



Food and Agriculture
Organization of the
United Nations

Food Outlook

BIANNUAL REPORT ON GLOBAL FOOD MARKETS



June 2023

Food Outlook

BIANNUAL REPORT ON GLOBAL FOOD MARKETS

Food and Agriculture Organization of the United Nations
Rome, 2023

Required citation:

FAO. 2023. *Food Outlook – Biannual report on global food markets*. Rome. <https://doi.org/10.4060/cc3020en>

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by FAO in preference to others of a similar nature that are not mentioned.

The views expressed in this information product are those of the author(s) and do not necessarily reflect the views or policies of FAO.

ISSN 0251-1959 [print]

ISSN1560-8182 [online]

ISBN 978-92-5-137230-2

© FAO, 2023



Some rights reserved. This work is made available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo/legalcode>).

Under the terms of this licence, this work may be copied, redistributed and adapted for non-commercial purposes, provided that the work is appropriately cited. In any use of this work, there should be no suggestion that FAO endorses any specific organization, products or services. The use of the FAO logo is not permitted. If the work is adapted, then it must be licensed under the same or equivalent Creative Commons licence. If a translation of this work is created, it must include the following disclaimer along with the required citation: "This translation was not created by the Food and Agriculture Organization of the United Nations (FAO). FAO is not responsible for the content or accuracy of this translation. The original [Language] edition shall be the authoritative edition."

Disputes arising under the licence that cannot be settled amicably will be resolved by mediation and arbitration as described in Article 8 of the licence except as otherwise provided herein. The applicable mediation rules will be the mediation rules of the World Intellectual Property Organization <http://www.wipo.int/amc/en/mediation/rules> and any arbitration will be conducted in accordance with the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL).

Third-party materials. Users wishing to reuse material from this work that is attributed to a third party, such as tables, figures or images, are responsible for determining whether permission is needed for that reuse and for obtaining permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

Sales, rights and licensing. FAO information products are available on the FAO website (www.fao.org/publications) and can be purchased through publications-sales@fao.org. Requests for commercial use should be submitted via: www.fao.org/contact-us/licence-request. Queries regarding rights and licensing should be submitted to: copyright@fao.org.

Photo credits (left to right/top to bottom):

©ALAMY; ©Shutterstock; ©iStock; ©Shutterstock; ©iStock; ©Shutterstock; ©iStock; ©iStock; ©iStock; ©Shutterstock; ©FAO; ©Shutterstock; ©iStock; ©Shutterstock; ©Shutterstock; ©iStock

HIGHLIGHTS

FAO's latest forecasts point to increases in production and higher closing stocks across several basic foodstuffs. However, global food production systems remain vulnerable to shocks stemming from extreme weather events, geopolitical tensions, policy changes and developments in other markets, potentially tipping the delicate demand-supply balances and impacting prices and world food security.

WHEAT

Global wheat production, stocks and trade are all forecast to fall in 2023/24 from their 2022/23 record high levels. Nevertheless, with significant carryover stocks from last season and nearly stagnant total utilization, world wheat supplies are set to remain ample.

COARSE GRAINS

With record production expected this year, global coarse grain supplies are forecast to recover in 2023/24 following a tight season in 2022/23. Higher supplies and lower prices are predicted to support an increase in utilization and trade.

RICE

Against the backdrop of production disruptions in 2022/23 and strong Asian demand, international rice prices have reached their highest level since October 2011. However, barring major setbacks, global production could recover in 2023/24, which, coupled with an anticipated stabilization in use, could boost world rice stocks.

MEAT

FAO's latest forecast points to a marginal increase in global meat production in 2023, led by poultry meat, despite challenges to production stemming from widespread animal diseases and high production costs. Meanwhile, a recovery in meat import demand in Asia is likely to foster an overall slight growth in global meat trade.

SUGAR

Following the downward revision to the 2022/23 production forecast in several key growing countries, the expected tighter global sugar supplies led to sharp increases in world sugar prices in recent months. Global trade in sugar is predicted to contract due to lower export availabilities and higher import costs.

OILCROPS

With expectations of improved global outputs exceeding utilization, FAO's forecasts for 2022/23 point to moderate stock replenishments for oilseeds and derived products. Preliminary projections for the 2023/24 season suggest further production growth across the oilcrops complex.

DAIRY

FAO's latest forecast points to a second consecutive year of slow growth in world milk production in 2023, primarily due to extreme weather events, lower producer margins and labour shortages. Following a slump last year, a slight recovery in global dairy trade is expected, despite likely import contractions in some leading importing countries.

FISHERIES

Production growth is expected to slow in 2023, with growth in aquaculture partly offset by declining catches in capture fisheries. Inflation and economic challenges are muting demand growth. Prices for a number of products are reaching new highs, although a slowing global economy will likely increase price sensitivity.

SPECIAL FEATURE

Food inflation in net food importing developing countries (NFIDCs): characterizing the increase and the effect of currency movements

Since the beginning of 2021, the consumer price index (CPI), the most widely used measure of inflation, has increased to levels not seen in decades. High and persistent inflation has a number of macroeconomic consequences that can reduce long-term prosperity. Importantly, rising food prices can lead to social unrest and slow the efforts to fight poverty and food insecurity. This special feature examines recent changes in the food component of the CPI for the net food importing developing countries, and the extent to which changes in international cereal prices were transmitted to these countries, considering movements in the exchange rates.

ACKNOWLEDGEMENTS

vi

MARKET SUMMARIES

1-9

MARKET ASSESSMENTS

10-61

Wheat	11
Coarse grains	17
Rice	24
Oilcrops, oils and meals	30
Sugar	38
Meat and meat products	43
Milk and milk products	50
Fish and fishery products	56

SPECIAL FEATURE

62-71

Food inflation in net food importing developing countries: characterizing the increase and the effect of currency movements	63
---	----

