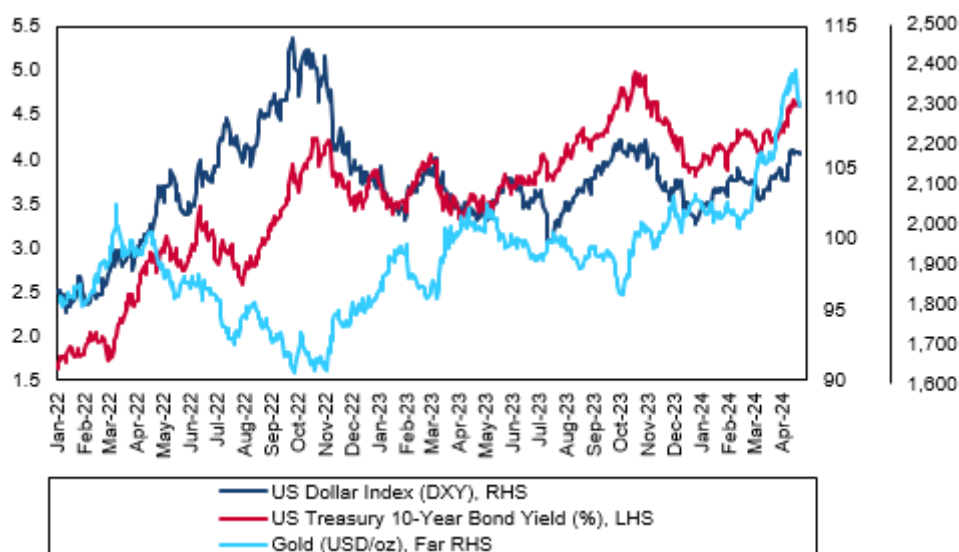
Source: Bloomberg, BMI

Gold: Middle East Tensions Create A New Floor Under Prices, But Upside Is Capped By Macro Factors

Gold prices (XAU index) have surged 12.6% in the year-to-date (from January 2) and gained 3.0% in the month-to-date (from April 1) as of April 25. This rise overshadows that of Brent at 0.9% in the month-to-date but is significantly lower than copper that has gained 8.7% in the month-to-date (copper analysis below). Gold prices are hovering around USD2,320/tonne at the time of writing on April 25, after reaching a new record high of USD2,431.5/oz on April 12. Prices rose steadily since the Israeli attack on Iran's consulate in Damascus on April 1 as global investors debated on the extent of a likely retaliation from Iran. As the measured and limited Iranian retaliation on Israel occurred over the weekend after trading hours, gold prices failed to break higher. Indeed, as market consensus is for a de-escalation in tensions for now, in line with our Country Risk team's view that the current round of tit-for-tat attacks between Israel and Iran has ended, gold prices have seen a soft easing in the days up to April 25. That said, with Israel and Iran having launched direct strikes against each other, a new behavioural threshold has been crossed, and the region has entered a higher plane of geopolitical risk. **This has now placed a firm floor under gold prices, which we believe to be around USD2,250/oz in the next three months, as gold's safe haven characteristic allows it to thrive from geopolitical uncertainty, especially as a Rafah invasion by Israel looms.**

Gold On A Pedestal, But Capped By USD Strength And Pushback In US Rate Cut Expectations

Gold Prices, US Treasury Yields & US Dollar Index



Sources: Bloomberg, BMI

Moreover, renewed US dollar strength and a pushback in market expectations for the first US Fed rate cut will work to cap the rally in gold prices due to its non-yielding characteristic. We expect prices to face some resistance in the coming weeks from these macro factors, around the USD2,400/oz level. We outline below the possible gold price ranges in the coming weeks:

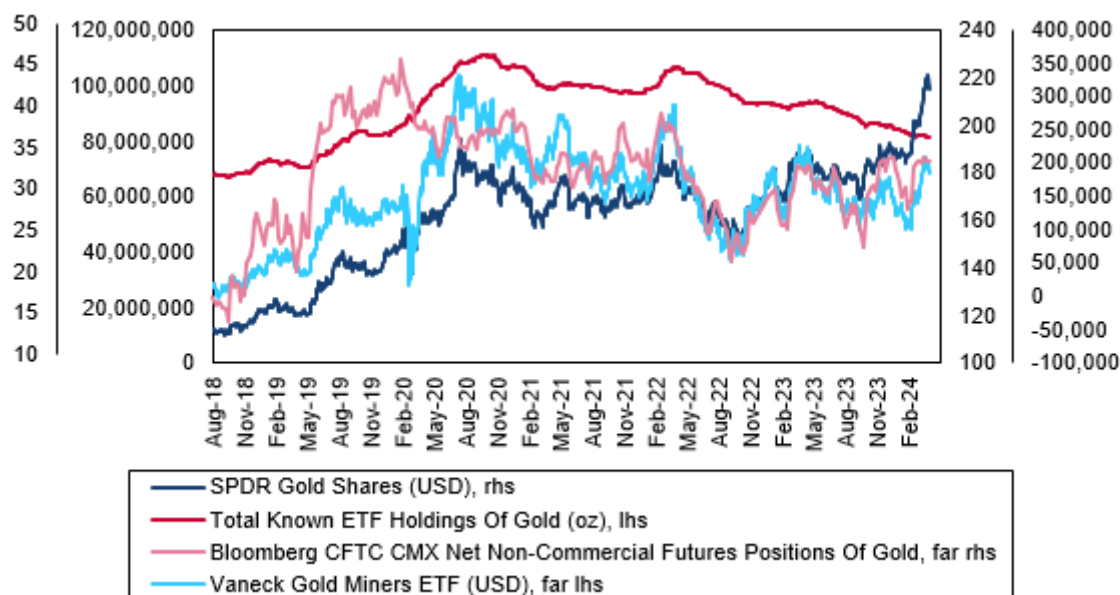
a. Status quo in Middle East Tensions, with no more Israel-Iran exchanges and a Rafah invasion priced in: **USD2250-2400/oz**

b. Moderate escalation in Middle East tensions, with another limited retaliation by Iran, or escalation on other fronts, notably in Lebanon and the West Bank : **USD2400-2500/oz**

c. Severe escalation, with large-scale Israel-Iran attacks or on other fronts, notably in Lebanon and the West Bank: **USD2500-2700/oz**

Sentiment Towards Gold Flying High

Select Indicators Of Sentiment Towards Gold



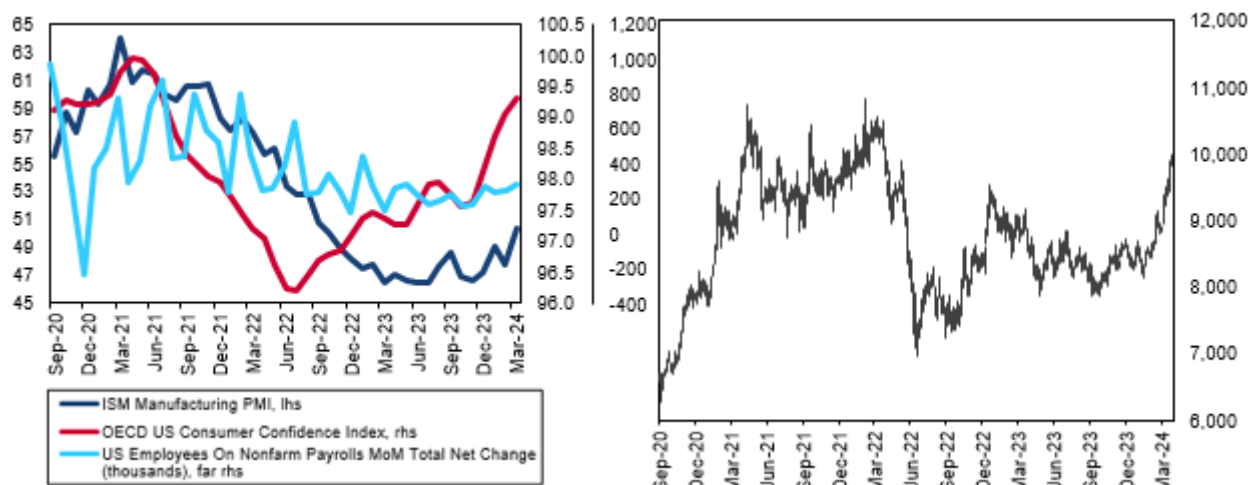
Source: Bloomberg, BMI

Industrial Metals: Base Metal Prices Rallying Again, But Not Due To Middle East Tensions

Industrial metal prices rallied in April, with the Bloomberg Industrial Metals sub-index rising by 11.9% in the month-to-date (from April 1) as of April 25 and by 11.0% in the year-to-date (from January 2). Broadly speaking, the release of encouraging March manufacturing data from Mainland China has brought some optimism, with the PMI for manufacturing climbing to 50.8 in March from 49.1 in February, signalling an expansion and fostering a more positive demand outlook for metals.

Copper Edging Higher As US Data Surprises To The Upside

LHC: Select US Macro Indicators; RHC: LME Copper Prices (USD/tonne)



Source: Bloomberg, BMI

In regards to base metals, prices have sustained year-to-date gains in April, buoyed by sanctions on Russian metals, tighter individual market fundamentals and an overall improvement in the health of the global economy.

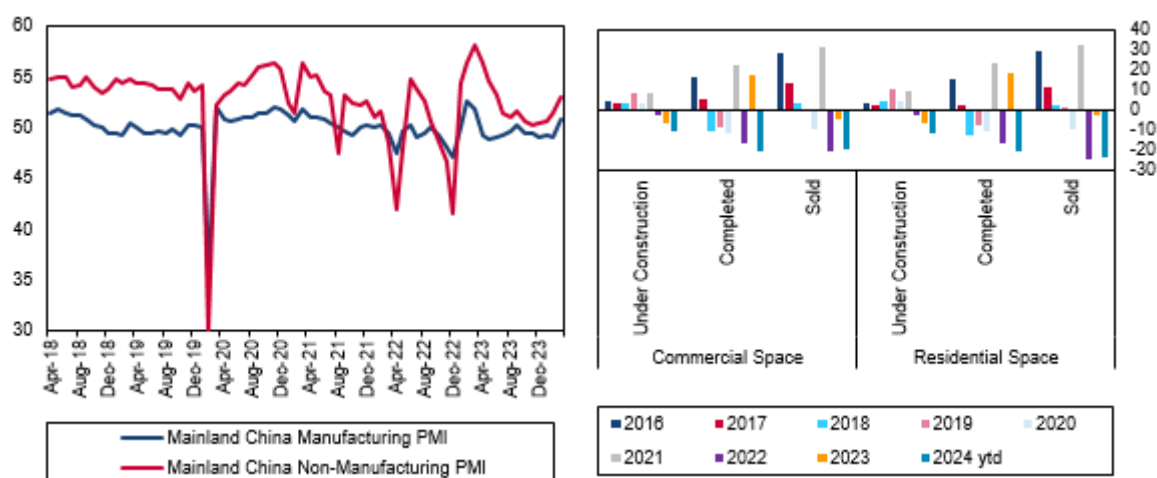
First, nickel and aluminium, the two main metals produced by Russia made the biggest individual gains in April, with a month-to-date (between April 1 and April 25) rise of 13.1% and 11.4%, respectively, for third-month LME futures of each metal. These have been driven by sanctions on Russian metals, imposed by the US and the UK, prohibiting the delivery of Russian copper, aluminium and nickel produced from April 13 to the LME and the Chicago Mercantile Exchange.

Second, the global growth outlook has become slightly more favourable in April as concerns about persistent high inflation and an imminent US recession have lessened in recent months, resulting in more relaxed financial conditions. As a result, our Country Risk team has revised up our global growth forecast by 0.1pp to 2.4% in April. **The rise in copper throughout April (8.7% rise over April 1-25) has largely been driven by optimism towards the global, and specifically the US economy as data continues to surprise to the upside.**

We note that base metals continued to climb despite a strengthening US dollar, with the DXY index climbing to 106 on April 22, up from the year-to-date low of 102 seen on January 2. Our Macro team now expects the Fed to delay the start of its cutting cycle until July following the release of March's inflation data, with the funds rate set to fall from its current 5.50% to 4.75% by year-end. A later Fed cut could limit the extent of price growth for base metals across the board in 2024.

Metals Rallying Over Mainland Chinese PMI, But No Pick-Up In Construction

LHC: Mainland Chinese PMI; RHC: Mainland Chinese Property Floor Space Growth (% y-o-y)

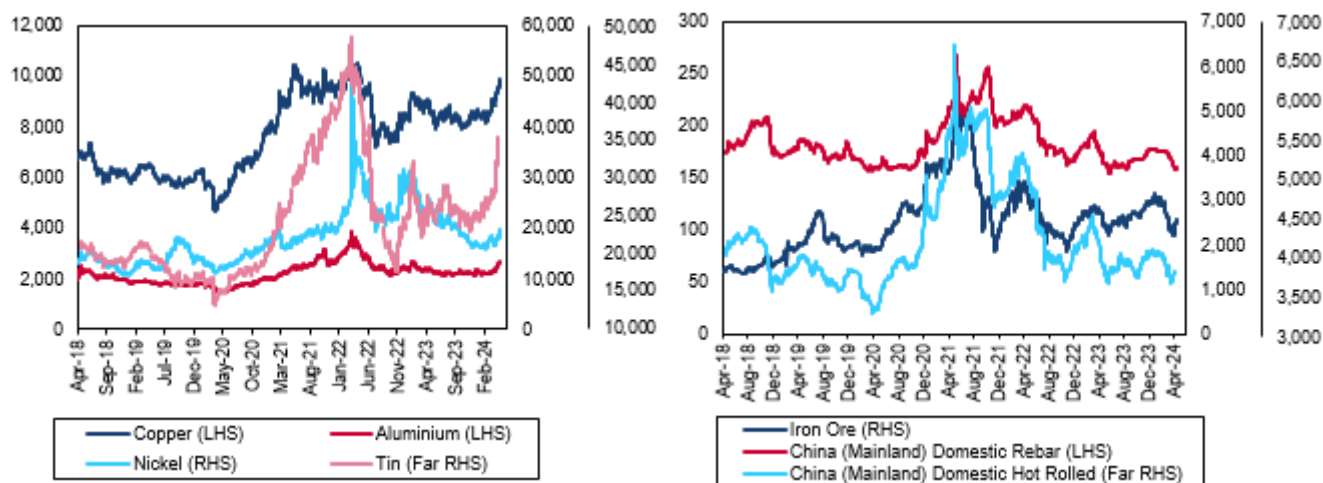


Source: Bloomberg, BMI

The rise in the Bloomberg Industrial Metals sub-index in the year-to-date has been largely driven by base metals, as ferrous metals have deviated from this general trend, with prices experiencing notable losses in the year-to-date as demand concerns intensify amidst ongoing challenges within Mainland China's property sector. That said, 62% Qingdao Iron Ore prices have seen a resurgence in April 2024 after the release of China's PMI data, closing at USD110/tonne on April 19 after reaching a year-to-date low of USD95/tonne on March 29. Yet, iron ore port inventories have remained elevated at 143.1mnt as of April 19. This, along with weak steel production and a still struggling property sector, has the potential to put further pressure on prices in the coming months. While hopes of a Mainland Chinese demand turnaround, stemming from a recovering manufacturing sector, are likely to fuel price growth in the short term, the property market downturn will remain a major drag, placing a cap on prices and tilting the balance of risks to the downside for ferrous metals over 2024.

Base Metals Outperform Ferrous Metals In Industrial Metals Sub-Complex

Select Metal Prices - Base Metals (LHC) & Ferrous Metals (RHS), USD/tonne



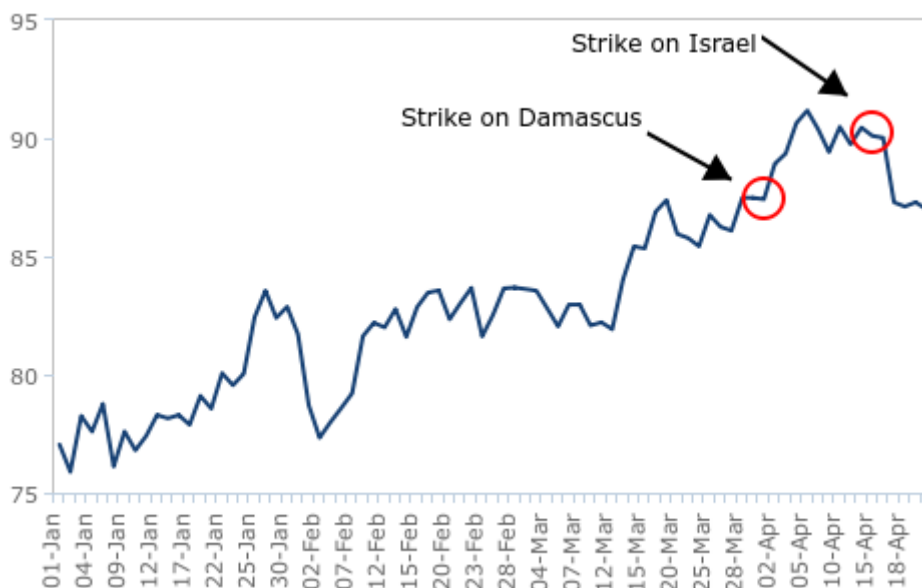
Source: Bloomberg, BMI

Oil: Limited Effect On Prices From Middle East Tensions, As Long As Physical Supply And Trade Are Not At Risk

Oil markets have been relatively unfazed by the recent escalation in tensions between Israel and Iran, despite oil rising by 16% in the year-to-date (from January 2), largely over geopolitical tensions, making it one of the top ten winners among other commodity sub-classes in 2024 overall. In April 2024, however, Brent has gained just 0.9% in the month-to-date as of April 25. Indeed, in the aftermath of Israel's attack on the Iranian consulate in Damascus on April 1, prices jumped with front-month Brent crude peaking at above USD91/bbl at market close. However, with clear signs that both sides wish to de-escalate, the contract has since sunk back to around USD88/bbl at the time of writing on April 25, on a par with the levels seen immediately prior to the Damascus attack. While a ground invasion on Rafah would increase tensions in the region, the impact on oil prices would likely be somewhat limited. **The invasion poses no physical risk to oil supply or exports and could only impact prices via sentiment channels – that is, via a higher risk premium as investors weigh the likelihood of a broader regionalisation of the conflict.**

Brent Retreating From Its Recent Highs

Global - Front-Month Brent Crude, USD/bbl

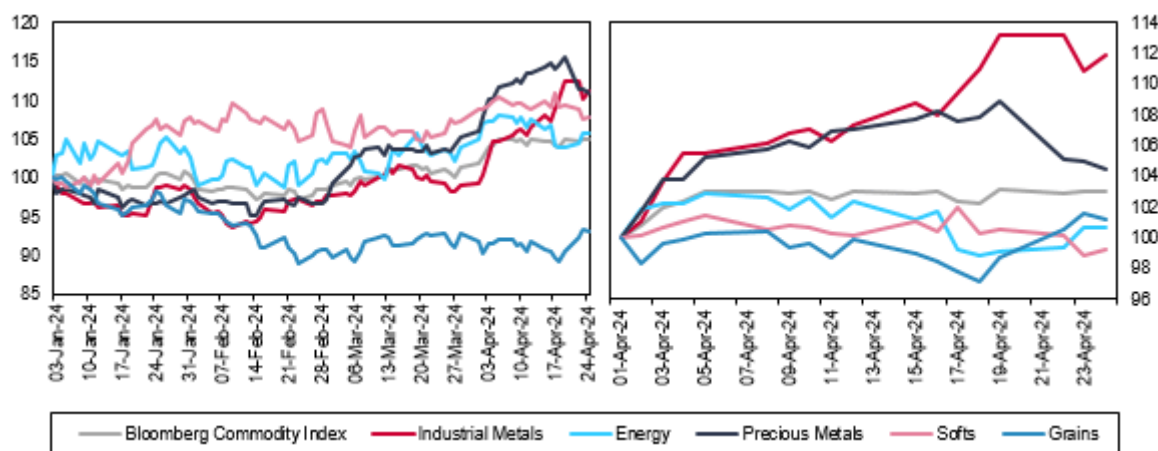


Source: Macrobond, BMI

That said, on the supply side, Brent will find support in elevated risks in Russia and the Middle East and continued production restraint by OPEC+. Although the OPEC+ group will be reviewing its current cuts in June, any return of barrels to the market will likely be gradual and structured so as to avoid upsetting oil prices. The demand side is somewhat more mixed. Global oil consumption has come under downside pressure over recent quarters but there are signs that economic momentum has begun to build and this, combined with a gradually improving GDP growth outlook, is weighing to the upside. However, rising uncertainty over the timing of US interest rate cuts amid sticky inflationary pressures is currently raising concerns for demand and having a bearish impact on Brent.