MAJOR POLICY DEVELOPMENTS

72-95

Grains	73
Rice	81
Meat	88
Dairy	91

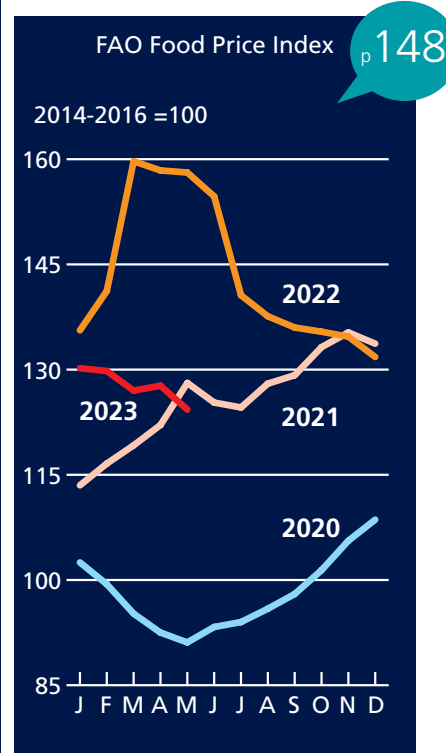
STATISTICAL TABLES

96-133

MARKET INDICATORS

134-147

Futures markets	135
Ocean freight rates	138
Food import bills	141
The FAO price indices	144



ACKNOWLEDGEMENTS

The Food Outlook report is a product of the FAO Markets and Trade Division of the Economic and Social Development Stream. This report was prepared under the overall guidance of Boubaker Ben-Belhassen, Director and Upali W. Galketi Aratchilage, Senior Economist. Market assessments were written by a team of economists, whose names appear under their respective market summary contributions. A contribution by the International Grains Council on ocean freight rates for the market indicators section is also gratefully acknowledged. The report benefited from research support from many staff, namely, David Bedford, Harout Dekermendjian, Emanuele Marocco, Grace Karumathy, Emanuele Mazzini, Marco Milo, Fabio Palmeri, Fetty Prihastini and the Fisheries and Aquaculture Statistics Team and GLOBEFISH.

Special thanks go to David Bedford for preparing the charts and statistical tables and to Valentina Banti for her administrative support. Additionally, the team is grateful to Ettore Vecchione for the desktop publishing and Ruth Raymond for her valuable editorial assistance.

MARKET SUMMARIES

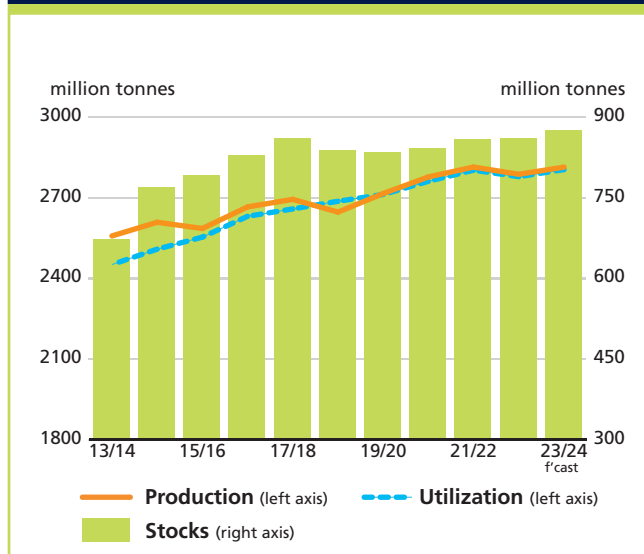
Early prospects point to a likely 1.0-percent increase in global cereal production in 2023 to reach 2 813 million tonnes (including rice in milled equivalent). Among the major cereals, the bulk of the increase rests on a foreseen rise in maize production, with increases also anticipated for rice and sorghum. Partially offsetting these increases, wheat and barley outputs are predicted to fall below their 2022 levels.

FAO's first forecast puts world cereal utilization in 2023/24 at around 2 803 million tonnes, up 0.9 percent from the estimated 2022/23 level; the increase stems almost entirely from a predicted growth in utilization of coarse grains. Higher feed use, largely of maize, is the dominant driver behind the expected increase, followed by growth in food consumption, especially of wheat and rice. Industrial use is foreseen to rise only marginally with expanded use anticipated for maize, rice, and barley.

Based on FAO's initial forecasts for global cereal production in 2023 and utilization in 2023/24, global cereal stocks could rise by 1.7 percent above their opening levels, reaching a record 873 million tonnes. Among the major cereals, the increase in maize inventories is expected to be the largest, followed by those of rice and barley. By contrast, stocks of wheat and sorghum will likely fall below their opening levels. With the current forecasts for utilization and stocks, the world cereal stocks-to-use ratio would decline fractionally, from 30.6 percent in 2022/23 to 30.4 percent in 2023/24.

Pegged at 472 million tonnes, world trade in cereals is forecast to remain near the 2022/23 level. An expected decline in global wheat trade is foreseen to offset predicted increases in the world trade of coarse grains and rice. In May 2023, the FAO Cereal Price Index averaged 129.7 points, down 43.9 points (25.3 percent) from last year's record value, reflecting sharp declines in the world prices of wheat and coarse grains; rice prices, however, have increased above their previous year values. Although the FAO Cereal Price Index dropped below its May 2022 record level, in May 2023 it was still 8.8 points (7.1 percent) above its last five-year average value for the same month.

CEREAL GRAIN PRODUCTION, UTILIZATION AND STOCKS



WORLD CEREAL MARKET AT A GLANCE

	2021/22	2022/23 estim.	2023/24 f'cast	Change: 2023/24 over 2022/23
	million tonnes			%
WORLD BALANCE				
Production	2 813.4	2 786.5	2 813.1	1.0
Trade¹	482.8	471.6	471.6	0.0
Total utilization	2 801.7	2 777.6	2 803.8	0.9
Food	1 174.3	1 185.0	1 193.2	0.7
Feed	1 054.3	1 029.3	1 044.7	1.5
Other uses	573.0	563.4	565.9	0.4
Ending stocks²	856.8	858.2	873.0	1.7
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/yr)	148.5	148.6	148.3	-0.2
LIFDC (kg/yr)	151.6	151.5	150.8	-0.5
World stocks-to-use ratio (%)	30.8	30.6	30.4	
Major exporters stocks-to-disappearance ratio ³ (%)	19.2	20.5	20.9	
FAO CEREAL PRICE INDEX (2014-2016=100)				
	2021	2022	2023 Jan-May	Change: Jan-May 2023 over Jan-May 2022 %
	131	155	140	-25

¹ Rice in milled equivalent.

² Trade refers to exports based on a July/June marketing season for wheat and coarse grains and on a January/December basis for rice.

³ May not equal the difference between supply (defined as production plus opening stocks) and utilization due to differences in individual countries' marketing years.

⁴ Low-Income Food-Deficit countries marketing years.