Metals In The Lead As A Group, But Cocoa Biggest Individual Winner

Bloomberg Commodity Subindices Normalised - Year-to-date (LHC) & Month-to-date (RHC)



Note: LHC - January 2 2024 = 100, RHC - April 4 2024 = 100. Source: Bloomberg, BMI

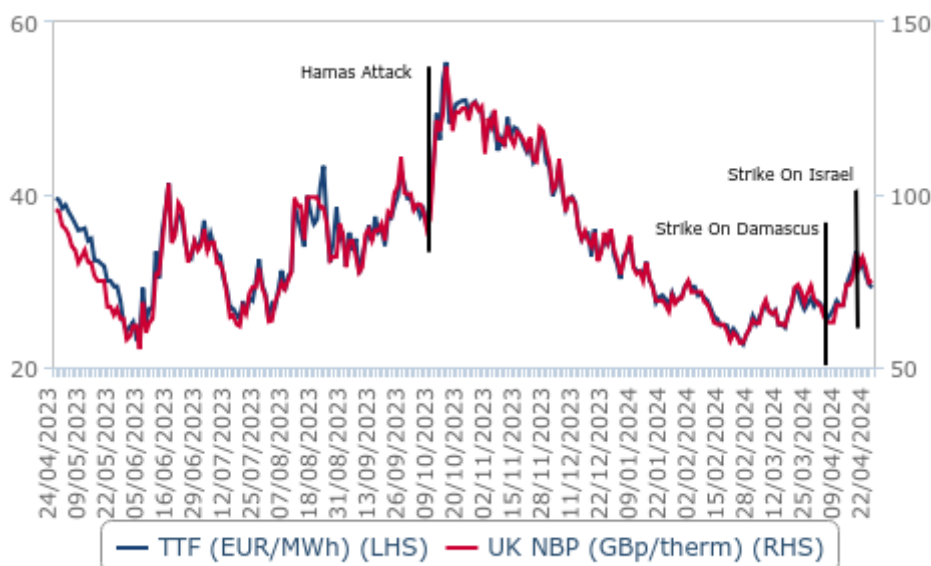
Natural Gas: Middle East Tensions Fail To Lift Prices For Now, As Poor Fundamentals Continue To Add To Woes

Escalating tensions in the Middle East have added upside price risks to key European natural gas benchmarks but weak fundamentals continue to reverse the bulk of gains. The latest round of retaliatory strikes on Iran by Israel have been interpreted by energy markets as a sign of de-escalation despite the unprecedented move to a higher plane of geopolitical risks. **Soft demand and steady imports of LNG continue to weigh on natural gas prices in Europe** pushing current prices lower than peak prices (down 47% for Dutch TTF and 45% for UK NBP) seen just after Hamas' attack on Israel on early October. The latest series of tit for tat attacks by Israel on Iran and its regional proxy groups in early April have added some recent price upside, signalling a marked uptick in tension and the potential for a wider regional conflict impacting energy transit and exports through the Strait of Hormuz. Prices for front month Dutch TTF are up by 11.2% and UK NBP is up 15.7% from the start of April to April 23. However, with elevated natural gas in storage and weak demand growth in Europe, a return to peak prices will be dependent on a significant disruption to LNG supply, which could result from a significant escalation in military action leading to attacks on energy infrastructure in the Middle East closer to key shipping routes.

Henry Hub prices have traded in a range between USD1.5-2.0/mnbtu since February 2024 and the latest increased geopolitical tensions were insufficient to push prices above the range ceiling. US natural gas prices have been weakened by the record level of gas in storage at the end of the heating season, lingering almost 15.0% above the 5-year high in early April. The seasonal trends or weaker demand in Q2 are expected to keep Henry Hub prices muted in the near term. However, we expect prices to see a stronger recovery over H224, driven by growing demand, supported by the LNG sector, with a new terminal in Plaquemines, Louisiana set to commence operations later this year. In reaction to the natural gas price sell-off, several US shale gas producers have announced cuts to their upstream spending and production guidance for 2024. Hence, we expect the US natural gas market to tighten in H224, which will allow prices to settle higher. We currently expect Henry Hub front month prices to settle at USD2.8/mnbtu in 2024.

European Natural Gas Prices Steadily Retreat

Front Month Dutch TTF and UK NBP



Source: Bloomberg, BMI

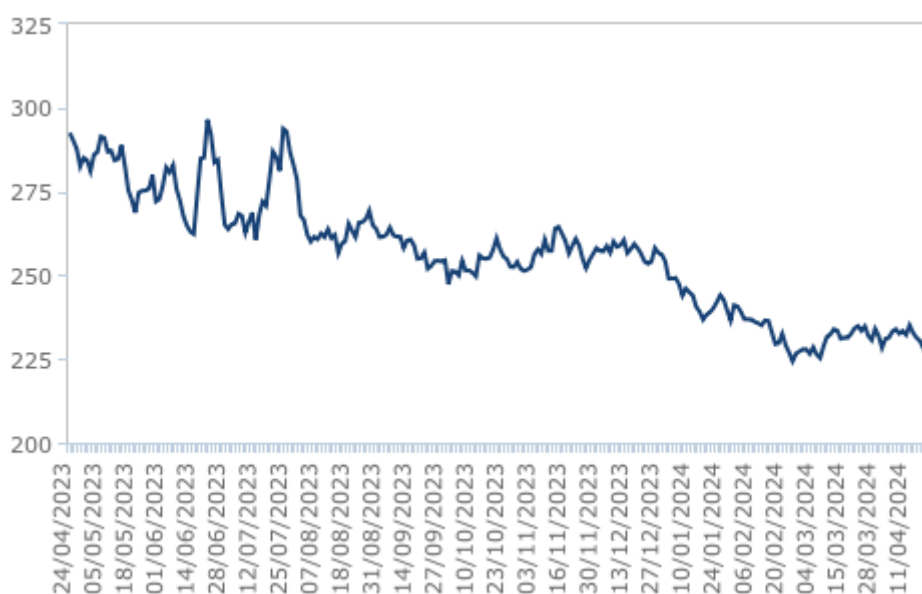
Grains: Limited Direct Risk From Middle East Tensions, Continued Underperformance Over Abundant Production Forecasts

Grains continue to underperform the wider agricultural complex. We maintain our view that prices will weaken in 2024 as large harvests in major exporting markets continue to drive bearish sentiment. Concerns as to the strength of Mainland Chinese import demand also continue to influence price development in feed grain markets. **Tensions in the Middle East pose a limited risk to the international grain market.** In line with the core view of our Country Risk team, which points to an expected de-escalation of Israel-Iran tensions, we expect that what limited price gains were accrued in the sessions after April 18 will dissipate in the near term. We caution, however, that the extensive net short positions accumulated in grain markets by speculators does render prices sensitive to developments insofar as news-driven short covering could prompt an upward swing. Should tensions instead escalate further, a scenario to which our Country Risk team assign a likelihood of 25%, the principal channel via which grain prices would be affected would be increased crude oil prices, which would increase the cost of agricultural production, via fuel and fertiliser prices, as well as the cost of shipping.

With respect to the continued weakness across grain markets, CBOT-listed second-month corn futures closed April 22 at US\$450/bu, equivalent to a YTD loss of 7.1%. On April 23, 2024, we made a downward revision to our forecast for the average corn price in 2024 and now anticipate a mean price level of US\$430/bu as compared to a YTD average of US\$447/bu up to April 22. We forecast that world corn end-of-season stocks will reach their five- or six-season high in 2023/24 with a net production surplus of 33.0mn tonnes in 2023/24. The two largest corn exporters globally, Brazil and the US, both increased corn production in 2023, from 116mn tonnes in 2022 to 137mn tonnes and from 347mn tonnes in 2022 to 390mn tonnes, respectively. This also resulted in increased exports from the two countries, which totalled 107mn tonnes in 2023, up from 90mn tonnes in 2022. Demand-side growth will continue with the normalization of corn-feed ratio in Mainland China and the USDA forecasts that end-of-season US corn inventories in 2024/25 will post a 16.6% y-o-y increase, further adding to bearish sentiment in the market.

Abundant Production Forecasts Continue To See Grains Underperform

Dow Jones Commodity Index Grains, USD



Source: Dow Jones Indices, BMI

Softs: Limited Direct Risk From Middle East Tensions, Mixed Performance As Cocoa Continues To Reach New Highs Sugar Retreats

Over the past month, the agricultural soft commodities market has displayed a diverse range of performances. ICE-listed second-month cocoa futures have stood out with a remarkable month-to-date surge of 14.6% as of April 25. Meanwhile, front-month ICE-listed sugar futures dipped by 12.0%, and second-month cotton futures fell by 13.2% in that same period.

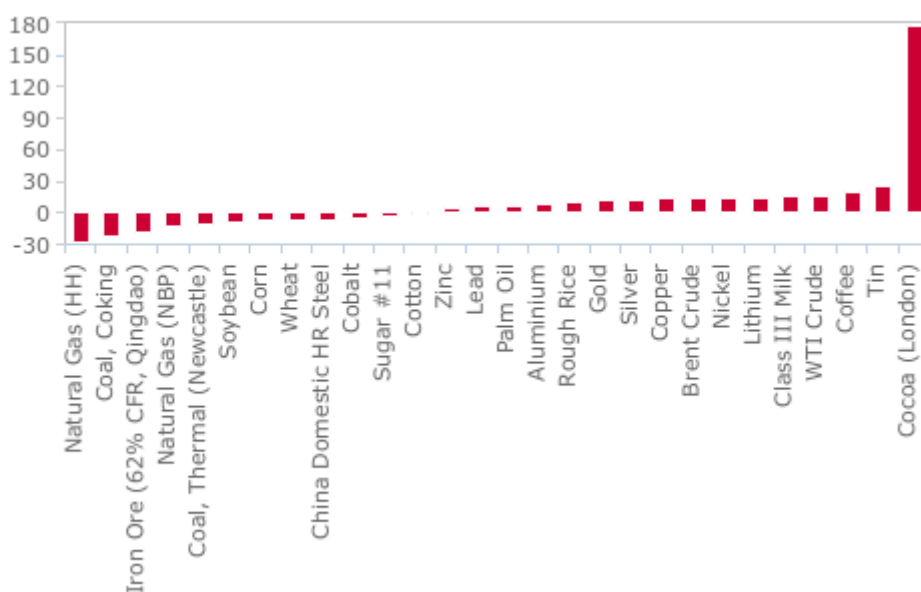
Amidst the fluctuations, the cocoa market has been particularly notable. Persistent supply-side issues have been driving forces behind the price increases throughout 2024, leading to a revision in the average annual cocoa price forecast to USD 6,000/tonne. Despite soaring prices, which have spiked by 165.8% year-to-date, peaking at USD 11,064/tonne as of April 22, demand for cocoa has not waned to the level anticipated, with global grindings in the first quarter of 2024 rising by 5.5% q-o-q. Although this represents a 0.7% decrease year-on-year, the dip is less severe than market expectations, offering additional support to the current price levels. The robust showing of cocoa futures highlights a market that is not just reactive to disruptions in supply but is also underpinned by demand that recent data suggests may be stronger than previously estimated. Should this trend persist, it could pose an upward risk to our current price forecast.

Sugar prices, conversely, have been subdued due to Brazil's strong supply and depreciated currency. Nonetheless, recent adverse weather conditions affecting Brazilian sugar production have led to a modest price recovery from a low of US\$19.3/lb on April 17. Despite this, sugar prices closed at US\$19.8/lb on April 22, marking a 9.4% fall over the month and a 3.8% year-to-date decline.

While geopolitical tensions between Israel and Iran have had minimal impact on these commodities and are expected to remain insignificant due to the absence of major producers in the region, sugar prices could benefit indirectly. Should Middle East tensions escalate, which our Country Risk team estimates at a 25% probability, this could potentially stimulate demand for ethanol and encourage more sugarcane to be diverted towards ethanol production. However, it's worth noting that the current dynamics of the Brazilian market lean towards sugar over ethanol, indicating that significant market shifts would likely require pronounced movements in the global oil markets. We are maintaining our sugar price forecast at US\$23.5/lb, while carefully monitoring developments in both Brazil and Asia, which play pivotal roles in shaping the global sugar landscape.

Cocoa YTD Performance Unbeatable

Select Commodities - 2024 Year-To-Date Performance (%)



Source: Bloomberg, BMI

Commodities Strategy And Outlooks

Commodity Sub-Group	Three-To-Six Month Outlook	12-To-24 Month Outlook	Comment	Recent Analysis
Oil	Neutral	Neutral-bullish	Brent prices have largely retreated from monthly highs seen in the immediate aftermath of the Israeli attack on the Iranian consulate in Damascus on April 1st. Fears of a wider escalation into a open regional conflict have subsided as retaliatory strikes by both Iran and then Israel have remained measured and have so far signalled de-escalation. Ukrainian strikes on Russia refining facilities have stopped further easing fears for a direct impact to energy exports and supply from Russia. As a result of these easing concerns sentiment has cooled with Brent prices are down by 3.4% over the monthly highs at USD88/bbl at the time of writing. Continued OPEC+ production cuts and question around future oil demand continue to counter bullish pressures. For now we maintain our current forecast for Brent crude to average USD85/bbl in 2024 given the lack of conviction for Brent to hold above the key USD90/bbl mark without disruption to global supply.	'Brent: Prices Breaking Through Resistance, As The Russia-Ukraine War Comes Back Into Focus' March 28
Natural Gas	Neutral	Bearish	European natural gas prices are higher over the month as tensions in the Middle East add to risk premium for energy. Front month Dutch TTF prices are 4.8% higher for the month at EUR28.7/MWh and front month UK NBP is 3.4% higher at GBp74/therm. Despite the solid gains natural gas prices have declined from recent highs in mid-April as retaliatory attacks from Israel and Iran appearing to be contained. Markets have interpreted the measured attacks as a signal that neither party wants events to escalate easing the risk of a near-term disruption to LNG supply. The de-escalation stance compounded with highly elevated natural gas in storage and mild weather forecast as Europe moves into Spring leaves easing upside pressures on prices. We have revised our forecast downwards for Dutch TTF and UK NBP gas prices for 2024 and 2025, as a result of elevated European storage levels and the dour outlook for demand. Front month Dutch TTF prices to average EUR30/MWh and EUR28/MWh in 2024 and 2025 respectively. Meanwhile UK NBP front month prices are expected to see a similar drop to GBp81/therm in 2024 and GBp76/therm in 2025. Henry Hub front month averaged at USD1.79/mnbtu in April, which marks a small increase from March average at USD1.75/mnbtu which reflects only a modest reaction to the elevated geopolitical risks. Henry Hub prices remain subdued given record storage levels and limited demand in the US, which seasonally sees consumption nadir in Q2. However, we expect prices to increase on growing market tightness in H224, with an average of USD2.8/mnbtu for 2024.	'UK NBP And Dutch TTF Gas Prices: Fundamentals Signal Bearish Outlook', April 18 'Henry Hub: Growing Demand To Support Price Recovery In H224', April 9
Ferrous Metals	Neutral	Bearish	Ferrous metals have experienced notable losses in the year-to-date as demand concerns intensify amidst ongoing challenges within China's property sector. That said, 62% Qingdao Iron Ore prices have seen a resurgence, with 62% Qingdao Iron Ore prices rising 7.8% month-on-month closing at USD110/tonne on April 19 after reaching a year-to-date low of USD95/tonne on March 29. Prices increase arose in response to a more optimistic demand outlook. That said, iron ore port inventories have remained elevated at	'Iron Ore: Despite Price Resilience, Rally Prevented By Weak

Commodity Sub-Group	Three-To-Six Month Outlook	12-To-24 Month Outlook	Comment	Recent Analysis
			143.1mnt as of April 19 which, coupled with weak steel production and a still struggling property sector, has the potential to put pressure on prices. Looking ahead, while hopes of a Mainland Chinese demand turnaround, stemming from a recovering manufacturing sector, are likely to fuel price growth, the property market downturn will remain a major drag, placing a cap on prices and tilting the balance of risks to the downside over 2024.	Mainland Chinese Property Sector', February 15 'Steel: Prices Set To Improve, Contingent On Mainland Chinese Demand', March 5
Base Metals	Neutral	Bullish	Base metals have enjoyed a lift in recent weeks, buoyed by sanctions on Russian metals, positive sentiment over global demand, and improving market fundamentals. We have recently revised up our 2024 annual copper price forecast to USD9,200/tonne, expecting prices to rise from 2023 level. Aluminium prices have benefited from fresh sanction on Russian metals, and other supply issues including disruptions in Mainland China's Yunnan province. Nickel prices continue to rise as well over the fresh sanctions on Russian metals. Looking ahead, we expect base metal prices to be supported by the weakening of the US dollar in 2024.	'Aluminium: Price Growth Later In 2024 As Market Conditions Improve', February 1 'Copper: Prices Set To Rise On Tighter Supply And Weaker Dollar, Further Upside Contingent On Mainland Chinese Demand', April 9
Precious Metals	Neutral-Bullish	Neutral	Gold prices (XAU index) have surged 12.6% in the year-to-date (from January 2) and gained 3.0% in the month-to-date (from April 1) as of April 25. Gold prices are hovering around USD2,320/tonne at the time of writing on April 25, after reaching a new record high of USD2,431.5/oz on April 12. Prices rose steadily since the Israeli attack on Iran's consulate in Damascus on April 1 as global investors debated on the extent of a likely retaliation from Iran. As the measured and limited Iranian retaliation on Israel occurred over the weekend after trading hours, gold prices failed to break higher. Indeed, as market consensus is for a de-escalation in tensions for	'Gold Prices: On A Pedestal As US Interest Rate Cuts Approach, But Strong Economic Data Presents High Risks', March 18

Commodity Sub-Group	Three-To-Six Month Outlook	12-To-24 Month Outlook	Comment	Recent Analysis
			now, gold prices have seen a soft easing in the days up to April 25. That said, as the Middle East region has entered a higher plane of geopolitical risk, this has now placed a firm floor under gold prices, which we believe to be around USD2,250/oz in the next three months, as gold's safe haven characteristic allows it to thrive from geopolitical uncertainty, especially as a Rafah invasion by Israel looms.	
Grains	Neutral-bearish	Bearish	Between April 15 and April 22, 2024, CBOT-listed second-month corn and soybean futures posted declines of 0.5% and 2.4%, respectively. Meanwhile, CBOT-listed second-month wheat and rice futures recorded increases of 3.2% and 9.0% in the same period. The recent upward pressure on wheat prices, with futures posting a 3.5% w-o-w increase on April 22, is driven by forecasts for dryer-than-expected weather in the US Wheat Belt. Tensions in the Middle East and concerns surrounding shipments in the region have also contributed to bullish sentiment. Rice futures have also posted a weekly increase of 4.6%, driven by persistent concerns surrounding Indian rice export restrictions. On April 11, 2024, we made an upward revision to our average rice price forecast for 2024, raising our outlook from USD15.95/cwt to USD16.50/cwt on the back of robust export demand for US rice. As of April 22, corn and soybean futures had decreased by 18.8% y-o-y and 26.4% y-o-y, respectively, on a YTD basis with forecasts of abundant harvests in major markets driving bearish sentiment	'Corn Price Forecast: Further Downward Revision As Excess Supplies Continue To Overhang Markets', April 23, 2024 'Rice Price Forecast: Upward Revision As US Rice Exports Benefit From Sustained International Market Tightness', January 11, 2024
Softs	Neutral	Neutral-bullish	Over the last month, we've witnessed diverse trends in global soft commodity prices. As of the market close on April 22, prices for cocoa and coffee, listed on the second-month contracts of the Intercontinental Exchange (ICE), surged by 32.2% and 23.7% respectively, compared to the previous month. On the contrary, the front-month contract for ICE-listed sugar and the second-month contract for ICE-listed cotton saw declines of 9.4% and 10.3%, respectively. Cocoa prices have been buoyed by a worsening supply forecast over the last 18 months. Coffee has recently come into focus with increasing concerns about global supplies. Coffee prices ended at US\$227.7/lb on April 22, marking a significant increase of 22.3% since the beginning of the year. While we had projected high trading prices throughout the year due to tight global supplies, the recent news of a potential 20% cut in Vietnamese coffee exports—after a notable drop in their domestic production—has	'Cocoa Price Forecast: Further Upward Revision Amidst Continued Pressures On Supply', March 15 2024

Commodity Sub-Group	Three-To-Six Month Outlook	12-To-24 Month Outlook	Comment	Recent Analysis
			intensified concerns about global availability and pushed prices even higher. Conversely, cotton prices have softened due to more plentiful supplies. Cotton closed at US\$81.7/lb on April 22, which is only a 0.3% rise since the start of the year. Although this is a marginal year-to-date increase, the current prices are still 18.5% below the peak reached on February 28. Prices have been further pressured downward by an improved supply forecast, coupled with weakened demand for U.S. cotton and the impact of a stronger U.S. dollar.	

Note: Outlook from current prices as of April 24 2024. Source: BMI

Select Commodities - Performance And BMI Forecasts

Commodity	Unit	Current Price	YTD(% Chg)	1 Year(% Chg)	2023 (ave)	YTD(ave)	2024f (ave)	2025f (ave)	2024f (% Chg YoY)
Agriculture									
Class III Milk	USD/cwt	18.08	14.87	2.79	17.50	16.87	17.00	16.50	-2.9
Cocoa (London)	GBP/tonne	9,113.00	169.70	298.82	2,651.42	5,506.85	4,687.80	3,984.00	76.8
Coffee	US\$/lb	220.85	18.61	14.16	170.56	192.17	182.00	178.00	6.7
Corn	US\$/bushel	452.50	-6.51	-25.51	553.22	446.95	430.00	460.00	-22.3
Cotton	US\$/lb	81.37	-0.95	0.84	83.33	89.01	88.00	90.00	5.6
Feeder	US\$/lb	243.75	9.65	19.62	-	242.16	-	-	-
Lean Hogs	US\$/lb	98.58	45.02	27.98	-	81.85	-	-	-
Live Cattle	US\$/lb	183.35	5.57	5.39	-	181.23	-	-	-
Palm Oil	MYR/tonne	3,955.00	6.29	6.75	4,149.64	3,994.43	3,750.00	3,500.00	-9.6
Rough Rice	USD/cwt	19.25	9.85	11.21	16.69	17.99	16.50	15.85	-1.1
Soybean	US\$/bushel	1,181.75	-8.96	-17.71	1,405.00	1,197.74	1,250.00	1,350.00	-11.0
Sugar #11	US\$/lb	19.88	-3.40	-23.27	24.60	22.17	23.50	20.00	-4.5
Wheat	US\$/bushel	599.25	-6.29	-8.79	671.00	581.98	605.00	648.00	-9.8
Energy									
Coal, Thermal (Newcastle)	USD/tonne	129.75	-11.37	-31.84	173.80	127.40	150.00	140.00	-13.7
Coal, Coking	USD/tonne	248.00	-22.50	-0.80	296.38	284.48	300.00	250.00	1.2
Brent Crude	USD/bbl	88.44	14.80	6.90	82.18	83.38	85.00	82.00	3.4
OPEC Basket, Oil	USD/bbl	88.17	12.40	7.71	82.95	83.37	84.00	81.00	1.3
WTI Crude	USD/bbl	83.30	16.26	5.76	77.61	78.69	82.00	79.00	5.7
Natural Gas (HH)	USD/mnBtu	1.81	-27.92	-20.28	2.66	2.03	2.80	3.60	5.3
Natural Gas (NBP)	USD/mnBtu	8.99	-12.05	-23.75	12.74	8.79	12.60	11.16	-1.1
Natural Gas (TTF)	EUR/MWh	29.01	-9.06	-26.74	41.25	27.86	40.00	38.00	-3.0
Industrial Minerals & Metals									

Commodity	Unit	Current Price	YTD(% Chg)	1 Year(% Chg)	2023 (ave)	YTD(ave)	2024f (ave)	2025f (ave)	2024f (% Chg YoY)
Aluminium	USD/tonne	2,579.00	8.18	7.62	2,288.00	2,296.85	2,400.00	2,500.00	4.9
Cobalt	USD/tonne	27,830.00	-4.48	-20.33	-	28,677.03	-	-	-
Copper	USD/tonne	9,706.50	13.41	10.37	8,523.00	8,730.56	9,200.00	9,400.00	7.9
Iron Ore (62% CFR, Qingdao)	USD/tonne	107.34	-18.56	1.17	114.30	115.63	120.00	100.00	5.0
Lead	USD/tonne	2,184.50	5.61	1.09	2,128.00	2,099.66	2,200.00	2,300.00	3.4
China Lithium Carbonate	USD/tonne	15,250.21	14.51	-33.23	35,956.10	103,686.67	50,000.00	20,000.00	39.1
Nickel	USD/tonne	19,006.00	14.47	-22.35	21,688.00	17,102.63	18,000.00	18,500.00	-17.0
China Domestic Hot Rolled Steel Average*	CNY/tonne	3,826.00	-6.18	-4.80	-	3,937.31	-	-	-
Tin	USD/tonne	31,938.00	25.67	20.09	25,912.00	27,425.95	26,000.00	28,000.00	0.3
Zinc	USD/tonne	2,792.50	5.06	2.70	2,651.00	2,526.32	2,500.00	2,650.00	-5.7
Precious Metals									
Gold	USD/oz	2,317.77	12.35	16.52	1,943.00	2,130.66	2,100.00	1,950.00	8.1
Palladium	USD/oz	1,032.00	-6.97	-32.74	-	990.63	-	-	-
Platinum	USD/oz	913.70	-8.17	-19.13	-	918.89	-	-	-
Silver	USD/oz	27.27	13.20	7.72	-	24.38	-	-	-

*We forecast a global average of steel prices; therefore, our forecasts are not included on this line. All metals prices except steel, lithium and iron ore refer to generic third-month contracts. All energy prices refer to generic front-month and all agribusiness refer to second-month contracts unless otherwise stated. - = not available. f = BMI forecast. Source: Bloomberg, BMI. Last updated: April 24 2024

Upstream Analysis

Africa Machinery Outlook: Minimal Uptick In Investment And Sales In 2024

Key View: 2024 will see some growth in agricultural machinery sales in Africa, although the extent of this will be limited as economic growth remains weak on the back of inflation and tight global financial conditions. At the same time, pressure on foreign exchange rates across the region will weigh on demand for agricultural machinery imports. While elevated global agricultural commodity prices will support farmgate prices and farmer incomes, we note that African farmers have faced exceptionally high agricultural input prices since the onset of the Covid-19 pandemic, which will have squeezed the capacity of farmers to fund capital investment. In addition, high fertiliser prices will also weigh on agricultural production volumes, which will, in turn, act to depress farmer incomes. We believe that the contractual distribution model will become more common across agricultural machinery sectors in Africa, capable as it is of circumventing the low capacity of the majority of farmers to afford items of agricultural machinery.

Latest Developments:

- In February 2024, the South African Agricultural Machinery Association (Saama) revealed that January 2024 tractor sales of 353 units were significantly (25% y-o-y) less than the 474 units sold in January 2023. Eight combine harvesters were sold in January, eight less than the 16 units sold in January 2023. In general, most summer crops remain healthy, particularly in the eastern parts of the country. The El Niño phenomenon which brings lower rainfall in January and February, failed to materialise fully, to the benefit of farmers. However, infrastructural problems in regard to electricity, road and rail transportation and harbours are affecting the agriculture sector negatively, namely, in the production and movement of equipment and products to and from local and overseas markets.
- In 2024, African agricultural machinery investment and sales will see a slight improvement as economic growth sees a general uptick and financial conditions ease. In SSA, it is our view that economic growth will improve in most major markets in 2024, with Ethiopia, where we anticipate economic growth to reach 6.8% in 2024, set to outperform. In North Africa, we believe that Egypt's real GDP growth will accelerate from 3.8% in FY2022/2023 (July 2022-June 2023) to 4.2% in FY2023/24 due to rising investment from Gulf Cooperation Council markets promoted by the privatisation plan and higher capital spending, while Algeria will exhibit a less pronounced slowdown, with growth set to fall from 2.9% in 2023 to a forecasted 1.3% in 2024.
- In December 2023, a press release by Saama stated that November 2023 tractor sales of 685 units were approximately 3% less than the 703 units sold in November 2022. On a year-to-date basis tractor sales are now approximately 7% down on 2022. Thirty-four combine harvesters were sold in November 2023, eleven more than the 23 units sold in November 2022. On a year-to-date basis combine harvester sales are now almost 37% more than last 2022.
- In South Africa, the market for agricultural machinery, particularly tractors, has not fallen as much as was initially expected. Circumstances have meant that older equipment could be replaced and this has stabilised the market.
- In South Africa, tractor sales is likely to remain subdued in the coming months due to the El Niño phenomenon, load-shedding and the need for alternative power supplies and fuel. Going forward, higher input costs, higher interest rates, and lower replacement demand for the next season due to robust machinery sales in the past few years will place a cap on machinery demand. However, an increasing focus on sustainable agricultural mechanisation, rapid urbanisation, the adoption of innovative technology, the growth of medium-scaled farms, and increased production and export of commercial crops in the country is likely to drive growth in agricultural machinery and equipment demand in the coming years.
- We believe that the contractual distribution model will become more common across agricultural machinery sectors in Africa, capable as it is of circumventing the low capacity of the majority of farmers to afford items of agricultural machinery. This could take the form of either a dispersed rental system or the communal (or, community-based) ownership of agricultural machinery products. We note, too, the potential for novel agtech applications to ameliorate agricultural outcomes in Africa but we caution that mass deployment and adoption is first contingent on the development of wider network infrastructures, although markets with extensive mobile coverage could stand to outperform.
- Several states across Africa have made the modernisation of the domestic agricultural sector a central economic target, a reflection of the potential to alleviate rural poverty and to stimulate both the rural as well as the national economy of so doing.

and we have identified Algeria, Ethiopia, and Morocco as leading efforts in this regard, which will support agricultural capital investment flows through the medium term.

It is our view that the evolution of four major dynamics will determine the pace of mechanisation across the agricultural sectors of Africa between 2024 and 2028:

- the rate of farmer-income growth, the product of both enhanced productivity and elevated commodity prices;
- the development of downstream agricultural processing capacities and the extension of farmer partnerships with established food companies;
- the continued extension of targeted state support and financial incentives to the domestic agricultural sector and agricultural machinery manufacture sector;
- the evolution of foreign exchange rates across Africa, as a continued weakening will undermine agricultural machinery imports;
- and, the expansion (or otherwise) of access to credit and favourable lending rates as well as cooperative risk-pooling structures.

Several Major African Economies To Improve In 2024

Real GDP Growth (% y-o-y)

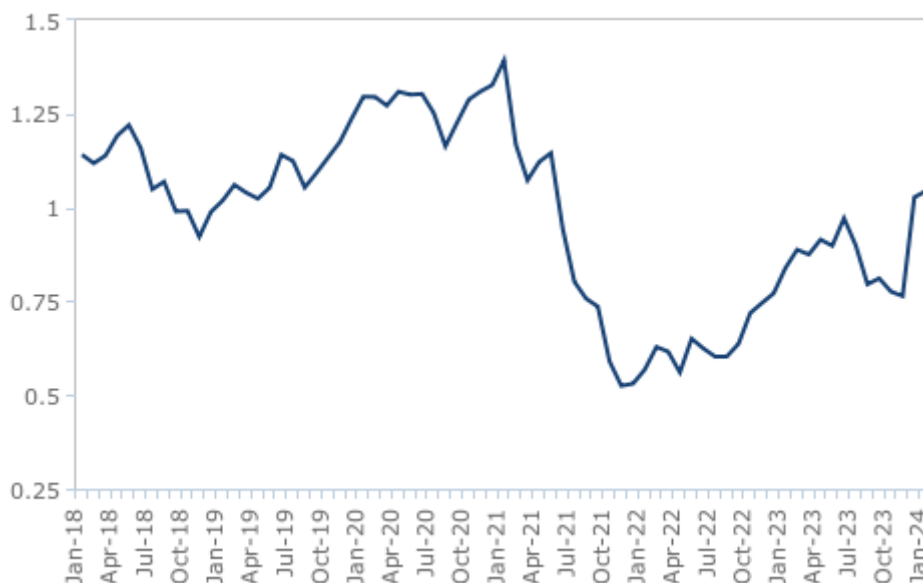


e/f = BMI estimate/forecast. Source: National sources, BMI

However, we believe that agricultural machinery investment faces significant headwinds in the short term. The rise in the cost of agricultural inputs has reduced the pool of funds available for capital investment across Africa but lower application rates of products such as fertiliser and pesticides will weigh on upcoming harvests, which will then weigh on farmer incomes. Moreover, the financial capacity of states to support agricultural capital investment through 2023 has been significantly undermined through the Covid-19 era, while the depreciation of currencies across the region and the widespread tightening of monetary policy across Africa will also diminish agricultural machinery purchases. On an inter-regional basis, we expect drought conditions in both North Africa and across the Horn of Africa to depress agricultural production volumes. Finally, we highlight that elevated fuel costs will further act to increase the operational costs of and so reduce investment in agricultural machinery.

Easing Fertiliser Prices To Aid Capital Investment Decisions

Grains-To-Fertiliser Price Index



Source: World Bank, BMI

1. Africa Starts From A Low Base Of Mechanisation

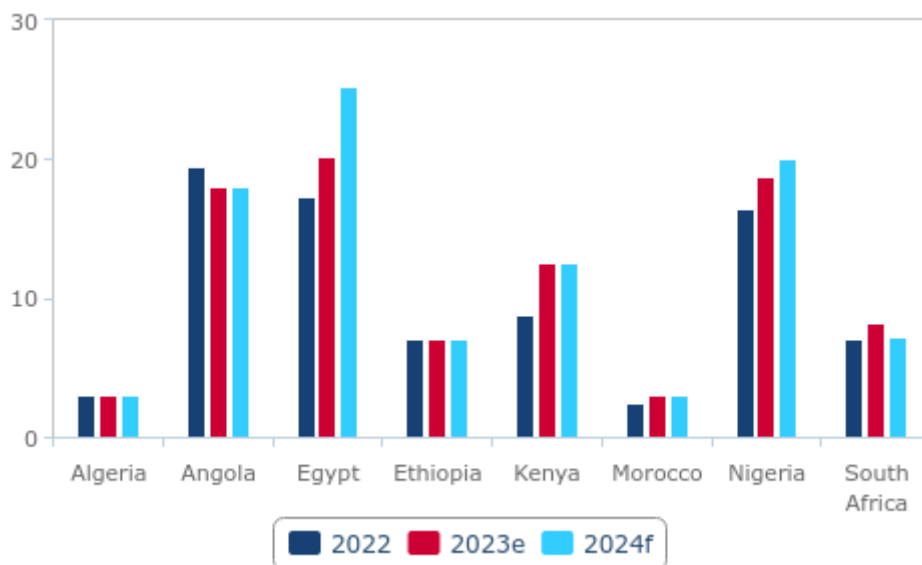
According to the United Nations, mechanisation levels on farms across Africa are currently deficient, with the number of tractors at 43 per sq km in South Africa, compared with 128 per sq km in India and 116 per sq km in Brazil.

Per the FAO, Africa has less than two tractors per 1,000 hectares of cropland, less than one fifth of level observed in South Asia and Latin America. This reflects disparities in the levels and rates of economic growth between these regions, while Africa's low base of mechanisation is borne out in the prevalence of smallholder subsistence farming in the region's agricultural sector. The sector also (partly, as a result) generates low crop yields, which stimulates high levels of import demand and thereby undermines both food security as well as the resilience of agricultural. In 2014, the Malabo Montpellier Panel (MMP), a group of international agricultural exports, recommended that African states formulate and implement agricultural mechanisation strategies in order to stimulate agricultural production growth. Four years later, the MMP considered 12 African states as having generated robust growth in agricultural mechanisation, including Ethiopia, Morocco, Rwanda, Tanzania, and Zambia.

Africa's new tractor market is traditionally dominated by Algeria, Morocco, and South Africa, which account for a high share of Africa's total tractor purchases each year. However, we note that the majority of these purchases tend to be the at lower-end of the market, with about four fifths of less than 100 horsepower and most being two-wheel drive. Tractor ownership on an individual or household basis is made challenging due to the limited access to collateral (required to support a loan application) and consequent high cost of borrowing. As noted by the FAO, the 'lack of finance is the overwhelming reason' behind farmers' inability to purchase agricultural machinery.

Financial Conditions To Improve Slightly In 2024, Aiding Agricultural Investment

Central Bank Policy Rate (% eop)



f = BMI forecast. Source: National sources, BMI

2. Global Players Starting To Establish Presence In Africa

Prior to the Covid-19 pandemic, a number of global agricultural machinery firms had voiced increasingly optimistic views on the prospects for sales growth in Africa. John Deere, for instance, expected sales to rise at a pace of 8-10% through the medium term (albeit from a low case), while pointing to Angola, Ethiopia, Nigeria, and Zimbabwe as promising markets. In 2021, John Deere delivered close to 1,000 tractors to Ethiopia, up from 60 tractors just five years earlier. In April 2021, John Deere announced its intention to expand construction equipment sales operations to 18 African economies, which is indicative of the positive spill-over effects that the growth of construction and infrastructure sectors can have in attracting global machinery firms to new markets. Simultaneously, firms such as Hello Tractor, the so-called 'Uber of tractors', have allowed for the purchasers of new tractors to operate them at a higher utilisation factor than would be possible on an individual basis. By facilitating the hiring out of agricultural machinery to those in need of it, the financial profile of an investment in such machinery can be improved, a particular advantage in markets in which access to credit remains tight. In August 2022, John Deere made a minority investment in Hello Tractor, which is based in Kenya, following Hello Tractor's successful participation in John Deere's 'Start-Up Collaborator Program', launched in 2019.

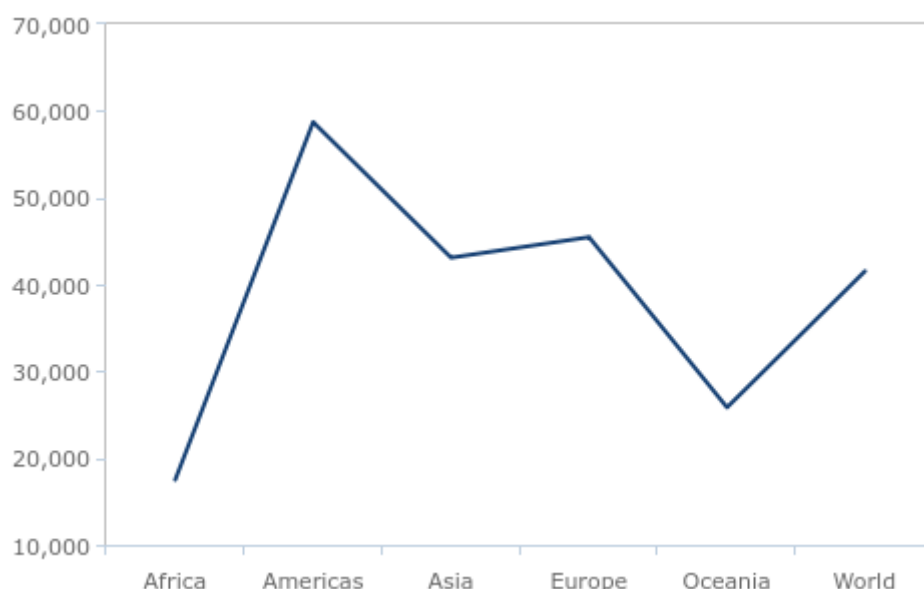
In our view, the corporate landscape of Africa's agricultural machinery sector will remain relatively stable through the medium term, in part as the sector's growth prospects have somewhat dimmed in the aftermath of the Covid-19 pandemic and its consequent macroeconomic headwinds. This also reflects the development of brand recognition across Africa and the fact that the relatively small pool of potential investment funds will act to constrain the number of firms entering specific markets. We do note, however, that several Indian firms are seeking to expand export sales to Africa under the 'made-in-India' campaign, which we consider to have moderate growth potential through the medium term. India's low-cost manufacturing base and the fact that its product offering is concentrated at the relatively low-end (and, therefore, less expensive) of the global market suggest that its exports will be well-suited to Africa's demand profile. However, we caution that export flows will be constrained due while India's domestic tractor production continues to rise and that the establishment of firm trading relationships and their associated logistical and transportation networks will require an investment of time.

Over the past five years, AGCO, the US-based agricultural machinery firm, has expanded its presence in Africa and has built new production facilities in Algeria, South Africa, and Zambia. AGCO's 2020 annual report made clear that its long-strategy includes the further expansion of its production facilities and related supply chain capacities in Africa. At the end of 2020, AGCO also adopted a

new two-tier distribution model, which will allow direct communication with vehicle dealers, to improve the efficiency of its sales. For us, this development highlights the importance of a flexible business model when operating in Africa, whether in terms of retail outlets, such as dealers, but also in terms of customer financing channels and terms, which may also include community-based investment, when the cost of a machinery item is divided between households.

Africa Lags Behind in Grain Yields

Select Markets - Yield 100g/ha



Source: BMI

3. Constraints On The Adoption Of Agricultural Machinery And Other Technologies

There is no single reason that sufficiently explains the low rate of adoption of agricultural machineries and other technologies across Africa, a reflection both of the heterogeneity of the markets that make up the continent as well as the complex nature of technological adoption itself. Instead, a series of constraints on adoption can be identified and, when integrated into a holistic framework, can be used to evaluate the specific binding constraints in a particular area or region and to identify practical policy levers with which to compensate for them.

We note, too, that while the lower levels of economic development that characterise a number of African states are often considered to lie at the heart of low rates of agricultural technological adoption this approach not only fails to generate specific policies applicable to and practicable within the agricultural sector itself but also mistakes the symptom of other constraints for their cause. In other words, low rates of technological adoption and low levels of economic development are both the result of specific constraints, rather than the latter serving as the determinant factor of the former.

In broad terms, five major varieties of constraints on Africa's adoption of agricultural machinery and other associated technologies have been identified:

- **Credit, Liquidity, and Savings Constraints:** the lack of access to financial mechanisms through which farmers are able to fund capital investment that would otherwise exceed their capacity to fund from their income – in Africa, where about four fifths of all farmers operate under two hectares of land, the prevalence of smallholder activities amplifies the impact of narrow access to credit.

- **Insurance Constraints:** the lack of access to risk management products, such as crop insurance, creates an incentive to favour low-risk, low-return technologies, which seek to stabilise rather than grow farmer income, and so will act to depress investment in novel agricultural technologies.
- **Knowledge (And Training) Constraints:** an awareness of agricultural technologies, especially those at the novel end of the technical spectrum, and an understanding of both the means by which to deploy them effectively and the potential yield-enhancing benefits of so doing are all necessary conditions for the mass adoption of agricultural machineries.
- **Transaction Cost and Infrastructure Constraints:** the fragmented nature of agricultural supply chains across much of Africa serves to reduce the return to the farmer of investment in new machinery and technologies, and thus discourages investment in new products. In particular, the impact of relatively low levels of investment in distribution and storage facilities, such as cold storage, serves to limit the return to the farmer of higher or more efficient cultivation.
- **Imperfect Market Constraints:** the inefficient allocation of labour (in both time and space) and the lack of clearly defined land rights both act to reduce the return on investment and to increase the risk attached to a particular investment insofar as machinery utilisation rates will lower than optimal and the benefit to the farmer of higher rates of future revenue will not be guaranteed.

Key Macroeconomic And Agribusiness Forecasts (2019-2028)

Geography	Indicator	2019	2020	2021	2022e	2023e	2024f	2025f	2026f	2027f	2028f
Global	Real GDP growth, % y-o-y	2.7	-2.8	6.2	3.0	2.7	2.1	2.8	3.1	2.9	2.9
Global	Wheat Price, US\$/bushel, ave	498	551	707	910	671	633	648	652	648	644
Global	Soybean Price, US\$/bushel, ave	901	956	1,362	1,515	1,405	1,350	1,300	1,250	1,220	1,190
Global	Corn Price, US\$/bushel, ave	392	368	564	681	553	500	450	425	410	400
Global	Rice Price, USD/cwt, ave	11.57	12.89	13.59	16.81	16.80	15.95	14.75	14.00	13.25	12.50
Algeria	Real GDP growth, % y-o-y	1.0	-5.1	3.4	3.1	2.9	1.3	1.6	1.7	1.8	1.9
Angola	Real GDP growth, % y-o-y	-0.7	-5.6	1.2	3.0	0.5	1.0	1.4	2.0	3.6	2.5
Egypt	Real GDP growth, % y-o-y	5.5	3.6	3.3	6.7	3.8	3.2	4.2	4.0	4.0	4.0
Ethiopia	Real GDP growth, % y-o-y	8.4	6.1	5.6	5.3	6.0	6.8	7.0	7.2	7.3	7.2
Kenya	Real GDP growth, % y-o-y	5.0	-0.3	8.4	4.8	5.5	5.5	5.3	5.3	5.3	5.5
Morocco	Real GDP growth, % y-o-y	2.9	-7.2	8.0	1.3	3.4	3.5	3.9	3.7	3.5	3.6
Nigeria	Real GDP growth, % y-o-y	2.2	-1.8	3.6	3.3	2.7	2.9	3.4	3.5	3.6	4.2
South Africa	Real GDP growth, % y-o-y	0.1	-6.2	4.8	1.9	0.7	1.7	1.9	1.8	1.6	1.5

e/f = BMI estimate/forecast. Source: National sources, BMI

Africa GM Outlook: Food Insecurity Makes Strong Case For GM Seeds, But Outlook Plagued By Public Hesitancy

Key View: GM adoption in Africa is still in its nascent stages, and we expect overall adoption for GM and biotech to remain sluggish over the coming decade as inherent structural challenges, bureaucratic inertia and institutional deficits continue to limit uptake. That being said, GM seed varieties not intended for human consumption, such as cotton, will probably intensify. In our view, South Africa is likely to consolidate its position as a regional leader of GM development, although some other markets, such as Kenya, Ghana, Ethiopia, Nigeria and Uganda, are beginning to show some signs of regulatory liberalisation.