WHEAT

Following a season of record-high world production, stocks and trade in 2022/23, global wheat markets are expected to tighten slightly in 2023/24 but should remain adequately supplied. Total wheat output in 2023 is pegged at 777 million tonnes, representing a 3.0 percent fall from the all-time high reached in 2022. The bulk of the foreseen decline is expected to occur in the Russian Federation and Australia, following record-high outputs in both countries in 2022, while smaller declines are anticipated in several other leading producers, including Ukraine and Kazakhstan.

Global total wheat utilization in 2023/24 is predicted to remain nearly stable at 780 million tonnes, up just 0.1 percent from 2022/23 and marginally below the 10-year trend. A 0.7 percent rise in the food consumption of wheat is foreseen, balancing expected reductions of 1.3 percent in feed utilization and 1.4 percent in other uses of wheat.

Based on preliminary forecasts for 2023 production and 2023/24 utilization, world wheat stocks are set to fall by 0.7 percent from their record opening levels to 308 million tonnes by the close of the seasons in 2024. Most of the expected drawdown will be concentrated in the Russian Federation, with smaller drops foreseen in the United States of America (United States) and Kazakhstan. By contrast, stocks in China and India are expected to increase, partly offsetting the declines.

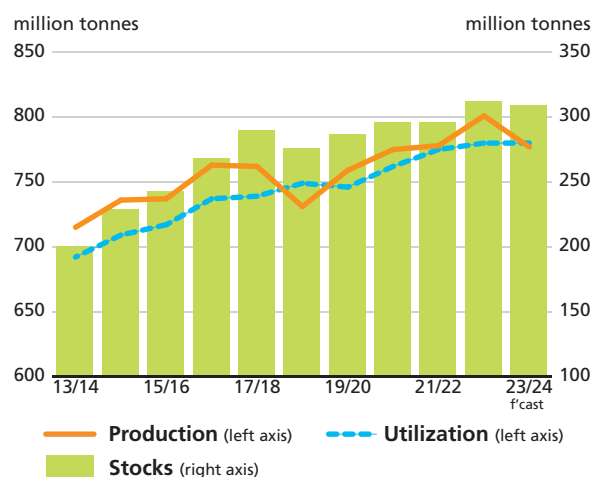
World trade in wheat (including wheat flour in wheat equivalent) in 2023/24 (July/June) will likely fall by 3.0 percent to 194 million tonnes. This anticipated decline is underpinned by smaller wheat purchases by China and the European Union, where imports are boosted to high levels in 2022/23 due to large flows from Ukraine. On the export side, expected declines in sales by Australia and Ukraine are foreseen to outweigh anticipated increases in shipments from Argentina and the European Union.

International wheat export prices have generally faced downward pressure since mid-2022, as supply prospects improved, uncertainty regarding Ukraine's exports eased with the implementation of the Black Sea Grain Initiative, and importers diversified their sources. Heading into 2023/24 with ample anticipated global supplies, world wheat prices will start the 2023/24 season at lower levels, with prices in May down 35 percent from May 2022 but 4 percent above their five-year average value for the same month.

Contact:

Erin Collier
Jonathan Pound (Production)

WHEAT PRODUCTION, UTILIZATION AND STOCKS



WORLD WHEAT MARKET AT A GLANCE

	2021/22	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>	Change: 2023/24 over 2022/23
	<i>million tonnes</i>			<i>%</i>
WORLD BALANCE				
Production	777.7	800.9	776.7	-3.0
Trade¹	195.9	199.6	193.7	-3.0
Total utilization	774.6	779.7	780.3	0.1
Food	524.0	530.7	535.0	0.8
Feed	147.7	151.2	153.0	1.2
Other uses	89.9	92.7	91.7	-1.1
Ending stocks²	295.1	310.7	308.5	-0.7
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/yr)	67.1	67.1	67.0	-0.1
LIFDC (kg/yr)	39.2	38.8	38.7	-0.3
World stocks-to-use ratio (%)	37.8	39.8	38.9	
Major exporters stocks-to-disappearance ratio ³ (%)	16.0	19.1	17.7	
FAO WHEAT PRICE INDEX⁴ (2014-2016=100)	2021	2022	2023 <i>Jan-May</i>	Change: Jan-May 2023 over Jan-May 2022 %
	132	165	138	-32%

¹ Trade refers to exports based on a common July/June marketing season.

² May not equal the difference between supply (defined as production plus carryover stocks) and total utilization due to differences in individual country marketing years.

³ Major exporters include Argentina, Australia, Canada, the European Union, Kazakhstan, the Russian Federation, Ukraine and the United States of America.

⁴ Derived from the International Grains Council (IGC) wheat index.

COARSE GRAINS

World production of coarse grains in 2023 is forecast to rise by 3.0 percent from the 2022 reduced level, reaching 1 513 million tonnes, with most of the increase resting on an anticipated higher production of maize and a foreseen smaller increase for sorghum. Much of the expected growth is concentrated in the United States of America, Brazil and the European Union.

World trade in coarse grains in 2023/24 is predicted to reach 221 million tonnes, up 1.4 percent from the estimated level for 2022/23, driven by expectations of a growth in sorghum trade and a smaller rise in maize trade. The increase stems from anticipated larger imports of all major coarse grains by China (mainland) and an expected rebound in maize imports by several countries, mostly in Asia, from their reduced purchases last season. On the export side, expected rebounds in sales by the United States of America (United States) of both sorghum and maize are seen as predominantly boosting exports, while a foreseen smaller increase in maize shipments from Brazil should also contribute to expanding trade globally.

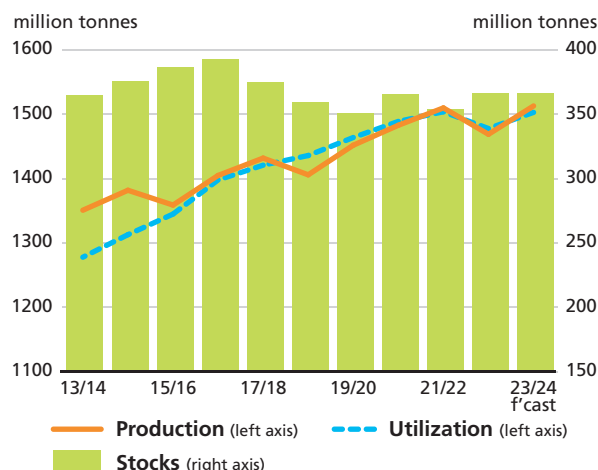
Higher supplies and lower prices are expected to support a 1.7 percent expansion in total utilization of coarse grains in 2023/24, led by a robust recovery in the feed use component, along with growth in industrial use and food consumption. Strong feed demand, largely for maize, in Brazil, China (mainland) and the United States of America (United States) are the main drivers behind the 2.6 percent forecast increase in total feed use of coarse grains, while higher use of maize in Brazil and the United States for ethanol is behind the 1.0 percent predicted rise in global industrial use.