Latest Updates

- In January 2024, the Federal Government of Nigeria approved the commercial release of transgenic insect-resistant and drought-tolerant maize varieties, known as TELA maize. The approval was granted by the National Committee on Naming, Registration and Release of Crop Varieties, Livestock Breeds/Fisheries at its 33rd meeting at the National Centre for Genetic Resources and Biotechnology, Ibadan on January 11 2024. The four varieties approved by the NVRC are SAMMAZ 72T, SAMMAZ 73T, SAMMAZ 74T, and SAMMAZ 75T. The new maize varieties are drought tolerant and are resistant to stem-borer and fall armyworms, resulting in a yield advantage of up to 10 tons per hectare under good agronomic practices. The national average for similar hybrids is six tons per hectare.
- In October 2023, the Environment and Land Court in Kenya dismissed a lawsuit challenging a government decision to allow the importation and cultivation of genetically modified (GM) crops, saying that the government had taken appropriate measures to regulate their use. In 2022, the Kenyan government had lifted a decade-old ban on GM crops in response to food insecurity after the East African region faced the worst drought in 40 years. The ruling hands Kenyan farmers a landmark victory as they are now a step closer to cultivating approved climate-resilient Bt maize seeds and disease-resistant cassava in a bid to arrest the country's food insecurity and improve their livelihoods through agriculture.
- On August 1 2023, the head of the Biotechnology Research Institute of Kenya stated at the Kenya Editors Guild (KEG) Members Meeting that four varieties of Bt cotton have been recommended for release by the National Performance Trials Committee (NPTC). While a judgement is yet to be delivered, the cultivation of Bt cotton is ongoing in the country, and the variety has experienced very high demand in other markets. So far, Kenya has approved 58 GMO projects, according to the National Biosafety Authority (NBA).
- On September 22 2023, the Savanna Agricultural Research Institute (SARI) of Ghana disclosed that a new Genetically Modified (GM) cowpea developed by the SARI is set to hit the Ghanaian market by the end of 2023 to early 2024. According to the developers, the new cowpea which is Ghana's first ever GMO crop will increase the yields for farmers by nearly 300%.
- On April 14 2023, after years of extensive research confirming its safety and having met all regulatory stipulations and scientific procedures, the Ghanaian government has deemed it fit to introduce the PBR cowpea crop (a genetically modified variety) into the nation's agricultural seed system. Ghana approved first GMO crop, BT Cowpea, which is resistant to pest attack. Genetically modified cowpea could be commercially available to Ghanaian farmers in 2024 following approval of the variety by the National Biosafety Authority in 2022.
- On November 16 2023, the Committee on Science, Technology and Innovation called on Uganda's government in a chamber of parliamentary sitting, to present laws regulating genetically modified organisms (GMO), to provide for the ongoing research on gene drive in the country. Uganda does not have laws on GMOs despite the fact that the country is carrying out research on GMOs. Uganda has scored some very good successes in GMO research but up to now the country has no biotechnology and biosafety BIOB law in place and therefore its farmers cannot take advantage of the research successes to overcome challenging agricultural production constraints.
- In October 13 2023, Tanzania said it would be vigilant against importing genetically modified food to its country. The present state of GMO use in Tanzania GM crops have been a contentious topic in Tanzania for more than three decades, even though this technology has been shown to have advantages elsewhere. Tanzania has relatively robust regulatory framework in place for GMO work in agriculture.
- Agriculture Minister of Tanzania, Hussein Bashe said that the country cancelled GMO trials, but such trials only be allowed for academic purposes, which in turn would help the country and its people to have a broader understanding of genetically

modified varieties, especially the benefits and impacts on the environment.

- On November 3 2023, the South African National Biodiversity Institute (SANBI) has published its first assessment of the impact on biodiversity by genetically modified organisms (GMOs). The key messages from this first assessment speak to the current knowledge of the impact of GM crops on biodiversity in South Africa; and the needs in terms of improving policy, research and development processes, and access to pertinent information. South Africa will continue to cement its position as a leader of GM development and usage but we expect some other countries to follow suit, albeit gradually.
- South Africa ranks among the top ten countries globally for adoption of GM crops. About 2.74 million hectares are dedicated to GM crop production each year. GM cotton, soybean and maize are commercialised in South Africa. South Africa's cotton area is 100% GM, soybean production is 95% GM, and maize production is greater than 85% GM. These crops either have insect resistance or tolerance to herbicides, or both.
- In August 2023, the Nigerian government started harvesting its genetically modified (GM) pest-resistant cowpeas, touting biotech crops as a solution to food insecurity.

The adoption of GM crops in Africa has been gradual resulting from policies in different African countries, influenced by political, social, and business conditions. Firm decisions and regulatory frameworks by governments approving GMO cultivation on a commercial scale would enhance the acceptance from society. African scientists are scaling up research on genetically modified (GM) crops such as maize and cassava to increase food security on the continent as climate change places increased stress on yields. Although slow, attitudes and perceptions toward GMO crops and products have changed on the African continent, particularly in Kenya, as more people are becoming aware of the benefits of GMO technology. This is in line with the recent reports that Kenyan authorities approve the cultivation of GM crops to boost crop yields. Investment in appropriate regulatory mechanisms and monitoring mechanisms for bio-tech products - crops and animals using biotechnology across the African continent, and structured public education on GM technology are top priorities, which will enhance the GMO sector and improve food security in the African countries. However, despite significant opposition to GM crops in a few African countries, increasing discussions, pro-GMO activists' processions, research and development of seed varieties, and importantly initiatives of governments and other institutions are on the rise. Having said that, unfavorable policies shaped by the public opinion which are being influenced by political opposition, anti-GM crops campaigns, weak and inadequate production technology, and the absence of crop biosecurity are some constraints to GMOs acceptance, mostly in east African countries. As the areas planted for genetically modified (GM) crops continue to grow in Africa, accelerated action and conducive enabling environment in support of modern agricultural biotechnology and genomics would enhance transformation of African food systems into a force of economic growth. Increased support for adoption of biotechnology among small players including the new generation of farmers across Africa are vital to feed the African population which is expected to reach 2.2 billion by 2050. While progress has been made towards commercializing GM crops in several countries of Africa, some key challenges and downstream issues remain to be addressed. These include building functional regulatory systems, vibrant seed systems, local seed production, reliable credit/financial and marketing services, and improved access to markets for small farmers. Unless these downstream issues are effectively addressed, smaller farmers will not benefit from GM crops and concurrently, food security, especially in many developing nations of Africa will not improve. In recent years, genetic modification (GM) has been successfully applied to address some key production constraints faced by orphan crops. This has increased interest in the potential of GM orphan crops to boost local food security and agri-business. Bureaucratic inertia, institutional gridlock and structural impediments continue to weigh on wider uptake of GM and biotech across the African continent.

Low Yields A Major Theme Across Africa

African countries have experienced serious and chronic food shortages in the past three decades and have historically faced domestic production deficits about one in every three years. The continent's agricultural yields are very low by global standards and crops are highly dependent on weather patterns, with heavy rains often leading to outbreaks of disease for vulnerable crops, such as cocoa, while prolonged episodes of dryness have dire consequences for grain crops.

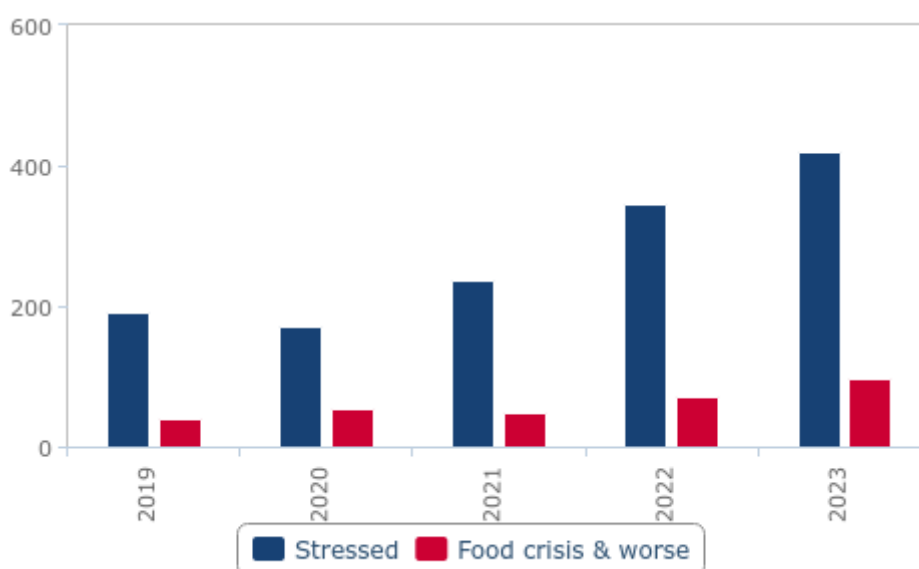
Most barriers for GM crop adoption come from socio-economical, ethical and socio-political concerns, environmental concerns, GM opponent pressure, perceived food safety and health concerns. Apparently these are likely reasons for slow adoption of GM crops

and weak public acceptance.

In the 1990s South Africa was the first country in Africa to commercialize the biotech production of cotton, corn and soybean, followed by Burkina Faso (cotton), Sudan (cotton) and Egypt (corn and cotton). Nigeria authorized the use of corn and cowpea in 2019 and a new cowpea variety (sampea 20-T) in 2020. Nevertheless, South Africa is the first African country to enact Regulatory Framework to allow GM crop cultivation, Import and Export, is also the largest user of genetically modified (GM) crops in Africa and the ninth largest producer of GM crops in the world. According to the USDA, 90% of corn plantings, 95% of soybean plantings and 100% of all cotton plantings in South Africa are grown from GM seeds. Overall, the country had a biotech crop production area of 3.0mn hectares (ha) in 2020, up from 2.3mn ha in 2015.

Food Insecurity Surging In SSA

SSA - Number Of People Who Are Stressed Or In Food Crisis (millions)



Source: World Bank, BMI

Recent Developments And Long-Running Structural Challenges To Regional Adoption

On July 13 2023, Rwanda announced a draft law, authorising genetically modified organisms (GMOs), their importation, commercialisation, and exportation. With this announcement, Rwanda follows the footsteps of South Africa, Kenya, Ghana, and Nigeria, which have already authorised GMOs. Operators willing to work with GMOs will be required to obtain a license from the National Environmental Management Authority (REMA). Additionally, the government plans to establish a monitoring and control body to oversee the initial experiments with GMO crops. The country is already conducting trials on cassava crops resistant to cassava brown streak disease (CBSD), a disease that can destroy up to two-third of crops.

Many African countries slow to adopt GM technology, including Tanzania and Kenya, had a higher ranking on the Global Hunger Index (GHI) during the period from 2000 to 2022, compared to those that were quick adopters, including Egypt and South Africa. The current use of GMOs in Kenya, Tanzania, and Uganda, however, is largely unknown. According to recent reports, Kenya has been added to the list of nations that accept GMOs. Even though Kenya has made progress with GMOs, the rigid and time consuming acceptance framework remains one of the biggest obstacles to GMO adoption. Kenyans have a negative perception of GMOs as a result of the negative press and publicity surrounding GM products. Kenya is currently importing GM maize as a result of the severe drought that has affected East Africa.

The situation surrounding the use of GMOs in Tanzania is not constant and, like that of Kenya, may change in the future, depending on the extent to which the community has received the necessary education from molecular biologists, experts, and researchers. In Tanzania, Individual perceptions on GMOs are influenced by a variety of factors - level of education, religion, age, occupation, rudimentary familiarity with science and technology, and marital status.

A recent International conference on GMOs and new genomic techniques in Berlin, Germany, organized by the German government and the United Nations and Conventions on Biological Diversity, which ended on March 16, 2023, sought to promote a broad technical and scientific exchange between scientists worldwide on the status and challenges for traceability, detection and identification of GMOs and products of genomic techniques. The speakers called for a more comprehensive harmonization of regulatory efforts in the handling of biotechnology products. Some harmonization has been done, especially in Europe and Southern Africa. There is a need for enhanced expertise in biotechnology supervision on the continent, which African governments need to take seriously.

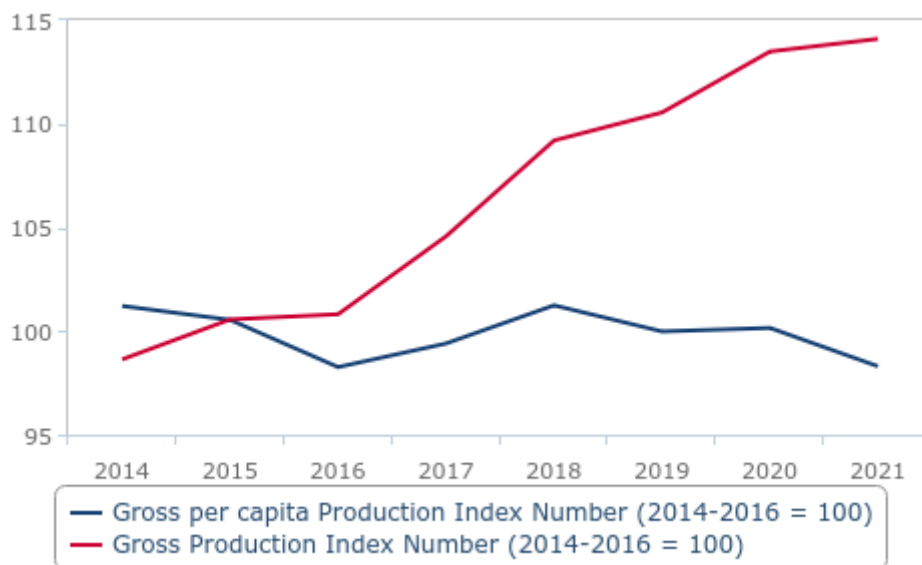
Looking at the advancements made in other parts of the world in the field of GMO, African countries are lagging behind with a strong need to catch up to international peers. In Africa, genetically modified crops are grown commercially in Nigeria, South Africa, Ethiopia, Malawi, Sudan, and Eswatini. Field trials are ongoing in eleven other countries as part of approval processes. Four countries have genom-edited crop projects in the works.

GM use across other parts of Africa will remain comparatively low (relative to other regions) over the coming years owing to structural problems across the African agricultural policymaking. Farmers on the continent have difficulty building savings or acquiring credit for expensive inputs, such as GM seeds and machinery. Profitability in the sector remains poor owing to low yields and inadequate infrastructure. A large proportion of farming on the continent can be characterised as subsistence farming, as opposed to commercial-scale farming seen across parts of APAC and Latin America.

Smallholders make up 80% of farmers in Sub-Saharan Africa (SSA), with many living from one harvest to the next, despite efforts to move towards large scale agriculture in the 1970s and 1980s (these efforts mostly failed). According to the UN Food and Agriculture Organization, between 1960 and 2000, 15 of 19 African countries surveyed saw average farm size decrease. However, African farming will have to move away from subsistence agriculture and become more profitable in order to support a thriving GM sector. We believe that partnerships with food companies, the development of cooperatives and greater access to credit are three of the most important strategies the sector could adopt in order to achieve greater profitability.

Decreased Per Capita Production Driven By Low Yields In SSA

SSA - Gross Production Index & Gross Per Capita Production Index For Agriculture (2014-2021)



Source: FAO, BMI

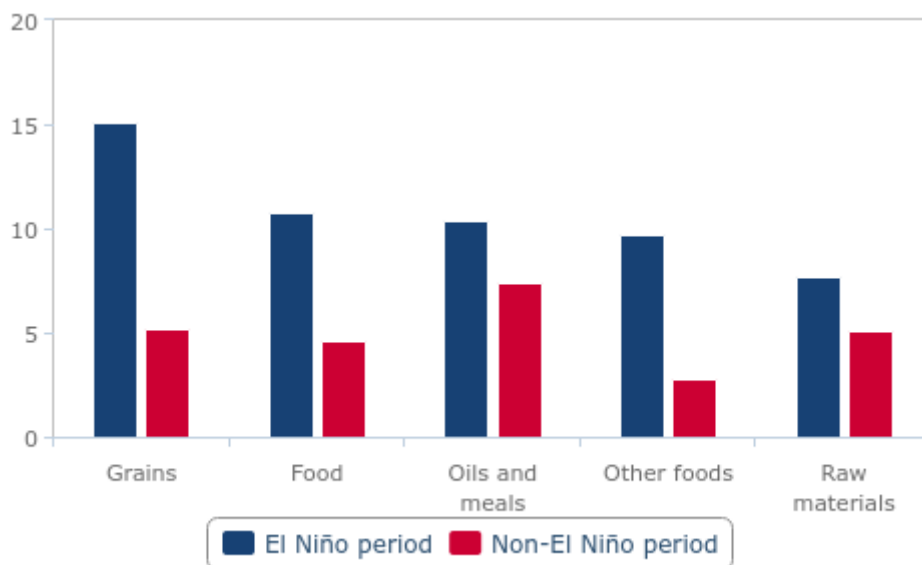
Limited Policy Coherence

Another major barrier to GM seed growth in the continent is the lack of policy alignment between African nations. According to the New Economic Partnership for Africa's Development (NEPAD), one of the major reasons for the lack of wide-scale GM adoption is the absence of functional regulatory systems both domestically and across the continent.

There is also little cohesion in policy decisions. According to the NEPAD African Biosafety Network of Expertise, 22 African countries have at least some form of biosafety regulatory framework in place (which is usually needed before field trials begin and GM varieties are approved). At one point Uganda had been conducting field trials without biosafety laws (the country has since implemented some basic framework governing testing) but President Museveni has not actively championed the passage of the Genetic Engineering Regulatory Law as of Q1/22 and farmers remain unable to use GM. Kenya previously authorised field trials for GM corn, but the government cancelled all tests in March 2017 and stated that the country was not yet ready for such experimentation, but seeds were eventually commercialised in 2019 and Bt corn looks likely to be commercialised by 2023/24. In Zambia, planting GM seeds remains illegal, but enterprises that want to buy products with GMOs must apply for a permit, and in some cases chain stores in the country sell them without one.

El Niño Associated With Increase In Prices Of Agricultural Commodities

Prices - % y-o-y change



Source: WB, BMI

One of the greatest points of contention over GM use in Africa is the control of first-generation seeds. First-generation seeds are patented by seed companies and are allowed to be used for only one season before farmers have to purchase new seeds for the following year. Using seeds derived from the resulting crops for the next season is, therefore, illegal. According to the USDA, 80% of African farmers currently reuse seeds from the previous crop. Consequently, patent rights and investor protection will prove to be a major obstacle for GM companies in Africa.

Adapting GM Technology To Africa Will Support Uptake

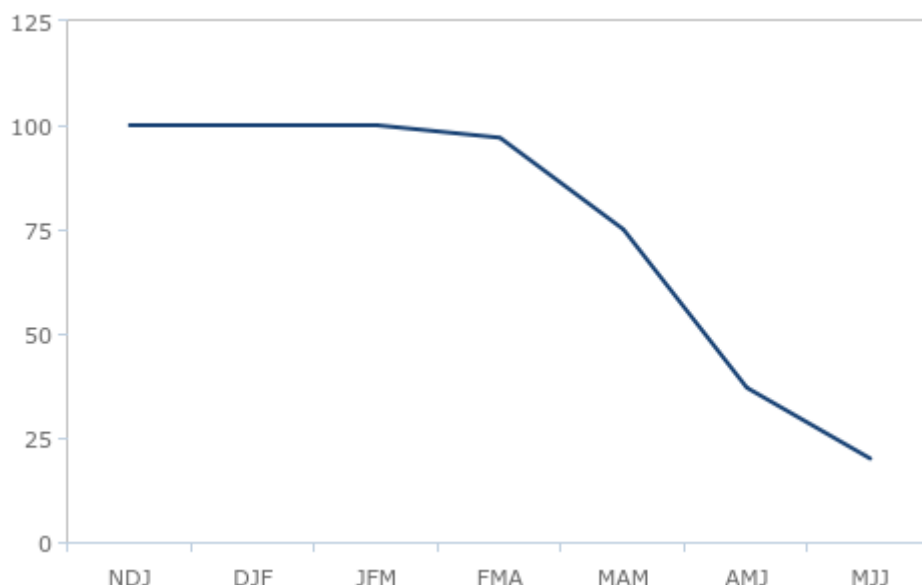
We believe that there is great potential for GM uptake by African farmers if the technology adapts to their needs and budgets. Developments over the last five years in GM varieties for crops such as cotton, sorghum and cassava, which are staples in many African markets, will help to promote the technology on the continent. The greatest successes will be achieved through close cooperation with local stakeholders, such as African scientists and farmers collaborating on improving local strains to adapt to changing conditions.