The forecast for global inventories of coarse grains by the close of seasons in 2024 is pegged at 366 million tonnes, up 3.9 percent from 2022/23. An expected rise in maize inventories, largely in the United States, makes up the majority of the forecast increase, with a smaller increase anticipated for barley stocks. As a sign of generally improved supply prospects in 2023/24, the ratio of major exporters' stock-to-disappearance (defined as domestic consumption plus exports) is predicted to increase from 13.0 percent in 2023/23 to 14.5 percent in 2023/24.

Contact:

Erin Collier
Jonathan Pound (Production)

COARSE GRAIN PRODUCTION, UTILIZATION AND STOCKS



WORLD COARSE GRAIN MARKET AT A GLANCE

	2021/22	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>	Change: 2023/24 over 2022/23
	<i>million tonnes</i>			<i>%</i>
WORLD BALANCE				
Production	1 509.7	1 468.8	1 513.0	3.0
Trade¹	230.9	218.4	221.4	1.4
Total utilization	1 504.4	1 478.2	1 503.3	1.7
Food	224.4	227.8	229.5	0.8
Feed	878.2	855.3	875.2	2.3
Other uses	401.7	395.1	398.6	0.9
Ending stocks²	364.8	352.6	366.2	3.9
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/yr)	28.4	28.6	28.5	-0.3
LIFDC (kg/yr)	60.9	61.5	61.0	-0.8
World stocks-to-use ratio (%)	24.7	23.5	23.6	
Major exporters stocks-to-disappearance ratio ³ (%)	13.0	13.0	14.4	
FAO COARSE GRAIN PRICE INDEX (2014-2016=100)				
	2021	2022	2023 <i>Jan-May</i>	Change: Jan-May 2023 over Jan-May 2022 %
	145	169	154	-0.2

¹ Trade refers to exports based on a common July/June marketing season.

² May not equal the difference between supply (defined as production plus opening stocks) and utilization due to differences in individual countries' marketing

³ Major exporters include Argentina, Australia, Canada, the European Union, Kazakhstan, the Russian Federation, Ukraine and the United States of America.

⁴ Derived from International Grains Council (IGC) wheat index.

RICE

Reflecting the positive incentives provided by generally higher producer prices, easing fertilizer costs and continuing government assistance measures, global rice production is forecast to recover by 1.3 percent in 2023/24 to 523.5 million tonnes (milled basis). With the exception of Latin America and the Caribbean and Oceania, all regions are predicted to harvest more than they did in 2022/23, although, amid heightened weather uncertainties, output in Asia could remain below previous records.

Following three years of successive expansion, tighter exportable availabilities and higher overall import costs are predicted to depress international trade in rice by 4.3 percent in 2023 to 53.6 million tonnes. All regions, other than Latin America and the Caribbean, are anticipated to reduce their levels of purchases from 2022, although efforts to contain inflationary pressure could keep imports, particularly by Asia, at relatively abundant levels. On the export side, India is forecast to register the largest absolute export reduction. A sizeable export contraction is also envisaged for Pakistan, with Argentina, Brazil, the Russian Federation and the United States of America expected to export less as well.

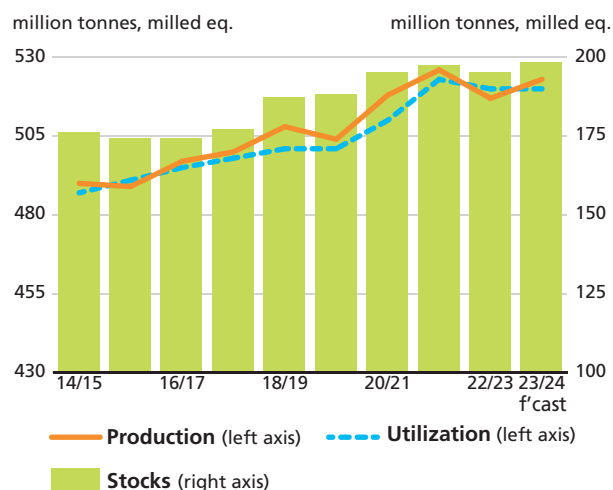
Continued reductions in the use of rice for animal feed could contrast with another expansion in food use in 2023/24, resulting in total rice utilization stabilizing around 520.1 million tonnes. As this level would fall short of anticipated production during the season, world rice stocks at the close of 2023/24 marketing seasons could rise 1.8 percent above their opening level to 198.3 million tonnes. Exporting countries are envisaged to drive this expansion, although importers could also end with more on reserve.

After rising during much of 2022, international rice prices have remained on an upward trajectory in 2023, underpinned by strong demand from Asian buyers and production disruptions registered in 2022/23 in some suppliers. This has been reflected by the FAO All Rice Price Index, which, at a value of 127.8 points in May 2023, stood at its highest level since October 2011.

Contact:

Shirley Mustafa

RICE PRODUCTION, UTILIZATION AND STOCKS



WORLD RICE MARKET AT A GLANCE

	2021/22	2022/23 f'cast	2023/24 f'cast	Change: 2023/24 over 2022/23
	<i>million tonnes, milled equivalent</i>			%
WORLD BALANCE				
Production	526.0	516.9	523.5	1.3
Trade¹	56.0	53.6	56.6	5.5
Total utilization	522.7	519.8	520.1	0.1
Food	419.1	422.3	424.8	0.6
Ending stocks²	197.0	194.8	198.3	1.8
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/yr)	53.0	53.0	52.8	-0.3
LIFDC (kg/yr)	51.5	51.1	51.1	0.1
World stocks-to-use ratio (%)	37.9	37.5	37.8	
Major exporters stocks-to-disappearance ratio ³ (%)	28.7	29.5	30.6	
FAO RICE PRICE INDEX (2014-2016=100)				
	2021	2022	2023 Jan-May	Change: Jan-May 2023 over Jan-May 2022 %
	106	109	125	19.7

¹ Calendar year exports (second year shown).

² May net equal the difference between supply (defined as production plus carryover stocks) and total utilization due to differences in individual country marketing years.

³ Major exporters include India, Pakistan, Thailand, the United States of America and Viet Nam.

OILCROPS

Global oilseed production is forecast to rebound in 2022/23, mainly driven by expected higher outputs of soybean and rapeseed, more than offsetting reduced production levels foreseen for sunflower seed and other oilseeds. Despite prospects of a significantly lower soybean crop in Argentina due to poor weather conditions, global soybean production is expected to recover owing to a bumper harvest in Brazil. World rapeseed production is estimated to reach a record high, linked to higher outputs across Australia, Canada and the European Union. By contrast, global sunflower seed production could decline, primarily due to a sharply lower crop in Ukraine amid the war.

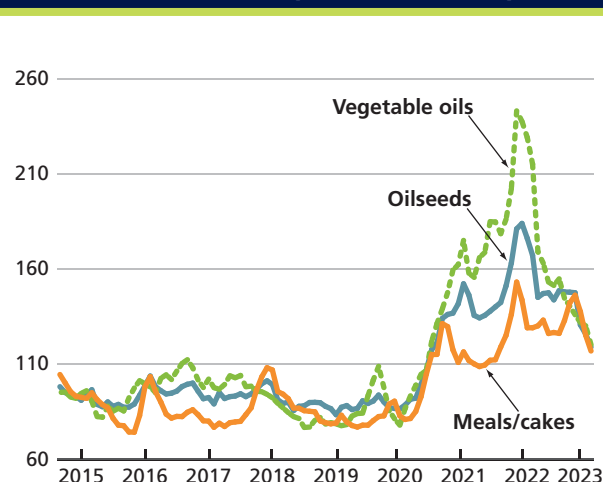
World meals/cakes outputs are forecast to increase, while consumption growth could remain subdued, reflecting protracted lacklustre demand from the livestock sector, primarily in China. With global oilmeal production forecast to exceed utilization, the carry-over stocks are set to recover from the previous season. Similarly, world oils/fats production is seen expanding, facilitated by a steady increase in global palm oil output. The global utilization of vegetable oils is expected to grow after stagnating in the past two consecutive seasons, broadly tied to the expectations of rising food consumption, mainly in Asia, and higher uptakes from the biodiesel industry for both discretionary and obligatory blendings. Global oils/fats carry-over inventories are expected to accumulate moderately, as global production is forecast to surpass consumption by a small margin. International trade is predicted to rebound for both oilmeals and vegetable oils due to revived import demand that coincides with improved global supplies.

As for the upcoming 2023/24 season, highly preliminary forecasts indicate a continued output increase across the oilcrops complex. As international prices for oilseeds linger above recent average levels, total planted areas will likely continue to expand, while yields could also increase, barring major weather issues. Assuming a continuation of modest growth in global utilization, anticipated world supplies should be sufficient to satisfy the projected demand for vegetable oils and oilmeals, and further restocking could thus be expected for these products.

Contact:

Di Yang

FAO MONTHLY INTERNATIONAL PRICE INDICES FOR OILSEEDS, VEGETABLE OILS AND MEALS/CAKES (2014-2016=100)



WORLD OILCROP AND PRODUCT MARKET AT A GLANCE

	2020/21	2021/22 <i>estim.</i>	2022/23 <i>f'cast</i>	Change: 2022/23 over 2021/22
	<i>million tonnes</i>			<i>%</i>
TOTAL OILCROPS				
Production	624.1	617.3	638.4	3.4
OILS AND FATS				
Production	243.2	246.7	253.4	2.7
Supply	278.3	278.9	285.9	2.5
Utilization	246.9	245.0	252.4	3.0
Trade	133.6	126.8	137.2	8.2
<i>Global stocks-to-use ratio (%)</i>	13.0	13.3	13.5	
<i>Major exporters stocks-to-disappearance ratio (%)</i>	9.7	10.2	9.8	
MEALS AND CAKES				
Production	161.4	158.5	163.9	3.4
Supply	191.9	187.3	189.3	1.1
Utilization	160.3	160.7	162.1	0.9
Trade	103.1	101.4	106.1	4.7
<i>Global stocks-to-use ratio (%)</i>	18.0	15.8	16.0	
<i>Major exporters stocks-to-disappearance ratio (%)</i>	10.0	9.2	8.3	
FAO PRICE INDICES (Jan-Dec) (2014-2016=100)				
	2021	2022	2023 <i>Jan-May</i>	Change: Jan-May 2023 over Jan-May 2022 <i>%</i>
Oilseeds	139	158	134	-21.7
Meals/cakes	116	133	133	-3.0
Vegetable oils	165	188	131	-40.6

Note: Kindly refer to footnote 1 on page 30 and to table 2 on page 33 for further explanations regarding definitions and coverage.

SUGAR

FAO's forecast for world sugar production in 2022/23 (October/September) is pegged at 177.5 million tonnes, up 1.9 million tonnes, or 1.1 percent, from the 2021/22 outturn. The foreseen increase is largely attributed to prospects of a significant recovery in production in Brazil, the world's largest sugar producer and exporter. However, this forecast is below FAO's preliminary expectations due to lower-than-earlier-anticipated outputs in China, the European Union, India, Mexico and Thailand.

Global sugar consumption is forecast to continue increasing for a third successive season in 2022/23, up 1.6 million tonnes, or 0.9 percent, from the previous season. Overall, the year-on-year growth is expected to mostly originate in Africa and Asia, driven by population and income growth. However, the increase in world sugar consumption forecast was limited by the projected deceleration in global economic growth in 2023 and high world sugar prices. The anticipated growth in world sugar intake, combined with the downward revision to the global production forecast, should reduce the world sugar production surplus to 1.4 million tonnes from the 4.9 million tonnes previously expected.

The forecast for the world sugar trade in 2022/23 stands at 60.7 million tonnes, which corresponds to a 1 percent drop from the estimated volume for 2021/22. The contraction is the result of an anticipated reduction in exportable supplies in the European Union, India and Mexico, more than offsetting foreseen larger shipments from Brazil. On the import side, slower global economic growth, coupled with high world sugar prices, is anticipated to curb global demand for sugar. In particular, in China, the largest international sugar buyer, imports are forecast to decline for the second consecutive season amid high world sugar prices and adequate domestic availabilities. By contrast, sugar imports by the European Union are set to increase sharply from last year on the back of high domestic prices and lower production.