Around the globe, GM crop-producing markets have benefitted by improved crop productivity, food security, and quality of life. Increased income to resource-poor farmers has been a key benefit at the individual level, especially most markets using this technology are in the developing world including Africa. Besides South Africa, technological progress is being noticed among markets like Sudan, Malawi, Ghana, Ethiopia, Nigeria, Uganda etc. where GM orphan crops (i.e. banana, cassava, cowpea etc.) and non-orphan crops (soybeans, maize, rice, cotton etc.) are being planted in many areas of these markets.

Moreover, the continent's traditionally firm opposition to GM technology appears to be broadly easing as a growing number of markets are conducting field trials or improving their regulatory frameworks on GM crops. The extensive droughts and floods that have hit the continent in recent years continue to weigh on the region's food security has the potential to accelerate a change in mind-set. Markets in southern SSA, such as Zimbabwe, which enforce a ban on GM imports, could be forced to authorise imports of GM food over the coming months as an extraordinary measure to alleviate food security threats, and even look to commercialise these seeds to combat the ongoing threat of climate change. Indeed, while presenting the 2021 Budget Strategy Paper, Zimbabwean Finance Minister Mthuli Ncube said it was time for the country reconsidered GM seeds. Articles have also appeared in newspapers in Namibia arguing that African farmers should consider drought resistance crops, while in Mozambique, supermarkets sell GM crops to consumers with seemingly few complaints.

El Niño Was Expected To Last Until April 2024

El Niño, Probability Of Remaining Active (%)



Note: NDJ = November-January, DJF = December-February, etc. Source: CPC, BMI

Cotton: Promising Outlook For GM Adoption

The BT cotton technology was field-tested and given approval for general release through appropriate biosafety regulatory processes and technology licensing agreements by governments of Ethiopia, Sudan, and Kenya.

Scientists at the Kenya agricultural and livestock research organisation have developed cotton resistant to bollworms and maize that is resistant to pests, as reported on February 2023.

Critical stakeholders in Nigerian modern agricultural biotechnology sector have recently urged farmers across the country to adopt the already commercialized BT. cotton which can revive Nigeria's comatos textile industry, stating that the development of genetically modified hybrid cotton, achieved after many years of rigorous research, can give value to the farmers in all the cotton growing zones of Nigeria. The Federal government of Nigeria already announced plans to revitalize Nigeria's textile industry with the introduction of BT. cotton, noting that the move would create massive employment particularly for Nigerian farmers in the country.

We expect continued progress to be made first and foremost in products that are not intended for human consumption (such as cotton or cut flowers) and in markets where the regulatory approval process is most developed (South Africa, Kenya and Ethiopia). Many of the nations among the first conducting GM field trials - such as Nigeria, Uganda and Ethiopia - are major cotton producers relative to the size of their agricultural industries. In May 2015, Ethiopia relaxed its strict policy on GMOs and commercialised GM seeds in 2019. Ethiopia is a major producer of cotton in Africa, and the Ethiopian textile and apparel industry is considered a key sector for the country's economic development. However, the industry's growth is outpacing domestic cotton production, making it dependent on imports and impeding its development.

By contrast, opposition to human consumption of GM crops and in some cases lack of funding (which was the case for cotton trials in Ghana) will ensure that policy bottlenecks remain over the coming years, which underpins our view for GM cotton to outperform other crops. In Zambia, the government has urged the country's National Biosafety Authority to enhance public awareness around GM seeds given the threat of climate change on the country's staple crops while public opposition elsewhere continues.

Nigeria ultimately commercialised some varieties of cotton but there was significant backlash in 2018. A number of civil society groups marched against the government and protested the adoption. That said, Nigeria has since approved bt cotton and two varieties of GM cowpea while studying some rice varieties as of Q421. Ugandan President Yoweri Museveni has repeatedly declined to sign long-delayed biosafety legislation and has kept the status of GM paralysed in the country. In Tanzania, the government has restated that it will never allow GM imports in order to protect local varieties from contamination, and also recently cancelled GM research trials into drought-resistant corn and virus- resistant cassava in Q1 2021.

Africa Fertiliser Outlook: Lower Prices In 2024 To Facilitate Application

Key View: Fertiliser prices remain weak in March 2024, paving the way for increased application rates in Africa in the months ahead. In general, uptake levels are already low due to limited farm incomes but we do expect the Sub-Saharan region to benefit from new projects and investments over the coming years, as food security concerns continue to grow.

Latest Updates:

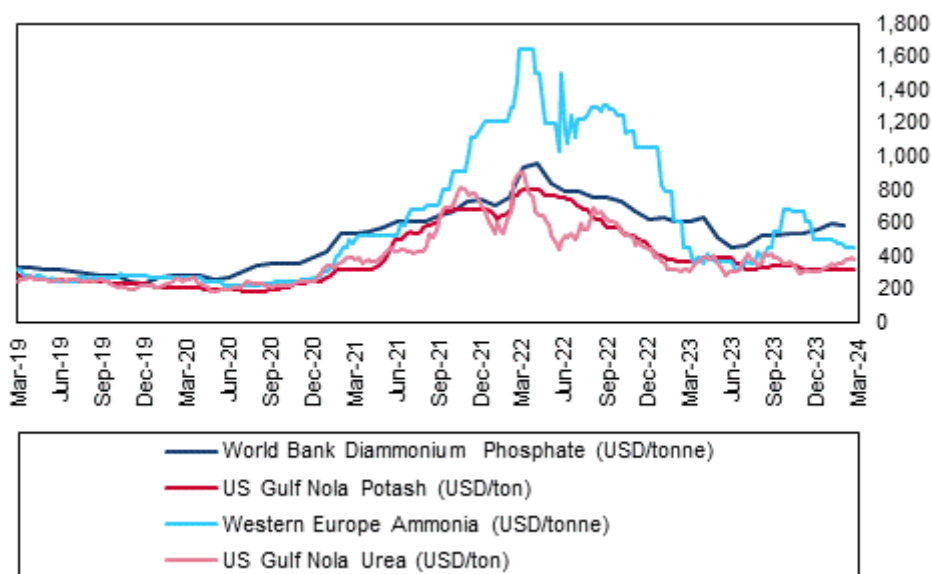
- Fertiliser prices have fallen through 2023 on a YTD basis, and are near 2021 lows as of March 2024. That said, we have noted that costs remain well-above pre-Covid norms and so continue to pose a downside risk to our agricultural production forecasts. On a regional basis, differences in capacities to finance higher fertiliser imports costs will also be borne out in differences in terms of access.
- In January 2024, following Morocco's footsteps, Algeria made a 16,000-ton fertiliser donation to Kenya. The Algerian presidency, in a press release relayed by local media, highlighted the crucial role of this urea 46 fertilizer in improving agricultural yields and reaffirmed its commitment to development aid within Africa.
- In February 2024, Shell Plc made a final investment decision to build a gas supply facility in Nigeria to feed a fertiliser plant owned by Africa's richest man Aliko Dangote, the company said in a statement. The new facility will supply 100 million standard cubic feet of gas per day from the Iseni field to the Dangote Fertiliser and Petrochemical plant for 10 years, according to the deal agreed by Shell and its joint venture partners TotalEnergies, Eni and the state oil firm NNPC Ltd. The USD2.5bn plant, Africa's largest urea complex with a 3-million-tonne output per year, accounts for 65% of Nigeria's fertiliser needs and can supply all the major markets in the sub-region.
- In February 2024, the government of Uganda through the Ministry of Energy and Mineral Development signed a USD400 million deal with Industrial Promotion Services Kenya Limited (IPS) and Norwegian Westgass Internasjonal AS for a green hydrogen-based fertiliser plant, aimed at reducing the country's dependence on fertiliser imports. According to Ruth Nankabirwa, Minister of Energy, the plant will be strategically located at Karuma, Kiryandogo District, within Bunyoro sub-region to leverage its proximity with the 600 megawatts Karuma hydropower plant. The project aims to boost nitrogen fertiliser production to approximately 200,000 tons per year and would require around 100 megawatts of electricity sourced from the Karuma power station.
- In October 2023, Zimbabwe's government suspended import duties on nitrogenous fertiliser in an attempt to reduce input costs and boost grain production ahead of a farming season that could be impacted by adverse El Nino weather conditions.
- In October 2023, the World Bank and the OCP Group signed a Memorandum of Understanding (MoU) to foster cooperation and programs benefitting five million farmers in Benin, Guinea, Mali, and Togo, covering 10 million hectares. This cooperation aims at accelerating investments and reforms to make fertilisers more accessible and affordable to farmers. The goal of the programme is to widen the access of farmers in West Africa to customized fertilisers that nourish the soil and improve crop yields, which in turn enhances the livelihoods of farmers, thereby contributing to African development and prosperity. The partnership will focus on five areas of cooperation - improving soil health and fertility through digital soil mapping analysis and customized fertilisation; establishing agricultural technology and service centers to train and support smallholder farmers; launching a Digital Farming School program to foster local capacities and entrepreneurship to transform the agri-food sector; strengthening the capacity of ECOWAS to operationalize its Roadmap on fertilizers and soil health; and supporting the establishment of a Regional Center for Soil Health and Fertility management in West Africa hosted by the International Institute of Tropical Agriculture (IITA).
- In September 2023, the Africa Fertilizer Financing Mechanism announced that it will extend a USD2mn partial trade credit guarantee and a USD877,980 grant to the African Fertilizer Agribusiness Partnership to support the distribution of 60kt of fertilizer to 300,000 smallholder farmers in Mozambique's Tete, Manica, Sofala and Gaza provinces. This credit guarantee, dubbed the Fertilizer Financing for Sustainable Agriculture Management project, will improve farming productivity by granting easy access and use of fertiliser for smallholder farmers. The project will also train 5% of the target farmers on using improved seeds, balanced crop nutrition and protection packages, and best farming practices, with 40% of women among the beneficiaries.
- In June 2023, 17 countries in West Africa and the Sahel agreed on a deal to make soil fertilisers more accessible and affordable. They pledged to consider soil health as a "critical pillar of food security" and committed to tripling fertiliser consumption by 2035.

in order to step up agricultural productivity. Several measures were announced to help small farmers who will benefit from subsidies to obtain mineral and organic fertilisers to meet their urgent needs.

- In May 2023, the African Development Bank approved a USD11.7smn budgetary allocation to the African Fertilizer Financing Mechanism (AFFM) for its 2023 operations. The AFFM will facilitate smallholder farmers' access to inputs and extension services through credit guarantee projects and capacity building for farmers and input distributors. The objectives are to ensure proper use of fertilisers, increase agricultural productivity and improve soil conditions. In addition, AFFM will actively work with African countries and other key stakeholders to develop the national food and agriculture pacts that the continent's leaders presented at the Feed Africa Summit in Dakar in January 2023.
- Africa has the potential to become a major fertiliser market as the region has abundant mineral reserves of three major macronutrients: nitrogen, phosphate and potash. The continent is also subject to rapid population and income growth, along with changing food consumption habits. The region faces severe food insecurity, which is primarily attributed to inadequate food production due to a lack of access to modern mechanisation and limited use of fertilisers. However, current regional policies favouring domestic fertiliser production in countries like Kenya and Morocco can stimulate market growth over the next few years.
- Low farm income levels and structural barriers will continue to limit fertiliser consumption growth in Africa over the long term.
- Sub-Saharan African markets will see new projects coming online in the coming years and consumption will grow at a superior rate compared with other global regions.

Fertiliser Prices Remain Near 2021 Lows, No Rally Ahead

Select Fertiliser Prices



Source: Bloomberg, BMI

Lower Fertiliser Prices A Boon For Africa's Food Security

Fertiliser prices have fallen through 2023 on a YTD basis, and are near 2021 lows as of March 2024.

Africa is, without a doubt, the region that is most affected by fertiliser price movements, with the biggest threat imparted on its food security. The crisis of high fertiliser prices started with the Covid-19 pandemic, which increased the cost of transporting fertilizer ingredients. This was followed by the Russia-Ukraine war. Finally, over 2022-2023, the rise in US dollar strength against many emerging market currencies have deepened the extent of the fertiliser affordability crisis in Africa. As fertiliser components are priced in US dollars, they have become vastly more expensive in African countries including Nigeria. In 2022, the price of fertiliser

more than doubled in Nigeria and 13 other countries, according to a survey by ActionAid, an international relief group. Concern about food insecurity has been very high in much of West and Central Africa, according to a World Bank bulletin.

Smallholder farmers, who make up the majority of farmers in the African region and who farm most of the land, frequently apply little or no inorganic fertiliser, as many farmers in SSA rely on livestock manure to maintain soil fertility. However, this has chemical limitations (one cow produces only about 15kg of nitrogen as manure each year, while a maize crop yielding about three tonne/ha requires about 100kg of nitrogen per hectare). Other forms of organic fertiliser also face various problems, including availability and logistical issues. Consequently, total levels of fertiliser use are insufficient to replace the soil nutrients that are mined each year through crop production.

Structural Factors Keep Regional Per Capita Consumption Low

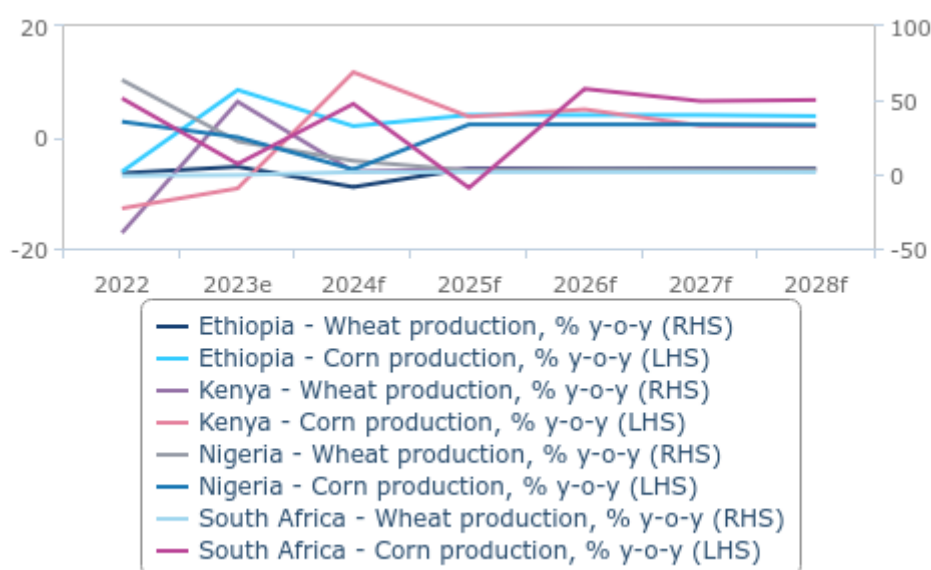
In SSA, five countries (Ethiopia, Kenya, Nigeria, South Africa and Zambia) account for almost two-thirds of consumption. In the Middle East and North Africa (MENA), three countries (Egypt, Iran and Morocco) account for 75% of consumption. There are numerous reasons why, broadly speaking, fertiliser demand is low in Africa. According to the Alliance for a Green Revolution in Africa, these are divided into three categories: lack of knowledge, lack of affordability and poor incentives.

Lack Of Financing: Smallholders usually have disposable cash for a few months after harvest time but have limited cash available during the lean season when they need to buy fertiliser and other inputs. Owing to the real or perceived risk to smallholder farming, farmers often cannot get access to credit to buy fertiliser and other inputs from the traditional financial sector, and when they can get loans, rates average between 20-30% per year. Regional agrodealers face similar problems.

Weak Incentives: The effectiveness of fertiliser applications depends on many factors aside from the fertilisers themselves, and because of such risks and uncertainties, many farmers decide to use fertilisers only on crops for which they are confident they can make a reasonable profit, reducing overall use.

Modest Uptick In Grains Production Will Support Fertiliser Demand Growth

Select African Markets - Wheat & Corn Production Growth



e/f = BMI estimate/forecast. Source: USDA, BMI

Poor supply and distributions systems from port to farm mean that SSA fertiliser prices are almost double global averages and hinder consumption. This supports illegal fertiliser trade across the region, with issues including cross-border smuggling of subsidised fertilisers as well as the sale of counterfeit fertilisers. Moreover, international fertiliser companies often refrain from entering partnerships with local ministries to supply subsidised nutrients owing to frequent delays in payments, which reinforces the position of illegal fertiliser traders. At the end of the supply chain, inadequate storage facilities mean that cost-effective amounts of fertiliser cannot be regularly purchased, resulting in substantial waste.

We believe that considerable improvements in physical and financial infrastructure remain to be made in many African countries before fertiliser consumption approaches developed market levels. Although our Infrastructure team sees strong growth potential in transport infrastructure in SSA countries, this will unlikely improve the fertiliser trade in the coming years. Investors will remain cautious in their exposure to SSA infrastructure investment owing to the challenging operational environment, various macroeconomic headwinds, poor access to electricity and underdeveloped financial markets.

Movement Regarding Policy Initiatives

To deal with the low levels of fertiliser use, African governments have created multiple plans in recent years. In 2003, the Comprehensive African Agricultural Development Plan called for a target of 6% compound annual growth in agricultural productivity by 2015 and called on governments to allocate at least 10% of their budgets to the agricultural sector. In 2006, African leaders adopted the 12-point Abuja Declaration on Fertilizer, which committed countries to increasing fertiliser use from the then-average of 8kg of fertiliser/ha in 2005 to 50kg/ha by 2015.

Since 2006 to now, overall fertiliser use in Africa (both total consumption and quantity per hectare) has increased, and the outlook is improving. Over that time, Africa is the only continent that has had annual fertiliser consumption growth exceed 8%. Some of the notable successes have been in improving government subsidy programmes, increasing private sector participation (including renewed external donor interest) and addressing some of financing concerns. However, other resolutions continue to see limited progress, including a lack of national level fertiliser policies and monitoring capabilities, regional procurement challenges, and limited intra-regional trade. This has led to calls for the African Union Commission to convene an Abuja II. This would involve implementing initiatives to again increase fertiliser use levels, with the focus going beyond fertilisers to cover soil health, integrated soil fertility management and the importance of farming profitability.

Fertiliser Policy Eras In Africa

	Phase 1: 1960s To Early 1990	Phase 2: 1990 To Mid-2000	Phase 3: Mid-2000 To 2015	Phase 4: 2015 To Present
Policy context	Government top-down command and control of fertiliser value chain	Structural adjustment, market liberalisation	Expansion of private sector, smart subsidies	Government withdrawal
Fertiliser consumption	Growth in fertiliser use and agricultural productivity	Reduced consumption	Increased consumption, adoption by more farmers	Shift to fertiliser blends
Private sector	Little involvement	Domestic private firms emerge, multinationals enter and expand	Expansion of private sector: manufacturing, imports and distribution	Competitive market-based provision, public-private partnerships
Government	Price controls, universal subsidies, subsidised credit, in-kind aid, overvalued exchange rates giving incentives for use, large-scale extension, support for export crops	Liberalisation, regulation, removal of subsidies, exchange rate liberalisation	Smart subsidies, promoting competition, targeting small farmers	Withdrawal from direct involvement in value chain, focus on improving business environment, incentives to ease supply and access, regional policy harmonisation

Source: NEPAD, CAADP, AGRA, BMI

Subsidies: More Momentum After Abuja Declaration

Of the main reasons why many Abuja recommendations have not been met is poor government policy, notably the lack of suitable policies and laws, poor implementation and enforcement of laws that do exist, lengthy processes for licensing new fertilisers/ commercial actors and inefficient subsidies, which has been the main policy used by governments in SSA. Fertiliser promotion programmes in Africa began in the 1970s and were characterised by large direct government expenditure. However, these programmes were expensive and governments lacked the capacity to implement them effectively. Consequently, many were eliminated in the 1990s as part of structural adjustment programs.

Since Abuja 2006, subsidies have returned to an extent and remain relevant to most countries in in SSA. As of 2022 most SSA countries have some type of subsidy programme in place, which includes allowing the private sector to import fertilisers and remove some of the bureaucratic burden from national governments. In some countries the government manages the subsidy programme, while in others the private sector manages the programme. The type of programmes that governments have implemented vary significantly. Some governments are attempting to make subsidies market friendly by introducing at least some attributes of smart subsidies, while others have used input vouchers and still others use electronic transfer or e-wallet systems using mobile phones. Mozambique and Uganda are yet to implement large-scale subsidy programmes. Finally, government advisory services have revived in recent years in several countries, such as Ethiopia which has invested heavily in this area.

Production Opportunities Exist As New Plants Come Online

The African fertilisers market is fragmented with the presence of many global and local players in the region. Yara International ASA, Israel Chemicals Ltd, Haifa Group, Groupe OCP, and Omnia Holdings Limited are some of the major players who have operations in the region. These companies are expanding their businesses by building new fertiliser manufacturing plants to boost domestic fertiliser production. Ethiopia, in recent years, has become a hot spot for the potassium-based fertiliser market, accompanied by ongoing investments in the country's fertiliser sector.

Africa as a whole is a net fertiliser exporter and is projected to have a surplus of both nitrogen and phosphorus in 2024 (while running a deficit in potash). This is mainly a result of major production facilities north of the Sahara, with production concentrated in six countries: Algeria, Libya, Egypt, Morocco, Nigeria, South Africa and Tunisia. By contrast, SSA imports 95% of the fertiliser it consumes. In SSA only a few corporations produce fertiliser; less than a few firms operate in any of the producing countries in the region. However, this is not for lack of opportunity as Africa possesses considerable mineral and hydrocarbon reserves that could be used to produce fertiliser or to power the facilities and infrastructure needed for commercialisation. Moreover, many fertiliser plants in SSA currently operate at below capacity, hindered by severe infrastructure constraints, government intervention and scarcity of financial capital.