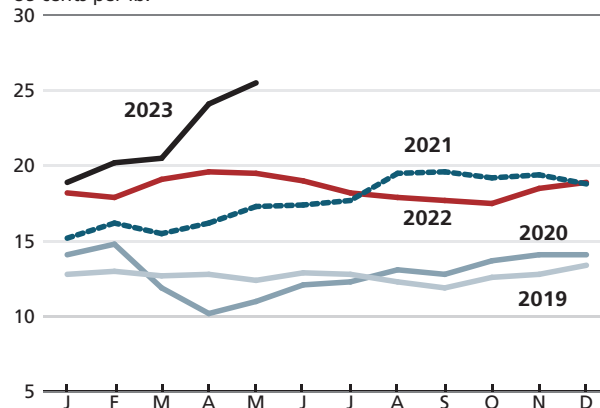
International sugar prices have overall increased since November 2022, and in May 2023 they were at their highest level since October 2011. The price increases were mainly the result of tightening global supplies. Further upward pressure on prices was exerted by the slow start of the 2023 harvest in Brazil, caused by heavy rains. In addition, the Brazilian real has generally appreciated against the United States a dollar since December 2022, affecting exports and contributing to higher world sugar prices.

Contact:

Elmamoun Amrouk
Fabio Palmeri

INTERNATIONAL SUGAR PRICES*

US cents per lb.



* as measured by the International Sugar Agreement (ISA)

WORLD SUGAR MARKET AT A GLANCE

	2020/21	2021/22 estim.	2022/23 f'cast	Change: 2022/23 over 2021/22
	million tonnes			%
WORLD BALANCE				
Production	169.1	175.6	177.5	1.11
Trade*	60.8	61.3	60.7	-1.00
Total utilization	170.0	174.5	176.1	0.93
Ending stocks	111.8	112.6	113.8	1.03
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/yr)	21.7	22.1	22.1	0.09
LIFDC (kg/yr)	12.8	13.0	12.9	-0.61
World stocks-to-use ratio (%)	65.7	64.5	64.6	0.10
ISA DAILY PRICE AVERAGE (US cents/lb)				
	2021	2022	2023 Jan-May	Change: Jan-May 2023 over Jan-May 2022 %
	17.67	18.49	21.83	15.87

* Trade figures refer to exports

MEAT AND MEAT PRODUCTS

World total meat production in 2023 is forecast to increase marginally to 364 million tonnes (carcass weight equivalent), principally driven by an anticipated increase in global poultry meat production, which is forecast to expand the most by volume, facilitated by increased demand from the food services sector and its general appeal as a relatively affordable meat type, despite widespread outbreaks of the highly pathogenic avian influenza virus and elevated feed prices. Global ovine meat production is also expected to increase in Asia and Oceania. By contrast, global pig meat production is expected to drop slightly, principally underpinned by a steep drop in output in Europe due to the continued impact of the African swine fever virus, weaker producer margins and somewhat lower domestic demand. Global bovine meat production is also forecast to fall marginally on lower cattle inventories, high feed costs, forage shortages and lower carcass weight in several leading producing regions, despite some increases elsewhere.

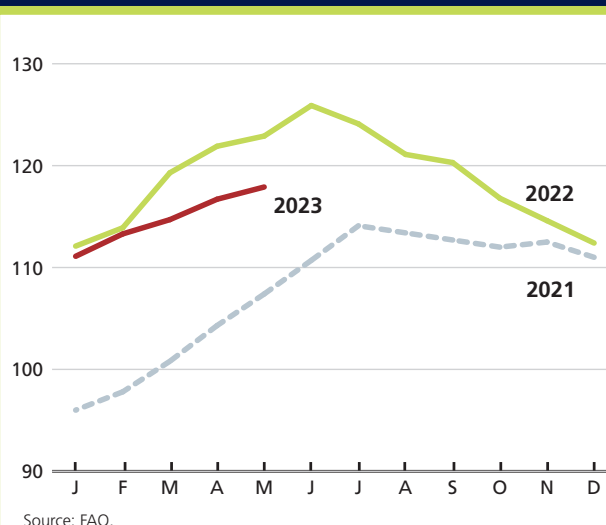
World trade in meat and meat products is forecast to reach 42 million tonnes (carcass weight equivalent) in 2023, only slightly above the 2022 level. This slight growth is underpinned by expectations of import expansions together with increased food services sales, particularly in China, following the end of the country's restrictions related to the COVID-19 pandemic. However, rising availabilities from domestic sources and lower consumer purchasing power amid high food prices and economic downturns could lead to import declines in most meat importing countries, partially offsetting the foreseen increases. Much of the expected increased demand is likely to be supplied by Brazil and Australia, facilitated by the high availability of exportable supplies, disease-free status and competitive prices.

Since reaching an all-time high in June 2022, international meat prices have trended downward in the second half of last year, reflecting increased exportable availabilities in some leading exporting countries amid lower import demand for spot supplies. However, the FAO Meat Price Index rebounded from February 2023, mainly driven by pig and bovine meat prices amid supply limitations and, more recently, rising poultry meat prices due to high demand.

Contact:

Upali Galketi Aratchilage
Emanuele Marocco

FAO INTERNATIONAL MEAT PRICE INDEX (2014-2016 = 100)



WORLD MEAT MARKET AT A GLANCE

	2021	2022 estim.	2023 f'cast	Change: 2023 over 2022
	<i>million tonnes (carcass weight equivalent)</i>			%
WORLD BALANCE				
Production	356.9	362.6	363.9	0.4
Bovine meat	74.9	76.3	76.1	-0.2
Poultry meat	138.2	140.8	142.7	1.3
Pigmeat	120.9	122.3	121.7	-0.5
Ovine meat	16.4	16.7	16.8	1.0
Trade	42.0	41.8	42.1	0.6
Bovine meat	12.1	12.6	12.8	1.2
Poultry meat	15.8	16.3	16.4	1.0
Pigmeat	12.7	11.5	11.4	-1.0
Ovine meat	1.1	1.1	1.1	5.2
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	45.0	45.2	45.0	-0.4
Trade - share of prod. (%)	11.8	11.5	11.6	0.2
FAO MEAT PRICE INDEX (2014-2016=100)	2021	2022	2023 Jan-May	Change: Jan-May 2023 over Jan-May 2022 %
	108	119	115	-2.8

MILK AND MILK PRODUCTS

World milk production in 2023 is forecast to reach 944 million tonnes, an increase of 0.9 percent from 2022. If confirmed, this would constitute a second consecutive year of slow growth, as foreseen significant year-on-year volume reductions in milk output in South America, Africa, Europe and Oceania are likely to counter the limited expansions expected in Asia, North America and Central America and the Caribbean. Rising milk yields and cattle numbers in India and Pakistan, together with high output in large-scale dairy farms in China, are likely to drive Asia's milk output expansion. Similarly, increasing yields and dairy cow numbers could lift milk output in North America, despite lower milk producer margins and a potential increase in cattle slaughter amid attractive premiums for slaughter-ready cows. Mexico will likely drive the milk output expansion in Central America and the Caribbean, where improved management systems and technology continue to drive production growth. Much of the output decline anticipated in 2023 is attributable to lower producer margins, the potential impact of extreme weather events and other challenging production conditions, especially labour shortages.

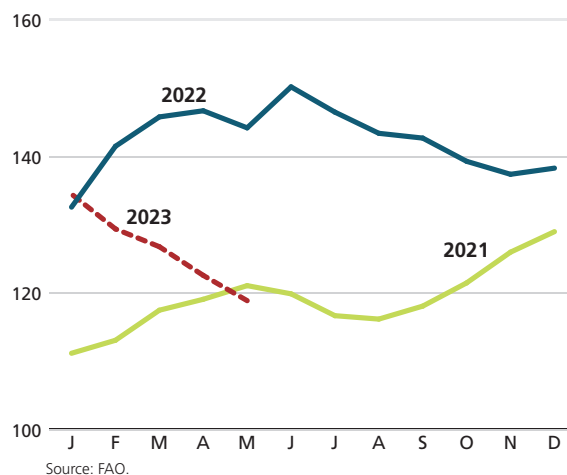
World total trade in dairy products is forecast at 85 million tonnes (in milk equivalents) in 2023, nearly stagnant at the last year's level, as higher import demand in Central America, North Africa, the Middle East and South East Asia is likely to be counterbalanced by likely import downturns in China, the European Union and Malaysia, among others. Rising supplies from national sources and high stocks, especially of whole milk powder, underpin much of the anticipated import contraction in China. In many developing countries, challenging economic conditions, currency depreciations and the limited availability of foreign exchange could constrain import purchases. These contractions are expected to be partially offset by likely higher imports by several countries, especially Algeria, Mexico, Australia and Indonesia, driven by growing demand from the food processing industry, which exceeds national supplies.

The FAO Dairy Price Index averaged 118.7 in May, down 21 percent from June 2022, when it reached its highest value in eight years. The decline principally reflects lacklustre global import demand, especially for spot supplies, notwithstanding generally tight supplies from leading global exporters.

Contact:

Upali Galketi Aratchilage
Harout Dekermendjian

FAO INTERNATIONAL DAIRY PRICE INDEX (2014-2016 = 100)



WORLD DAIRY MARKET AT A GLANCE

	2021	2022 <i>estim.</i>	2023 <i>f'cast</i>	Change: 2023 over 2022
	<i>million tonnes (milk equivalent)</i>			%
WORLD BALANCE				
Total milk production	931.1	935.9	944.0	0.9
Total trade	88.6	84.6	85.0	0.5
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	117.7	117.4	117.4	0.0
Trade - share of prod. (%)	9.5	9.0	9.0	-0.4
FAO MEAT PRICE INDEX (2014-2016=100)	2021	2022	2023 <i>Jan-May</i>	Change: Jan-May 2023 over Jan-May 2022 %
	119	142	126	-11.1

FISH AND FISHERY PRODUCTS

The global fisheries and aquaculture sector is expected to face a muted demand outlook across most major commodity groups in 2023. Consumer spending power in major markets has been eroded considerably in the past year as a result of inflation, while economic uncertainties have weakened growth. Global production of aquatic animals increased by an estimated 1.2 percent in 2022 and is expected to grow by an additional 0.6 percent in 2023 as lower catches are offset by increased aquaculture production.

Of the major wild-caught species, reduced tuna catches have caused raw material prices to rise. Prices for cephalopods, which had been low, have recently surged, with supplies of octopus and squid expected to tighten in 2023. Reduced groundfish quotas have pushed prices up this year. Landings of small pelagic species for human consumption are expected to decrease, with reduced quotas for mackerel and herring.

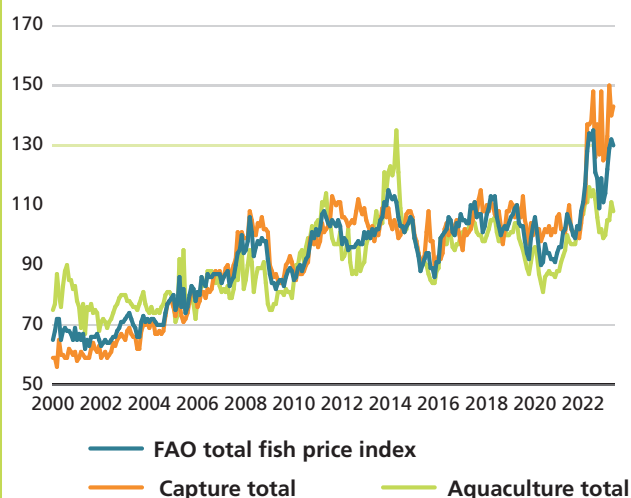
There is a growing expectation among meteorologists that an El Niño climatic phenomenon will start in August. Such an event could directly impact a number of key stocks, mainly in South America, including the Peruvian anchoveta, the main source of fishmeal and fish oil. Catches of anchoveta were poor in 2022 and, with the majority of the 2023 anchoveta quota yet to be set, there is considerable uncertainty in the market. Fish oil, in particular, is in very tight supply, with prices now more than double the levels seen in June 2022. Any further reduction in the supply of fishmeal and fish oil would lead to an extremely tight market, placing additional pressure on aquaculture input prices.

In the second half of 2023, a strong positive outlook is predicted for the main aquaculture species. As of this writing, shrimp prices are low, due to increased farmed shrimp production led by enormous growth in Ecuadorian production over the past couple of years. Pangasius is growing ever more popular as one of the most affordable fish on the market, with harvests increasing greatly in 2022. In the farmed Atlantic salmon sector, prices are surging again due to robust demand and limits on the rate of global supply expansion.