We hold a favourable view on fertiliser producers in the MENA region over the coming years, and production growth will improve in SSA as well given the number of various new projects coming online. In 2023 there were 12 fertiliser manufacturing plants in SSA producing nitrogen- and phosphate-based fertiliser products (there are no potash manufacturing plants). Also included in this category are plants producing lime supplements, micronutrients and organics. In March 2022, Dangote's new fertiliser factory was inaugurated outside Lagos and it joins Notore Chemicals Industries and Indorama Eleme Fertilizer & Chemicals in Nigeria to become the three main urea production plants in the region (Madagascar and Zimbabwe produce other nitrogen-based fertiliser), while phosphate plants are located in Mali, Senegal, Togo, Tanzania and Zimbabwe. Access to ample reserves of natural gas and phosphate rock at a cheap cost in comparison with competitors in North America, Asia and Eastern Europe underpins our expectations for solid performance from fertiliser companies based in the MENA region.

We hold a more positive view on the near-term prospects for fertiliser production in SSA, especially for nitrogen-based fertilisers. Over the past few years, several companies have shown interest in establishing new complexes to produce ammonia or urea. More than a dozen projects in Nigeria, Ethiopia and elsewhere have been under study since 2010. Large greenfield projects are also under consideration in several countries, either as autonomous projects or in partnership with foreign entities in at least 11 North African and SSA countries.

We retain a generally positive outlook for Egypt's fertiliser sector as initiatives aimed at boosting domestic production facilities will yield fruit over the coming years. In addition to steady government support for the sector driven by export potential, we see recently completed and ongoing projects driving greater output.

Recent investment has focused on nitrogen fertilisers, already the most-produced category as opposed to phosphate and potash. Some headline projects include the upcoming fertiliser complex in Cairo by El Nasr Co for Intermediate Chemicals and one by the German company Thyssenkrupp. Furthermore, in Q221, Stamicarbon announced a contract with Abu Qir Fertilizers Co to increase capacity of its Abu Qir 3 urea melt plant in Egypt, with work due to be completed in 2025. Phosphate fertiliser production also appears to be increasing, as exports have trended upwards in recent years, but with new investments focusing on nitrogen, we expect the production gap to widen over the coming years.

We do not expect fertiliser production growth to be matched by increased domestic demand. Egypt's use of nitrogen fertiliser per area of farmland is high at over 340kg/ha in 2018. Furthermore, we forecast limited crop production growth in Egypt to 2025 as arable is limited.

South Africa is one of the major agriculture-producing countries in the continent and import dependent. All the potassium-based fertilisers are consumed domestically and 60%-70% nitrogenous fertilisers are imported. The South African fertiliser market has been operating in a deregulated environments, with no import tariffs or government sponsored schemes. In this deregulated environment, the prices of fertilisers marketed in the country are highly influenced by currency exchange rates (ZAR/USD), overseas prices, and shipping costs. Thus the growers are aiming for the long term sustainability of high-quality grain production.

An increasing trend observed in the adoption of Specialty Fertilisers due to their higher efficiency. However, specialty fertilisers are higher priced compared to conventional fertilisers. CRF, liquid fertiliser, SRF, and water soluble fertilisers are covered by Specialty types. The demand for liquid fertiliser are keeping up in the Africa region, as the soils in the region are dry and liquid fertiliser ensures easy absorption by the plants. Water soluble fertiliser's absorption rate is more than double compared to conventional fertilisers reaching an efficiency of about 80%-90% and reducing total fertiliser use. ICL's increased focus on specialty fertiliser offers growth opportunities compared with its mature legacy businesses.

In terms of phosphate fertiliser, Africa will see the largest increase globally of more than 20% in the coming five years. Pre-production work has also been done in several countries with large phosphate reserves, including Guinea Bissau, Mali, Togo and Uganda. Overall, there are around 37 new fertiliser processing and manufacturing facilities in SSA that are either operational or expected to come online. A network of fertiliser blending plants process imported or locally produced fertiliser into balanced nitrogen, phosphorus and potassium blends throughout Africa.

Sustainability: Additional Fertiliser Use To Reduce Greenhouse Gas Emissions

In the context of Africa, an increase in fertiliser use will be a key driver towards improving sustainability and reducing the continent's admittedly small carbon footprint. Low fertiliser use is leading to the depletion of soil nutrients in many parts of Africa, and some estimates argue that almost 100mn ha of land have already been degraded through soil erosion, leaching of nutrients and nutrient mining via harvests. Many observers believe that the continued low or imbalanced use of fertiliser will lead to negative environmental consequences along with reduced biodiversity. In particular, in places where fertiliser use is low, soils can't sustain the yields required to meet food demands. Consequently, farmers need to cultivate a larger area for crops, which means large-scale deforestation, less biodiversity and greater volumes of greenhouse gases (GHGs). The deficit in food production also requires food imports, which in turn stimulates environmental degradation elsewhere.

Research by Vlek et al (2017) has shown that increasing the fertiliser use in Africa by 20% would increase GHG emissions by only 0.37mn tonnes of CO₂ equivalent emissions a year (a similar 20% increase in South Asia would lead to an additional 6.5mn tonnes of CO₂ emissions). However, the increased use of fertiliser would raise yields of rice by 5%, wheat by over 1% and maize by 9.9%, which would potentially permit 2mn ha of currently cultivated land to be set aside for reforestation, thus potentially sequestering between 7.7mn and 18.8mn tonnes of CO₂ per year. The research demonstrates that significantly increasing African fertiliser use could result in a considerable decline in carbon emissions, provided the excess land would be used for reforestation.

Downstream Analysis

Food

Key View: Food spending growth in 2024 will be impact by double-digit inflation in 2024, as was the case for much of 2023. Spending will be heavily orientated towards staples such as bread, rice and vegetables, as low- and mid-income consumers face disposable income pressures. Through the forecast period to 2028, real spending growth will gradually return over the medium term, as inflation eases; however, risks remain weighted to the downside.

Latest Updates

- We forecast food spending in Egypt to grow by 33.1% in local currency terms in 2024. This is a deceleration in spending from the 40.5% growth registered in 2023. Much of the growth in food spending is due to rising inflation and somewhat elevated global food prices. Inflation in 2024 is now expected to average 36.9%, up from an estimated 33.9% in 2023.
- With many food products such as cereals, meat and poultry imported into Egypt, consumers will have to trade down price points where government subsidies are not available. The prices of food staples such as wheat and cooking oil have increased in recent months, which is negatively impacting the purchasing power of Egyptian households. In February 2024 (latest available data) food inflation grew by 50.9% y-o-y.
- During 2024, the outperforming food segment is expected to be meat and poultry products, showing growth of 61.9% y-o-y. Pasta products will underperform, showing growth of 11.5% y-o-y.
- Over the medium term to 2028, we forecast food spending to rise by an average of 17.3% to reach EGP6.55trn by YE28. This is up from EGP3.97trn in 2024. Household spending will be focused on meeting essentials over this period, with particularly strong growth in staples such as bread, rice and cereals.

Structural Trends

Food Spending Outlook For 2024

We forecast food spending in Egypt to grow by 33.1% in local currency terms in 2024, which is a deceleration in spending from the 40.5% growth registered in 2023. Much of the growth in food spending is due to elevated global food prices; severe inflation, which is impacting Egypt; and currency pressures facing the country that are driving up import costs.

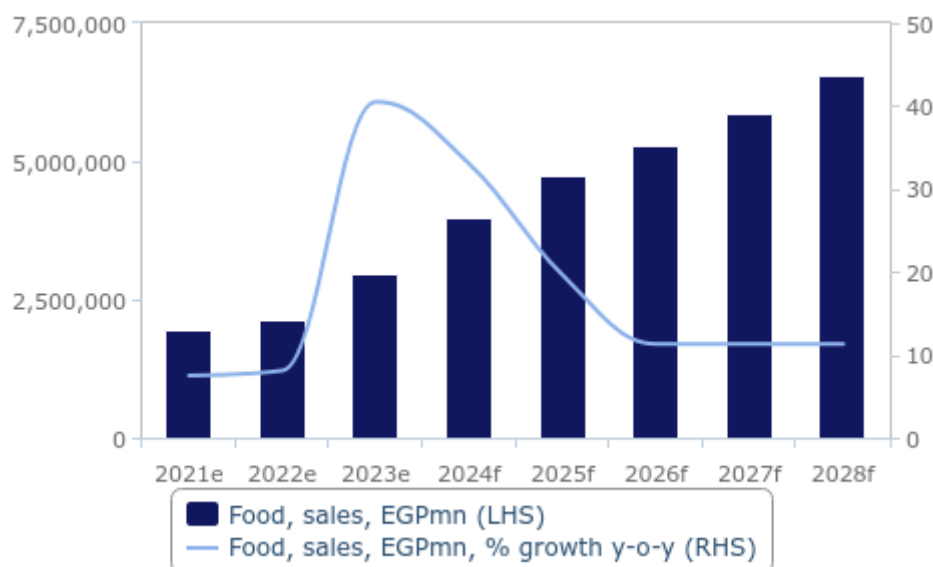
In Egypt, a subsidised flatbread loaf sells for USD0.01, allocating five loaves a day to people who are under the subsidy programme. It is estimated that around 70mn people in the country benefit from this programme. Egypt is heavily dependent on wheat imports, with Ukraine and Russia as its biggest suppliers.

With many food products such as cereals, meat and poultry imported into Egypt, consumers will have to trade down price points where government subsidies are not available. The prices of food staples such as wheat and cooking oil have increased in recent months, which is negatively impacting the purchasing power of Egyptian households. In February 2024 (latest available data) food inflation grew by 50.9% y-o-y, up from 47.9% in January 2024.

During 2024, the outperforming food segment is expected to be meat and poultry, showing growth of 61.9% y-o-y. Pasta products will underperform, showing growth of 11.5% y-o-y. Meat and protein prices in Egypt have increased substantially over the last 12 months. Much of this growth is due to elevated inflation. Consumers will look to trade down on premium meat and seafood, opting for simpler food items such as vegetables, lentils and pasta instead.

Inflation To Heavily Weigh On Food Spending In 2024

Egypt - Food Spending & Growth (2021-2028)



e/f = BMI estimate/forecast. Source: National statistics, BMI

Medium-Term Trends

Egypt's economy is import-dependent. This reliance is particularly strong with food imports like cereals, meat and poultry. As the Egyptian pound continues to weaken in the short term, we expect an increase in the proportion of household spending on the food and drinks category. While the government offers subsidies to low-income families for flat bread, there is not an equivalent subsidy for meat and poultry.

Over the medium term to 2028, we forecast food spending to rise by an average 17.3% to reach EGP6.5trn by YE28. This is up from EGP3.97trn in 2024. Household spending will be focused on meeting essentials over this period, with particularly strong growth in staples such as bread, rice and cereals.

Egypt has a large and rapidly growing consumer base, with the largest population size across the Middle East and North Africa region, forecast at over 113mn in 2024. Food expenditure will be fuelled by continued economic growth, coupled with favourable demographics and the rapid expansion of the mass grocery retail sector.

Food and drink companies are currently presented with an opportunity to enter Egypt or to strengthen their existing presence in the country, in order to take advantage of the strong long-term growth prospects. Following years of high inflation, relative economic stability is a positive signal to domestic and foreign food investors. Reflecting the improvements in the economy, foreign investors have shown growing interest in mergers and acquisitions. We have already seen an uptick in investment over recent years, with food and drink majors such as Kellogg's, Cargill, Pepsi, Coca-Cola and Kraft Heinz announcing ambitious investment plans.

Food Sales (Egypt 2021-2028)

Indicator	2021e	2022e	2023e	2024f	2025f	2026f	2027f	2028f
Food, sales, EGPmn	1,962,175.5	2,121,980.5	2,982,345.3	3,967,984.9	4,745,910.8	5,283,522.2	5,881,123.3	6,544,799.4
Food, sales, EGPmn, % growth y-o-y	7.5	8.1	40.5	33.0	19.6	11.3	11.3	11.3
Bread, rice and cereals, sales, EGPmn	280,792.7	295,558.4	380,186.2	466,817.5	529,994.0	569,982.0	613,448.5	660,174.1
Bread, rice and cereals, sales, EGPmn, % growth y-o-y	4.9	5.3	28.6	22.8	13.5	7.5	7.6	7.6
Pasta products, sales, EGPmn	15,562.3	15,959.6	18,724.7	20,879.1	22,029.8	22,502.2	22,940.2	23,321.6
Pasta products, sales, EGPmn, % growth y-o-y	3.4	2.6	17.3	11.5	5.5	2.1	1.9	1.7
Meat and Poultry, sales, EGPmn	359,201.2	420,938.3	791,926.6	1,282,617.5	1,686,688.0	1,973,257.3	2,295,024.4	2,660,371.1
Meat and Poultry, sales, EGPmn, % growth y-o-y	16.6	17.2	88.1	62.0	31.5	17.0	16.3	15.9
Fish and fish products, sales, EGPmn	178,970.8	193,963.0	284,458.4	384,735.1	468,326.6	523,843.5	586,918.6	656,111.7
Fish and fish products, sales, EGPmn, % growth y-o-y	7.7	8.4	46.7	35.3	21.7	11.9	12.0	11.8
Dairy, sales, EGPmn	373,176.0	395,031.6	477,862.9	550,757.1	603,376.2	643,032.1	686,327.2	733,271.2
Dairy, sales, EGPmn, % growth y-o-y	5.7	5.9	21.0	15.3	9.6	6.6	6.7	6.8
Oils and Fats, sales, EGPmn	203,202.5	215,760.2	289,271.9	369,133.6	429,853.0	469,491.7	513,208.0	560,932.1
Oils and Fats, sales, EGPmn, % growth y-o-y	5.7	6.2	34.1	27.6	16.4	9.2	9.3	9.3
Fresh and preserved fruit, sales, EGPmn	112,461.9	117,997.1	149,996.6	182,043.7	205,052.2	219,377.0	234,908.9	251,481.1
Fresh and preserved fruit, sales, EGPmn, % growth y-o-y	4.6	4.9	27.1	21.4	12.6	7.0	7.1	7.1
Fresh vegetables, sales, EGPmn	290,547.1	307,534.5	382,638.4	453,768.7	504,504.4	537,982.8	573,364.7	610,234.4
Fresh vegetables, sales, EGPmn, % growth y-o-y	5.6	5.8	24.4	18.6	11.2	6.6	6.6	6.4
Sugar and sugar products, sales, EGPmn	96,912.6	104,037.6	129,043.0	152,572.5	170,629.6	184,691.4	200,117.6	216,921.0
Sugar and sugar products, sales, EGPmn, % growth y-o-y	5.2	7.4	24.0	18.2	11.8	8.2	8.4	8.4
Other food products,	51,348.3	55,200.1	78,236.6	104,660.0	125,456.9	139,362.1	154,865.2	171,981.0

Indicator	2021e	2022e	2023e	2024f	2025f	2026f	2027f	2028f
sales, EGPmn								
Other food products, sales, EGPmn, % growth y-o-y	6.9	7.5	41.7	33.8	19.9	11.1	11.1	11.1

e/f = BMI estimate/forecast. Source: National statistics, BMI

Regional Overview

Five Key Themes For MENA Agribusiness

Key View

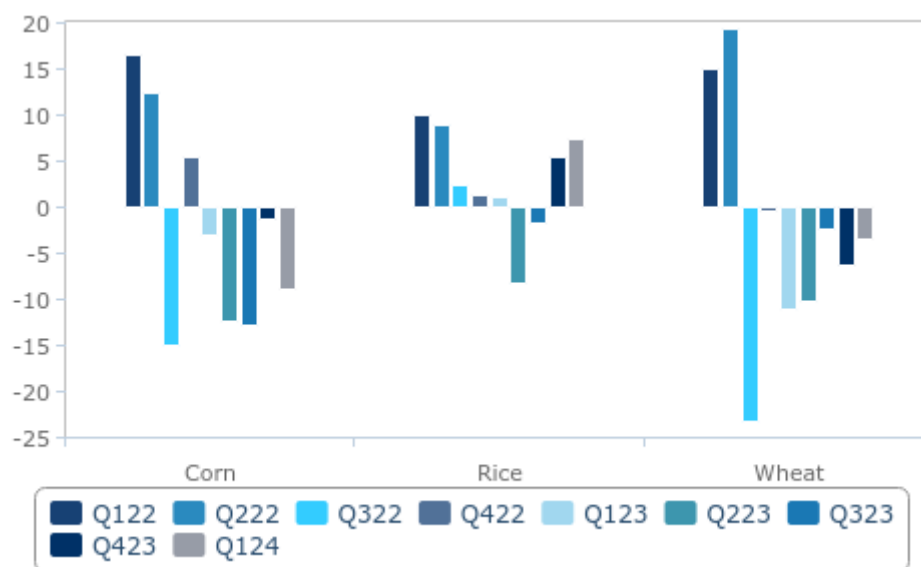
- Global agricultural prices continued to fall through the first three months of 2024. Between end-December 2023 and end-March 2024, the Dow Jones-UBS Agricultural Index declined by 3.8% while the World Bank's Food Price Index fell by 2.3% during the same period. Lower agricultural prices through 2024 to date have been driven in the main by lower grain prices, with the Dow Jones-UBS Grains Index having lost 8.8% between end-December 2023 and end-March 2024. Expectations of large global grain harvests, including in markets such as Brazil and Russia, have acted as the chief source of downward pressure on prices since the start of 2024. We expect that grain prices will continue to trend lower through 2024.
- We have identified several broad themes that we believe will shape agricultural outcomes in the MENA region through the medium term. Firstly, it is our view that food price inflation pressures in the region, after recording robust upward momentum from mid-2022 onwards, will continue to ease in 2024 as agricultural import prices decline. Secondly, we expect that agricultural production in MENA, despite state-led initiatives to expand and encourage cultivation, will remain low relative to regional demand. Thirdly, we anticipate that demand-side pressures, the result of subsidised food schemes, population growth, and rising incomes among other factors, will lead to the further deterioration of MENA's agricultural production balances and so result in a greater reliance on food imports.
- We also highlight the varied policy responses to food security concerns that have been implemented across MENA and have identified the GCC countries as developing the most ambitious structural programmes. Overall, we maintain a sceptical view on the practical impact of such policies and do not anticipate them having a significant impact on agricultural self-sufficiency with regard to staple crops during the medium term. In broad terms, growing conditions in MENA will remain inhospitable to optimal crop production, which is already borne out in the region's yield deficits to global norms, while water and arable land scarcities will continue to constrain plausible output growth potential. Recent GCC investments in private sector agribusiness trading firms indicate a medium-term focus on supply chain security and trade diversification.

1. Global Q2 2024 Agricultural Price Outlook: Grains And Softs Diverge

Global agricultural prices continued to fall through the first three months of 2024. Between end-December 2023 and end-March 2024, the Dow Jones-UBS Agricultural Index declined by 3.8% while the World Bank's Food Price Index fell by 2.3% during the same period. Lower agricultural prices through 2024 to date have been driven in the main by lower grain prices, with the Dow Jones-UBS Grains Index having lost 8.8% between end-December 2023 and end-March 2024. CBOT-listed second-month corn, rough rice, and soft red winter (SRW) wheat futures contracts had lost 6.1%, 4.7%, and 10.0% since the end of 2023 as of the end of March 2024, while CBOT-listed second-month soybean futures contracts fell by 7.1% over the same period. The initial shock to international grain markets caused by the start of the Russia-Ukraine war has now dissipated – notwithstanding the potential for a future uptick in hostilities in the Black Sea region to once again direct price development – while some of the stresses accumulated during the pandemic, such as stock depletion, continue to be unwound. With respect to CBOT-listed second-month corn and wheat futures, for example, average prices through the first three months of 2024 were 34.4% and 35.8% lower, respectively than during 2022 but at the same time 18.4% and 20.6% higher respectively, than between 2015 and 2019. Expectations of large global grain harvests, including in markets such as Brazil and Russia, have acted as the chief source of downward pressure on prices since the start of 2024. In 2023/24, the USDA forecasts that world corn production will climb to a record 1,230mn tonnes and that world wheat production, after a record harvest of 789mn tonnes in 2022/23, will amount to almost 787mn tonnes. Meanwhile, the world rice market, faced with India's trade restrictions and concerns – although starting to ease at the start of April 2024, as to the impact of an El Niño event on rice production in South East Asia, remains an outlier. Despite slipping by 2.1% between December 2023 and March 2024, the FAO's All Rice Price Index remained 8.7% higher than its level of twelve months earlier.

Grain Prices Continue To Ease Following Spike In February 2022, Rice Remains The Exception

Grain Prices (% q-o-q)

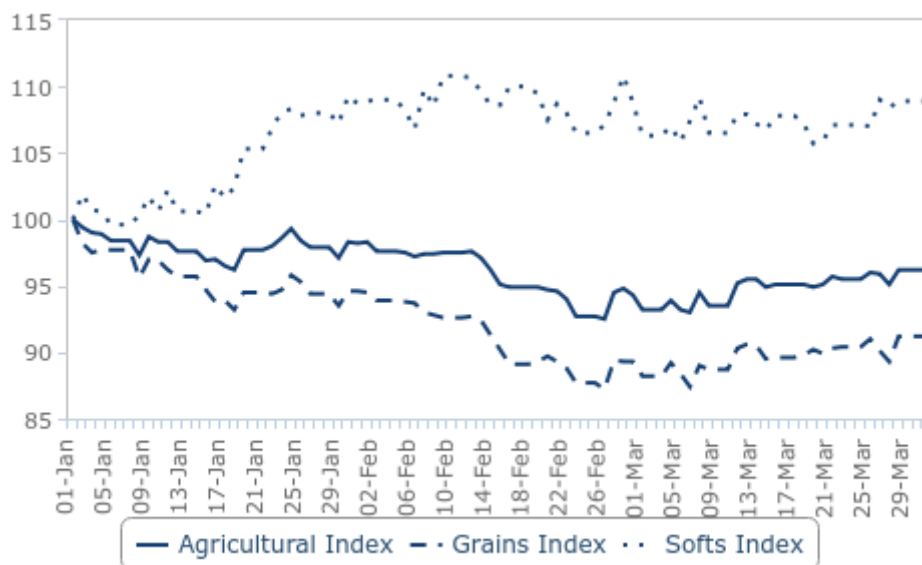


Note: CBOT-listed second-month futures contracts. Source: Macrobond, BMI

In contrast to the bearish sentiment prevalent in most corners of the international grains markets, the agricultural softs sub-class exhibited remarkable strength during the first three months of 2024 in no small part as the negative impact of unfavourable weather conditions on production was amplified by the often tight geographical concentration of softs production. Between end-December 2023 and end-March 2024, the Dow Jones-UBS Softs Index rose by 8.9%. During this period, cocoa prices more than doubled, with ICE-listed second-month cocoa futures contracts climbing from USD4,162 per tonne at the end of 2023 to USD9,306 per tonne at the end of March 2024, a cumulative increase of 123.6%, before reaching an all-time end-of-session record high of USD9,614 on April 01, 2024. As a consequence of persistent production challenges, both short-term and structural in nature, in major producers Côte d'Ivoire and Ghana, the global cocoa market is forecast to generate its third consecutive production deficit in 2023/24. Elsewhere in the agricultural softs sub-class, ICE-listed second-month cotton, frozen concentrate orange juice (FCOJ), and sugar (#11) futures contracts increased by 12.0%, 15.0% and 12.0% respectively, between the end of 2023 and the end of March 2024. Cotton prices have found support on expectations that the global production balance will narrow in 2023/24 on lower production in Mainland China, India, and the US and higher export volumes, with the USDA projecting that the world cotton surplus will decline from 5.1mn bales in 2022/23 to under 10,000 bales in 2023/24. With respect to FCOJ prices, a protracted fall in fresh orange production in the US, where output has fallen at an average rate of 9.2% per annum since 2015/16, was amplified by adverse weather conditions in 2022/23, which resulted in a 27.4% season-on-season fall in domestic production and a 48.6% season-on-season fall in processing volumes, and perennially thin contract trading volumes. Sugar (#11) prices, meanwhile, regained some of the ground lost during December 2023, when prices fell by 18.5%, after production concerns in India, which eventually led to the extension of trade restrictions, saw prices increase by 29.6% between start-January and start-December 2023.

Production Concerns Have Seen Softs Prices Outperform The Wider Agricultural Complex

Dow Jones-UBS Agricultural Price Indices (Dec 29 2023 = 100)



Note: Second Position. Source: Macrobond, BMI

As for the remainder of 2024, we are of the view that grain prices will trend lower and that the price development of individual agricultural softs will be directed by the evolution of weather conditions, albeit to different degrees. At the time of writing at the start of April 2024, our average price forecasts for CBOT-listed second-month corn, rough rice, soybean, and soft red winter (SRW) wheat futures contracts in 2024 all point to year-on-year declines. One principal uncertainty with regard to the international rice market is whether and when India will repeal its rice trade restrictions, which we do not anticipate taking place before the Indian general election. The repeal of trade restrictions in India is also a relevant factor for world sugar and wheat markets. We continue to believe that the impact of reduced transit throughput at the Panama Canal and the Suez Canal, as per conditions in April 2024, will have a muted impact on grains prices. However, we highlight the risk posed to the world wheat market should Russia's export capacities, whether via its Black Sea ports or via the Kerch Strait, be diminished in the context of the Russia-Ukraine war. The USDA forecasts that Russia will account for almost one quarter of global wheat exports in 2023/24, underpinning the importance of Russian volumes for market sentiment. With respect to weather conditions, we note that the US Climate Prediction Center (CPC) considers the likelihood of a transition from El Niño to ENSO neutral conditions between April and June 2024 to be high (83%) and the likelihood of a subsequent transition to La Niña conditions between June and August to be more probable than not (62%). While the withdrawal of El Niño conditions would be expected to temper production pressures in several softs markets, such as cocoa, we caution that the transition to ENSO neutral conditions will not appear as a discrete event in commodities markets. The impact of reduced rainfall in southeast Asia on palm oil yields, for example, is not expected to materialise until towards the end of 2024. Moreover, reduced supplies of commodities including cocoa and coffee robusta has led to sharp depletion in world inventories, which will require rebuilding.

Related Research

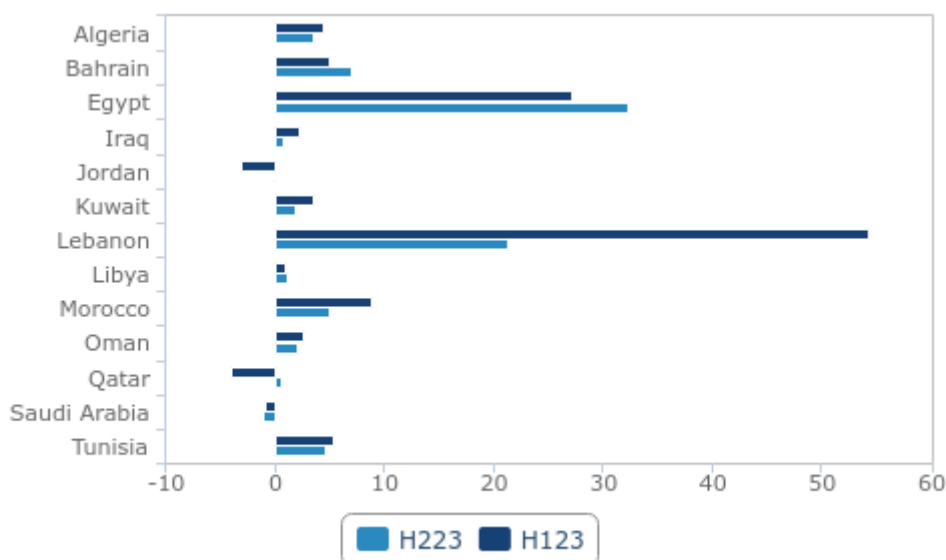
- Wheat Price Forecast: Abundant Supplies Dampen H124 Prices, Tighter Market Ahead in 2024/25, April 2024
- Food Prices Decline For Seventh Straight Month Despite Sugar Market Strength, March 2024
- Agribusiness Key Themes For 2024: Post-2022 Market Normalisation Sees Latent Stresses Re-Emerge, November 2023

2. In MENA, Food Price Inflation Pressures Have Softened

The easing of the global agricultural price level throughout 2023 and into 2024 has been to the benefit of net food importing regions, such as MENA. In sum, the trade deficit in agricultural products generated across 18 MENA markets widened from USD80bn in 2020 to almost USD95bn in 2021 and then to more than USD115bn in 2022, when the five widest deficits – reflecting comparative population sizes, amongst other factors – were found in Saudi Arabia (USD25bn), Iraq (USD14bn), Iran (USD13bn), Algeria (USD10bn), and Egypt (USD9.3bn). In line with our view, stated at the start of 2024, that food price inflation pressure across MENA were set to ease, now complete inflation data for much of MENA in 2023 indicates that food price pressures did indeed soften during the second half of 2023. Of the 13 markets for which full-year data was available at the start of April 2024, just four – Bahrain, Egypt, Jordan, and Qatar – experienced higher rates of average food price inflation between July and December 2023 than between January and June 2023. In absolute terms, Lebanon saw the most significant deceleration in the pace of food price inflation between the two periods, with an average rate of 280.85% during H123 and of 239.57% during H2 2023. In relative terms, average food price inflation between H1 2023 and H2 2023 declined by 61.4% in Saudi Arabia (2.11% to 0.81%), by 44.2% in Morocco (16.80% to 9.37%), and by 36.4% in Iraq (7.21% to 4.59%). With respect to real food price inflation (food price inflation net headline inflation), recent trends in MENA are similar. In addition to the four markets that saw food price inflation increase between H123 and H223, Libya was the fifth market to see average real food price inflation accelerate between the two periods. In February 2024, the latest economic data indicates that real food price inflation in Algeria turned negative, falling from 0.89% y-o-y the month prior to -0.84% y-o-y.

Most MENA Markets Saw Food Inflation Ease In H2 2023

MENA - Real Food Price Inflation (% ave)



Source: Macrobond, BMI

The reliance of MENA on international agricultural markets in order to source required staple food items and other products implicates the regional food prices during periods of global disruption. On a standalone basis, both the Middle East and North Africa depend upon imports for over 70% of regional corn consumption, while the former relies on imports for more than 45% of regional wheat consumption and the latter for more than 60% of regional wheat consumption. As a result, the sharp response of world grain prices to the onset of the Russia-Ukraine war in February 2022 was felt acutely across the region, as evidenced in increased rates of food price inflation. For the major corn- and wheat-importing markets in MENA, such as Egypt, Iran, Algeria, Saudi Arabia, and Morocco, the impact of the outbreak of war was further amplified by the fact that a high share of their grain imports had been

sourced from the Black Sea region in view of the cost-competitive export quotations of Russia and Ukraine. For example, Egypt sourced over 40% of its combined corn and wheat imports from either Russia or Ukraine in 2021 while for Lebanon the Russia-Ukraine import share exceeded 60% in 2021. In consequence, the initial Russian naval blockade of Ukraine could have represented a severe threat to food supplies. The subsequent operation of the Black Sea grain deal served to lower international grain prices and to facilitate the resumption of Ukrainian grain exports, with Egypt, Israel, and Tunisia amongst the largest destinations for grains shipped under the terms of the deal. Expectations of bumper grains harvests in major exporting markets, not least in Russia, resulted in the later collapse of the grain deal not having a significant impact on grains prices. Meanwhile, India's introduction of rice export restrictions, which began with a broken rice export ban in the second half of 2022 and subsequently included a non-basmati white rice export ban and a parboiled rice export duty, posed a similar threat to MENA's large rice importers, such as Iran, Saudi Arabia and Iraq.

Related Research

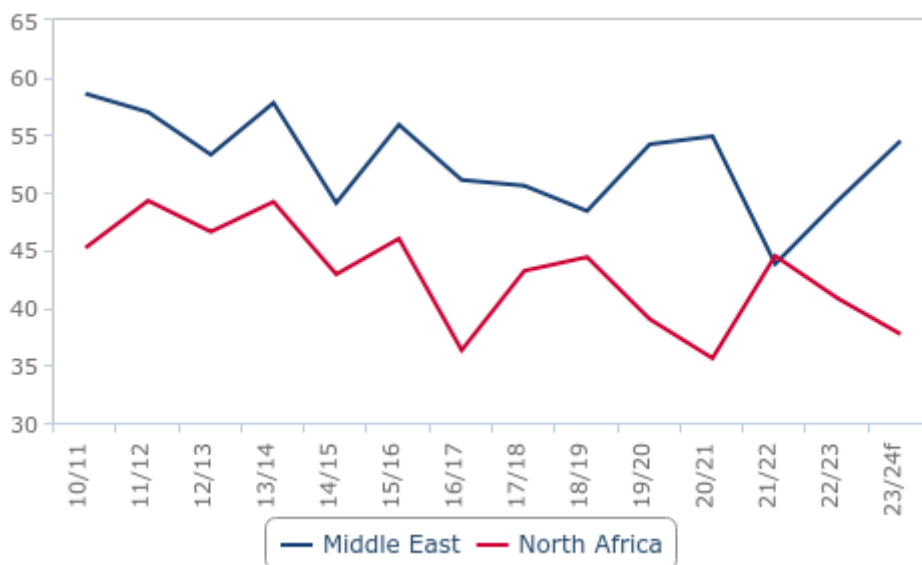
- Agri-Food Resilience: Focus On International Grain Exporter Concentration Is Misplaced, Recent Evolution Of Inter-Regional Import Dependencies Delineates Fragilities, March 2024
- Red Sea Crisis Adds Another Challenge For Some MENA Countries, Keeps Geopolitical Risk Higher For Longer, January 2024
- Quick View: Red Sea Disruption Poses Upside Price Risks To Agricultural Commodities, Fertilisers, January 2024

3. Staple Crop Production Set To Remain Marginal Despite Supportive Agricultural Policies

Food supplies in MENA are geared towards grains consumption as is borne out in per capita grain consumption rates across the region, which are for the most part elevated when compared to the world average. One factor that has served – and will continue to serve – to underpin elevated per capita grain consumption rates is the existence of extensive state-run subsidised food distribution schemes across much of the region, which are geared toward grain and grain-based product consumption. Between 2010 and 2021, grain crops accounted for 51.5% of total caloric consumption – and 50.8% of total protein consumption – in MENA, with the highest domestic rates found in Egypt (61.9%), Yemen (60.7%), and Iraq (57.3%). Wheat alone accounted for 36.0% of total caloric consumption – and 39.0% of total protein consumption – in MENA during the same period, with the highest domestic rates found in Tunisia (43.9%), Yemen (43.3%), and Iraq (41.8%). In turn, high rates of grains consumption are reflected in low rates of grain production self-sufficiency. Between 2010/11 and 2021/22, the Middle East produced under 55% of the grains that it consumed while North Africa produced under 45% of the grains that it consumed. Demand, however, is not the sole reason behind MENA's insufficient regional production. From an agricultural perspective, MENA is not especially hospitable to grain cultivation, which is evidenced in comparatively low regional crop yields. Both arable land and water supplies are scarce while climatic and weather conditions pose a distinct challenge to farmers. Moreover, just 5% of the MENA land mass is classified as arable land, an area that is also under threat from soil erosion. These difficulties have been compounded by unsustainable cultivation practices, such as excess fertiliser use, which poses a long-term threat to soil quality. In addition, at least two thirds of the markets in the region utilise groundwater at rates that exceed renewable internal freshwater resources, an issue that continued population growth will render even more acute. These challenges are set to rise with climate change, which threatens higher average ambient temperatures and more frequent droughts.

Regional Self-Sufficiency Is Low And Trending Lower

Grain Self-Sufficiency (%)



f = USDA forecast. Source: USDA, BMI

Domestic policy schemes designed to stimulate agricultural production growth have been implemented across MENA, most of which focus on staple crops and crops for which self-sufficiency is especially low. In 2018, for example, Saudi Arabia repealed a ban on domestic wheat cultivation, which was first introduced in 2015 in order to combat the depletion of aquifers and groundwater reserves. The Saudi Grains Organization, the sole domestic wheat purchaser, announced its intention to purchase locally produced wheat with the intention not solely of encouraging cultivation growth but also of incentivising a shift away from the planting of alfalfa, a more water-intensive crop, the demand for which from the domestic livestock sector has risen in recent seasons. Algeria launched a new agricultural sector development programme in September 2020 that aimed to reduce the domestic consumer market's reliance on imported food items via an expansion of domestic grains production, facilitated in part via the creation of the Office for the Development of Agriculture in Saharan Lands, which was tasked with attracting agribusiness investment to Algeria's southern regions. In Egypt, a more short-term response to the surge in wheat prices in 2022 took the form of an increase in the state's wheat procurement prices, alongside other incentives for farmers to increase production. At the start of 2023, the local wheat procurement price was raised by about 40% as the government sought to accumulate stocks. GCC states have also looked to foreign land acquisition deals to secure grain volumes, but these structures have historically had a limited impact on available grain supplies. On a separate front, the UAE has leveraged trade policies as a means by which to de-risk agricultural imports, such as the UAE-India Comprehensive Economic Partnership Agreement (CEPA) that entered into force in mid-2022. India's subsequent rice export restrictions have, however, demonstrated the potentially limited effectiveness of such agreements. The regional focus on stimulating staple grain production growth – to no small degree due to demand-side pressures linked to subsidised food schemes – poses a further risk to MENA's water resources insofar as the cultivation of staple grains is often water intensive.

Related Research

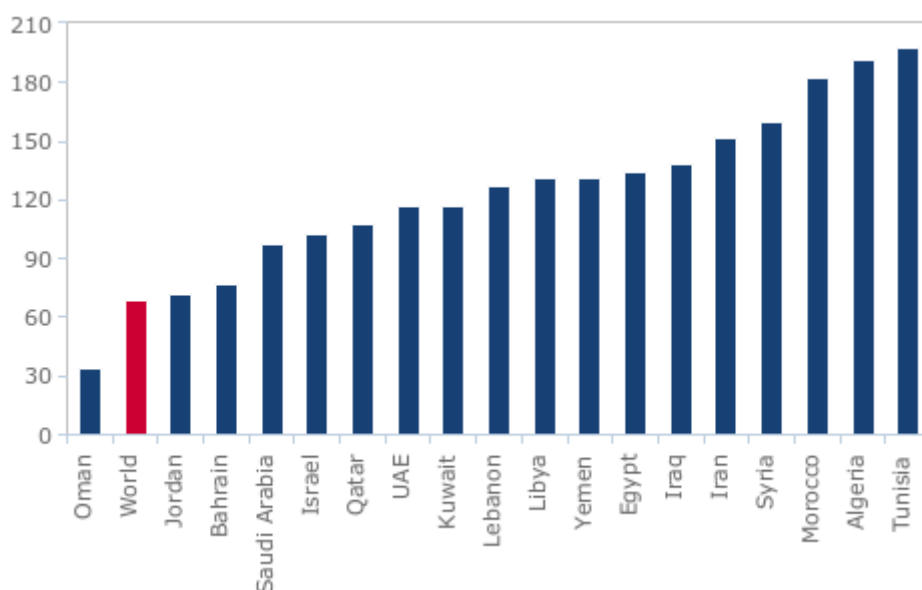
- Favourable Growing Conditions To Drive Iraqi Wheat Production Growth In 2024, Import Demand Set To Ease, March 2024
- Outlook For Maghreb Wheat Harvests Deteriorates On Persistent Moisture Deficits, February 2024
- Food Security In North Africa: A Look At The Structural Factors Driving Wheat Insecurity, March 2023

4. Production Balances Set To Deteriorate Further On Population Growth, Diet Diversification

According to the UN's medium estimate, the world's population will increase from 7.94bn in 2022 to 8.51bn in 2030, equivalent to an increase of 7.2%. Over the same period, in contrast, the population of North Africa is forecast to increase from under 260mn to over 290mn, equivalent to an increase of 13.0%, while the population of Western Asia is forecast to increase from almost 292mn to more than 325mn, equivalent to an increase of 11.6%, for a combined regional increase of approximately 67mn people. As a result, demand-side pressure on grain production balances across MENA is set to increase throughout the 2020s, exacerbated in turn by high rates of per capita grain consumption when compared to other world regions. Moreover, the World Bank has estimated that one third of the total caloric intake in MENA is accounted for by subsidised wheat and wheat-based products. In turn, this will increase the financial pressure on states with respect to subsidised food distribution schemes while efforts to reform and reduce such schemes in the past have often led to public disapproval and in some cases social unrest. One second-order consequence of elevated grain and grain-based product consumption levels is that the prevalence of undernourishment in above levels considered to be compatible with food security. Between 2015 and 2022, as compared to a benchmark of 5%, the annual prevalence of undernourishment in North Africa rose from 4.5% to 6.4% and in Western Asia from 9.1% to 10.8%. During the same period, the average rate of moderate-to-severe food insecurity stood at 27.1% in North Africa and at 32.5% in Western Asia.

Individual Wheat Consumption Rates Tend To Be Highest In North Africa

Wheat Consumption Per Capita (kg, 2021)



Source: FAO, BMI

The continued economic development of MENA will pose a second challenge to the region's net agricultural position insofar as higher incomes are associated with diet diversification, with particular relevance for per capita levels of animal protein consumption. For example, growth in animal-based protein items, such as meat, eggs, and dairy items, across much of the region has caused animal feed import demand to increase. Regional production of corn and soybean, major feed inputs, is expected to remain low. Since 2010/11, the volume of the Middle East's soybean imports has risen by 8.5% per annum on average while the corresponding figure for North Africa is 12.6%. Over the same period, imports have met an average of 96% and 100% of each region's annual soybean consumption. While this trend toward diversification could serve to reduce elevated per capita grain consumption in a direct sense – in that wheat-based calories could account for a small share of total food supplies – the increased demand for animal feed grains would operate in the opposite direction with respect to regional grain self-sufficiency. An increased reliance on imported feed grains could also serve to further export food supplies in MENA to fluctuations in world agricultural markets. In Egypt, for

example, the domestic poultry sector, reliant upon imported feed corn, saw up to 40% of small-scale producers suspend operations in Q4 2022 in response to elevated prices caused by the Russia-Ukraine war and the devaluation of the Egyptian pound. In Saudi Arabia, individual consumption of fresh dairy products almost doubled between 2010 and 2020, which encourage the domestic cultivation of water-intensive alfalfa, while in Iran consumption increased by about one third over the same period, which exposed domestic food prices to the combined impact of higher feed import costs and the depreciation of the Iranian rial since 2022. Algeria is the world's second-largest importer of powdered milk products, after Mainland China, while domestic milk production is estimated to match approximately 55% of local demand.

Related Research

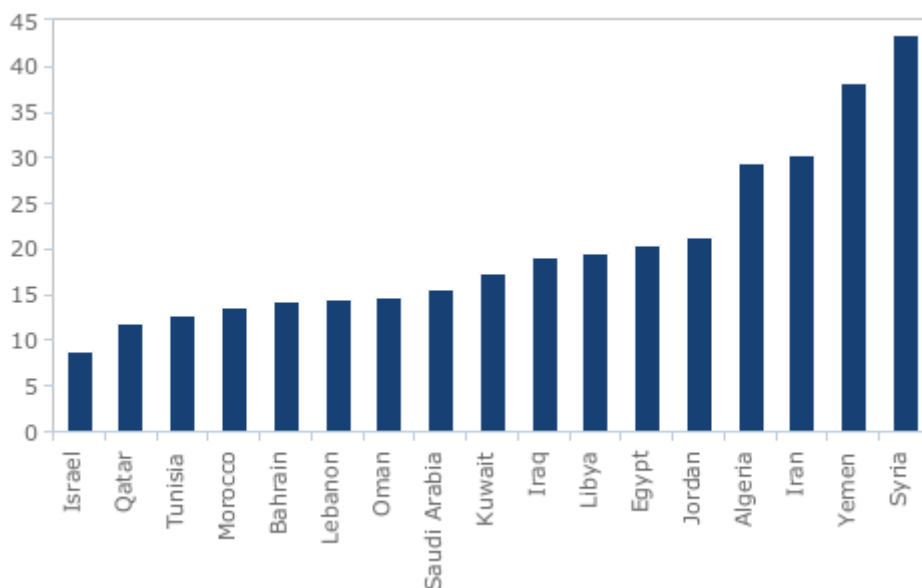
- Soybean Price Forecast: Downward Revision For 2024 Amid Global Supply-Demand Shifts, March 2024
- Egypt Reaches Light At The End Of The Tunnel, March 2024
- Palm Oil Price Forecast: Recent Strength Prompts Upward Revision, Further Price Increases Capped, February 2024

5. Varied Responses To Food Security Threats Across MENA

As described above, MENA is characterised by structural agricultural production deficits across most staple food items, with the extension of often grain-dominated subsidised food schemes underpinning sizeable agricultural trade deficits. It is our view that the root drivers of this situation (a climate inhospitable to agricultural production, scarce water and arable land resources, population growth, urbanisation, economic development, and so on) will not be resolved in the medium term, which will weigh on the region's capacities to safeguard domestic consumers during periods of agricultural market volatility, and that adaptive and/or reactive measures will instead be pursued. In the aftermath of the surge in global food prices in 2007-2008 and the Arab Spring, which began at the end of 2010, domestic concerns about food security in MENA rose in prominence and the issue became a more direct subject of policy development. The most common, and indeed near ubiquitous, response across the region has been the use of subsidies or tax cuts to encourage local agricultural production, as well as bolster sales to state procurement bodies in order to accumulate inventories for periods of tight supplies, and to support domestic consumption. This has amplified the impact of periods of elevated import prices on the region's fiscal position, which is of especial significance to MENA's non-oil exporting economies. In response to the surge in world agricultural commodity prices provoked by the Russia-Ukraine war, for example, Egypt raised state wheat procurement prices while Saudi Arabia extended financial support to private sector food importers. As a second-order effect, the introduction and maintenance of output price support measures safeguards rural incomes, which also provides for improved food security. Producer subsidies, however, can raise local agricultural prices above those available in world trade markets.

Enhanced Self-Sufficiency Would Be To The Benefit Of Regional Trade Balances

Agricultural Imports (% Total Imports, 2022)



Source: Trade Map, BMI

Within MENA, the GCC countries, most notably Saudi Arabia and the UAE, have adopted the most ambitious food security programmes. This reflects not just the financial capabilities and foreign exchange earning power of the GCC's oil exporters but also an acknowledgement of the importance of food security to broader economic diversification targets. The UAE, for example, aims to become the most food secure nation (as measured by the Economist's Global Food Security Index) by 2051. A distinction can be made between GCC food security policies that focus on domestic agricultural and food sector outcomes (many of which hope to leverage novel agricultural technologies and practices such as vertical and urban farming methods) and those that aim to leverage capital investment in foreign production capacities and to expand the GCC's role in the global food trade. An earlier focus on foreign agricultural land acquisition deals has somewhat softened in recent years, a reflection in part of the uncertain impact of such deals on domestic food security, but investment in agricultural technology start-ups has conversely accelerated. In 2022, for example, France-based InnovaFeed, a vertical insect farming outfit, secured USD250mn in a series D funding round led by Qatar Investment Authority. The UAE's 2021 investment, via state-owned ADQ, in Louis Dreyfus, which included a long-term agricultural commodities sales agreement, and Saudi Arabia's 2022 purchase, via the Saudi Agricultural and Livestock Investment Company of a stake in Olam Agri demonstrate the perceived benefit from an expanding role in world agricultural markets and the development of sourcing capabilities. For GCC states, COFCO, the Mainland Chinese state-owned food trader, serves as a potential model of a commercial agricultural trading company that also holds a clear policy mandate related to strengthening domestic food security.

Related Research

- Global Nitrogen-Based Fertiliser Outlook: Application Growth To Slow Through The Long Term, January 2024
- GCC Food Security: The UAE Looks To Land Acquisitions, Trade Deals And Domestic Agtech To Mitigate Food Supply Risks, November 2023
- Morocco: New Drought-Resistant Grain Varieties Enhancing Food Security In A Changing Climate, March 2023

Competitive Landscape

Egypt - Major Agribusiness Companies

Company	Sub-Sector	Fiscal Y/E	Market Cap (USDmn)	Revenue (USDmn)	EBITDA (USDmn)	Net Income (USDmn)	Operating Margin (%)	Profit Margin (%)	Three-Year Avg. Revenue Growth (%)
Abou Kir Fertilizers & Chemical Industries	Fertilisers & Agricultural Chemicals	06/2023	3,675.3	874.6	481.0	593.9	54.4	67.9	43.0
Arab Dairy Products Co/The	Packaged Foods & Meats	12/2021	38.2	78.9	1.3	-3.4	0.0	-4.3	1.5
Cairo Poultry Co	Packaged Foods & Meats	12/2022	151.9	343.0	56.2	15.7	8.9	4.6	15.5
Delta Sugar Co	Packaged Foods & Meats	12/2022	393.0	202.1	59.5	45.1	27.8	22.3	18.2
Edita Food Industries SAE	Packaged Foods & Meats	12/2022	830.7	406.5	80.6	54.4	16.8	13.4	25.5
Egyptian Chemical Industries KIMA	Diversified Chemicals	06/2023	512.6	268.2	118.0	46.7	34.5	17.4	203.4
Egyptian Financial & Industrial Co	Fertilisers & Agricultural Chemicals	12/2022	171.2	194.7	51.6	40.0	24.4	20.6	36.1
Juhayna Food Industries	Packaged Foods & Meats	12/2022	625.2	602.2	71.7	33.8	9.0	5.6	14.9
Misr Fertilizers Production Co SAE	Fertilisers & Agricultural Chemicals	12/2022	5,066.7	999.5	568.9	384.5	49.5	38.5	37.9
Obour Land For Food Industries	Packaged Foods & Meats	12/2022	151.8	241.6	36.4	24.5	13.6	10.1	22.4
Upper Egypt Flour Mills	Packaged Foods & Meats	06/2023	39.9	97.0	9.0	8.0	8.5	8.2	28.6

Note: Data correct as of February 14 2024. Source: Bloomberg, BMI

Egypt Demographic Outlook

Demographic analysis is a key pillar of our macroeconomic and industry forecasting model. The total population and demographic profile of a market are key variables in consumer demand and are essential to understanding issues ranging from future population trends to productivity growth and government spending requirements.

The accompanying charts detail the population pyramid for 2022, the change in the structure of the population between 2022 and 2045 and the total population between 1990 and 2045. The tables show indicators from all of these charts, in addition to key metrics such as population ratios, the urban/rural split and life expectancy.

Population

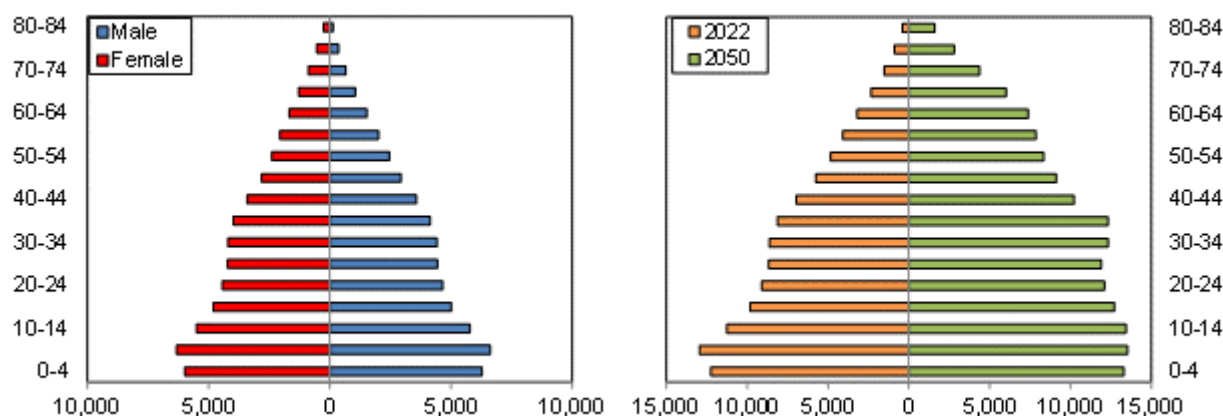
Egypt - Population, mn (1990-2050)



f = BMI forecast. Source: World Bank, UN, BMI

Population Pyramid

Egypt - 2022 Male vs Female Population, '000 (LHC) & 2022 vs 2050 Population, '000 (RHC)



Source: World Bank, UN, BMI

Population Headline Indicators (Egypt 1990-2025)

Indicator	1990	2000	2005	2010	2015	2020	2025f
Population, total, '000	57,214.6	71,371.4	79,075.3	87,252.4	97,723.8	107,465.1	116,275.5
Population, % y-o-y		2.09	2.00	2.05	2.23	1.75	1.56
Population, total, male, '000	28,850.6	36,137.3	40,071.8	44,175.7	49,472.6	54,357.4	58,764.9
Population, total, female, '000	28,364.1	35,234.1	39,003.5	43,076.7	48,251.2	53,107.7	57,510.6

f = BMI forecast. Source: World Bank, UN, BMI

Key Population Ratios (Egypt 1990-2025)

Indicator	1990	2000	2005	2010	2015	2020	2025f
Active population, total, '000	31,251.7	41,746.6	48,413.7	54,599.3	60,743.3	66,715.5	73,093.5
Active population, % of total population	54.6	58.5	61.2	62.6	62.2	62.1	62.9
Dependent population, total, '000	25,963.0	29,624.8	30,661.6	32,653.1	36,980.5	40,749.6	43,181.9
Dependent ratio, % of total working age	83.1	71.0	63.3	59.8	60.9	61.1	59.1
Youth population, total, '000	23,541.0	26,430.3	27,241.6	29,039.1	32,715.9	35,689.4	37,180.8
Youth population, % of total working age	75.3	63.3	56.3	53.2	53.9	53.5	50.9
Pensionable population, '000	2,421.9	3,194.5	3,420.1	3,614.0	4,264.6	5,060.2	6,001.1
Pensionable population, % of total working age	7.7	7.7	7.1	6.6	7.0	7.6	8.2

f = BMI forecast. Source: World Bank, UN, BMI

Urban/Rural Population And Life Expectancy (Egypt 1990-2025)

Indicator	1990	2000	2005	2010	2015	2020	2025f
Urban population, '000	24,875.8	30,544.8	34,023.7	37,535.1	41,811.1	45,976.8	50,514.7
Urban population, % of total	43.5	42.8	43.0	43.0	42.8	42.8	43.4
Rural population, '000	32,338.9	40,826.6	45,051.6	49,717.3	55,912.7	61,488.3	65,760.8
Rural population, % of total	56.5	57.2	57.0	57.0	57.2	57.2	56.6
Life expectancy at birth, male, years	62.2	65.9	66.4	67.1	68.0	68.7	69.9
Life expectancy at birth, female, years	66.0	70.1	71.2	72.3	73.1	73.4	74.9
Life expectancy at birth, average, years	64.1	68.0	68.8	69.7	70.5	71.0	72.4

f = BMI forecast. Source: World Bank, UN, BMI

Population By Age Group, % (Egypt 1990-2025)

Indicator	1990	2000	2005	2010	2015	2020	2025f
Population, 0-4 yrs, total, '000	8,855.1	8,995.9	9,578.7	10,580.8	12,635.0	12,548.7	12,075.0
Population, 5-9 yrs, total, '000	7,902.3	8,735.9	8,944.0	9,532.7	10,555.7	12,598.0	12,520.1
Population, 10-14 yrs, total, '000	6,783.7	8,698.5	8,718.8	8,925.5	9,525.2	10,542.6	12,585.7
Population, 15-19 yrs, total, '000	5,719.0	7,841.3	8,680.2	8,682.8	8,922.0	9,498.9	10,519.9
Population, 20-24 yrs, total, '000	5,083.0	6,706.5	7,832.3	8,620.1	8,703.0	8,873.5	9,458.3
Population, 25-29 yrs, total, '000	4,478.6	5,622.1	6,694.8	7,760.1	8,644.0	8,642.6	8,823.9
Population, 30-34 yrs, total, '000	3,806.8	4,972.6	5,601.9	6,622.1	7,766.4	8,581.6	8,589.9
Population, 35-39 yrs, total, '000	3,141.0	4,360.5	4,938.4	5,530.7	6,603.0	7,699.7	8,518.7
Population, 40-44 yrs, total, '000	2,651.3	3,681.1	4,306.5	4,859.8	5,486.8	6,523.9	7,618.5
Population, 45-49 yrs, total, '000	1,829.7	3,005.3	3,608.5	4,211.1	4,787.5	5,392.3	6,418.0
Population, 50-54 yrs, total, '000	1,646.3	2,481.6	2,891.5	3,465.8	4,073.5	4,636.8	5,223.8
Population, 55-59 yrs, total, '000	1,590.1	1,656.6	2,338.9	2,715.5	3,276.1	3,861.5	4,393.6
Population, 60-64 yrs, total, '000	1,306.1	1,419.0	1,520.6	2,131.2	2,481.0	3,004.7	3,529.0
Population, 65-69 yrs, total, '000	996.1	1,270.1	1,240.1	1,325.3	1,849.8	2,154.7	2,587.6
Population, 70-74 yrs, total, '000	695.1	922.4	1,035.8	1,005.2	1,079.1	1,493.1	1,714.8
Population, 75-79 yrs, total, '000	422.0	574.3	654.4	734.4	712.7	771.1	1,038.8
Population, 80-84 yrs, total, '000	210.8	288.8	331.8	373.7	424.9	412.7	441.7
Population, 85-89 yrs, total, '000	77.1	108.1	123.4	138.2	156.4	181.2	166.7
Population, 90-94 yrs, total, '000	18.4	26.8	30.0	32.6	36.6	41.8	45.2
Population, 95-99 yrs, total, '000	2.4	3.8	4.3	4.3	4.8	5.3	5.9
Population, 100+ yrs, total, '000	0.1	0.2	0.3	0.3	0.3	0.3	0.4

f = BMI forecast. Source: World Bank, UN, BMI

Population By Age Group, % (Egypt 1990-2025)

Indicator	1990	2000	2005	2010	2015	2020	2025f
Population, 0-4 yrs, % total	15.48	12.60	12.11	12.13	12.93	11.68	10.38
Population, 5-9 yrs, % total	13.81	12.24	11.31	10.93	10.80	11.72	10.77
Population, 10-14 yrs, % total	11.86	12.19	11.03	10.23	9.75	9.81	10.82
Population, 15-19 yrs, % total	10.00	10.99	10.98	9.95	9.13	8.84	9.05
Population, 20-24 yrs, % total	8.88	9.40	9.90	9.88	8.91	8.26	8.13
Population, 25-29 yrs, % total	7.83	7.88	8.47	8.89	8.85	8.04	7.59
Population, 30-34 yrs, % total	6.65	6.97	7.08	7.59	7.95	7.99	7.39
Population, 35-39 yrs, % total	5.49	6.11	6.25	6.34	6.76	7.16	7.33
Population, 40-44 yrs, % total	4.63	5.16	5.45	5.57	5.61	6.07	6.55
Population, 45-49 yrs, % total	3.20	4.21	4.56	4.83	4.90	5.02	5.52
Population, 50-54 yrs, % total	2.88	3.48	3.66	3.97	4.17	4.31	4.49
Population, 55-59 yrs, % total	2.78	2.32	2.96	3.11	3.35	3.59	3.78
Population, 60-64 yrs, % total	2.28	1.99	1.92	2.44	2.54	2.80	3.04
Population, 65-69 yrs, % total	1.74	1.78	1.57	1.52	1.89	2.01	2.23
Population, 70-74 yrs, % total	1.21	1.29	1.31	1.15	1.10	1.39	1.47
Population, 75-79 yrs, % total	0.74	0.80	0.83	0.84	0.73	0.72	0.89
Population, 80-84 yrs, % total	0.37	0.40	0.42	0.43	0.43	0.38	0.38
Population, 85-89 yrs, % total	0.13	0.15	0.16	0.16	0.16	0.17	0.14
Population, 90-94 yrs, % total	0.03	0.04	0.04	0.04	0.04	0.04	0.04
Population, 95-99 yrs, % total	0.00	0.01	0.01	0.00	0.00	0.00	0.01
Population, 100+ yrs, % total	0.00	0.00	0.00	0.00	0.00	0.00	0.00

f = BMI forecast. Source: World Bank, UN, BMI

Agribusiness Methodology

Connected Thinking

BMI employs a unique methodology known as 'Connected Thinking'. This means that our analysis captures the inter-relatedness of the global economy, and takes into account all of the relevant political, macroeconomic, financial market and industry factors that underpin a forecast and view. We then integrate them so as to explain how they interact and affect each other. Our Connected Thinking approach provides our customers with unique and valuable insight on all relevant macroeconomic, political and industry risk factors that will impact their operations and revenue-generating potential in the industry/industries within which they operate.

We use a transparent forecasting model as a base for our industry forecasts, but rely heavily on our analysts' expert judgement to ensure our forecasts capture all of the insights we derive using our unique Connected Thinking approach. We believe analyst expertise and judgement are the best ways to provide the most accurate, up-to-date and comprehensive insight to our customers.

Agribusiness Methodology

For the Agribusiness industry we have historical data and five-year forecasts for up to 17 commodities per market, including the production and consumption of key grains, softs and meat.

Our forecasts are a combination of regression modelling and analyst expert judgement.

Our Agribusiness analysts interact with other analytical teams in BMI, including Country Risk, Food & Drink and Infrastructure. This is to ensure they have a comprehensive understanding of external factors that may impact the Agribusiness industry outlook.

Within the Agribusiness industry, issues that might result in analyst expert judgement could include but are not limited to:

- technological developments that might influence future output levels (for example greater use of biotechnology)
- dramatic changes in local production levels due to public or private sector investment
- regulatory environment and specific areas of legislation, such as import and export tariffs, and farm subsidies
- changes in lifestyles and general societal trends
- formation of bilateral and multilateral trading agreements, and political factors

There is a constant rolling cycle of data monitoring, with databases being updated on a quarterly basis. Analysts will intervene outside of these cycles to implement forecast changes when necessary.

Historical figures for Agricultural commodities production and consumption are based on data published by local agriculture ministries and when necessary are supplemented by data from the US Department of Agriculture, the UN Food and Agricultural Organization (FAO) and the International Cocoa Organization.

Industry-Specific Methodology

Production

Our production forecasts are based on a regression model, using a market's own historical time series.

We also apply analyst expert judgement to refine and finalise the various agricultural commodities production forecasts based on exogenous and endogenous variables or events not captured by our regression model.

Agricultural Commodities Forecast

Grains	Softs	Dairy	Meat
Wheat	Sugar	Whole milk powder	Pork
Corn	Coffee	Liquid milk	Beef and veal
Barley	Cocoa	Butter	Poultry (excluding turkey)
Rice	Cotton	Cheese	
Soybean	Palm oil		

Source: BMI

Consumption

Our consumption forecasts are based on a regression model using a market's own historical time series and key macroeconomic explanatory variables from our Country Risk service, such as private final consumption, inflation and interest rates.

We also apply analyst expert judgement to refine and finalise the various agricultural commodities production forecasts based on exogenous and endogenous variables or events not captured by our regression model.

Agribusiness Market Value

The construction of the agribusiness market value is done in two steps:

- We construct an in-house model of the agribusiness market, where for each commodity its forecast production value is multiplied by its commodity price. This is repeated for each commodity in our agribusiness universe and then aggregated to give an agribusiness total market value. Commodity prices reflect either market prices or production prices; this depends on the commodity in question and whether or not sufficient data is available.
- We use an in-house agribusiness total market value model as a benchmark model to forecast the FAO's gross production value. If necessary, analysts can subjectively intervene in the model to take into account qualitative data.

To summarise, the final agribusiness market value is historical data from the FAO gross production value which is then forecast using an in-house agribusiness market value model that is objectively and subjectively estimated.

The model itself is priced in US dollars. Conversion to local currency and euros is done directly using our Country Risk exchange rate forecasts.

We ensure that the internal model best matches the FAO gross production value definition and construction to ensure that the internal model serves as a useful benchmark.

FAO Definition Of Gross Production Value (USD)

The value of gross production has been compiled by multiplying gross production in physical terms by output prices at farm gate. Value of production measures production in monetary terms at the farm gate level. Since intermediate uses within the agricultural industry (seed and feed) have not been subtracted from production data, this value of production aggregate refers to the notion of gross production.



30 North Colonnade, Canary Wharf, London, E14 5GN, UK

Tel: +44 (0)20 7248 0468

Fax: +44 (0)20 7248 0467

Web: www.fitchsolutions.com/bmi

ISSN: 1759-1597

Copy Deadline: April 2024

© 2024 Fitch Solutions Group Limited. All rights reserved.

All information, analysis, forecasts and data provided by Fitch Solutions Group Limited are for the exclusive use of subscribing persons or organisations (including those using the service on a trial basis). All such content is copyrighted in the name of Fitch Solutions Group Limited and as such no part of this content may be reproduced, repackaged, copied or redistributed without the express consent of Fitch Solutions Group Limited.

All content, including forecasts, analysis and opinion, is based on information and sources believed to be accurate and reliable at the time of publishing. Fitch Solutions Group Limited makes no representation or warranty of any kind as to the accuracy or completeness of any information provided, and accepts no liability whatsoever for any loss or damage resulting from opinion, errors, inaccuracies or omissions affecting any part of the content.

This report from BMI – A Fitch Solutions Company is a product of Fitch Solutions Group Limited; UK Company registration number 08789939 ('FSG'). FSG is an affiliate of Fitch Ratings Inc. ('Fitch Ratings'). FSG is solely responsible for the content of this report, without any input from Fitch Ratings.

Copyright © 2024 Fitch Solutions Group Limited.