Contact:

William Griffin
Audun Lem
Stefania Vannuccini

FAO FISH PRICE INDEX (2014-2016 = 100)



WORLD FISH MARKET AT A GLANCE

	2021	2022 <i>estim.</i>	2023 <i>f'cast</i>	Change: 2023 over 2022
	<i>million tonnes (live weight)</i>			<i>%</i>
WORLD BALANCE				
Production	182.1	184.4	185.5	0.6
Capture fisheries	91.2	91.0	89.5	-1.6
Aquaculture	90.9	93.4	96.0	2.8
Trade value (exports USD billion)	176.6	190.2	192.4	1.2
Trade volume (live weight)	66.8	68.0	68.2	0.3
Total utilization	182.1	184.4	185.5	0.6
Food	161.2	164.2	166.1	1.2
Feed	16.9	16.1	15.3	-5.0
Other uses	4.0	4.0	4.0	0.0
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
Food fish (kg/yr)	20.4	20.6	20.6	0.3
From capture fisheries (kg/year)	9.4	9.4	9.2	-1.8
From aquaculture (kg/year)	11.5	11.7	11.9	1.9
FAO FISH PRICE INDEX (2014-2016=100)	2021	2022	2023 <i>Jan-May</i>	Change: Jan-May 2023 over Jan-May 2022 <i>%</i>
	101.7	120.8	128.1	4.5

Source of the raw data for the FAO Fish Price Index: EUMOFA, INFOFISH, INFOPECSA, INFOYU, Statistics Norway

* Jan-Apr2022 over Jan-Apr 2021, in percent

MARKET ASSESSMENTS

WHEAT



PRICES

International prices down from near-record highs last year

International wheat prices have been generally coming down since surging to a near-record level in May 2022, following the disruptions to Ukraine's exports created by the war. The implementation of the Black Sea Grain Initiative in July 2022, which allows Ukraine to export grain from its Black Sea ports, helped to reduce uncertainty and improve supply prospects in global markets. Since the start of 2023, ample supplies and strong competition among

exporters, including especially robust sales by the Russian Federation and Australia, have underpinned the continued downward trend in world wheat prices, which in May 2023 were 35 percent below their values in May 2022. Although wheat prices remain elevated – at 4 percent above their five-year average value in May 2023 – the ample global supply forecast in 2023/24 portends a continued softer tone in markets.

Similarly, wheat futures at the Chicago Board of Trade (CBOT) for nearby delivery have been falling since mid-2022, reaching their lowest level in May 2023 since December 2020, reflecting the overall softer tone in the

Figure 1. IGC Wheat Price Index

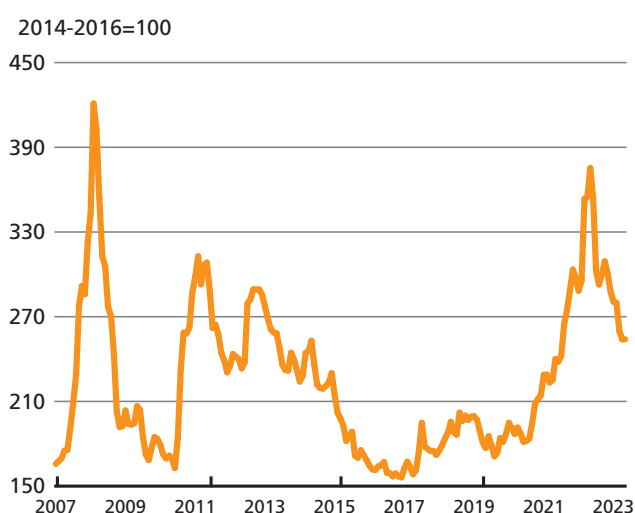
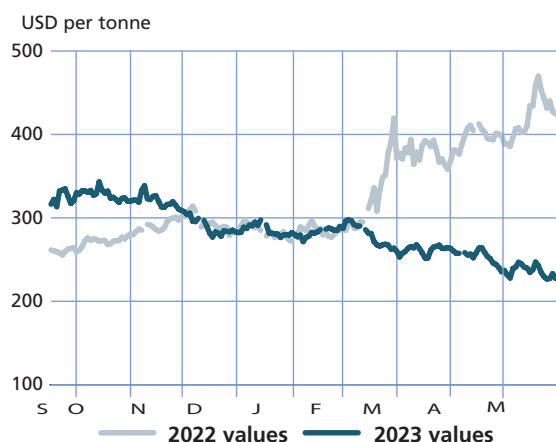


Figure 2. CBOT wheat futures for September



market due to ample supplies, fewer trade disruptions and strong competition among exporters. The September CBOT soft red winter futures has also been on a general downward trend, averaging United States dollar 234 per tonne in May, down 16 percent from the start of this year and 45 percent lower than in May 2022. More detailed analysis of the futures markets can be found in the Market Indicators section of this report.

PRODUCTION

Production to decline in 2023 from the 2022 record level

At 777 million tonnes, FAO forecasts a 3.0 percent year-on-year decline in global wheat production in 2023 from the all-time high in 2022, but still marking the third largest output on record.

In *North America*, similar to the previous year, a sizeable proportion of the winter wheat area in the **United States** has suffered from persistent drought. Despite an upturn in wheat sowings, reinforced by robust crop prices, extensive dryness has reduced yield expectations, and total production is forecast at 45.2 million tonnes, on par with the 2022 reduced output. In **Canada**, there are some concerns that dryness will develop in the western areas where the bulk of the wheat crop is grown. Official production forecasts currently place the 2023 wheat output 12 percent higher than the past five-year average at 34.3 million tonnes, largely resting on an expected 7-percent expansion in spring sowings on account of remunerative crop prices.

In *Europe*, weather conditions across most of the **European Union** have been generally beneficial for winter wheat crops, except in **Spain** and **Portugal**, where long-term rainfall deficits and high temperatures have curbed yield prospects. Reflecting the beneficial weather conditions across the bulk of the European Union, the bloc's total wheat production in 2023 is forecast to increase by 4 percent to 138.8 million tonnes. In the **Russian Federation**, total wheat production is expected to decline to about 83 million tonnes in 2023, following the 2022 all-time high, reflecting a contraction in wheat planted area due to excessive wet conditions in late 2022 and softer crop prices. In **Ukraine**, the effects of the war have caused a significant reduction in wheat plantings, and, despite the positive impact of conducive weather, production in 2023 is foreseen to be well below the five-year average. In the **United Kingdom of Great Britain and Northern Ireland (United Kingdom)**, following the high level of 2022, wheat production is anticipated to fall moderately to 14.4 million tonnes in 2023, as an expected drop in yields is seen to offset an expansion in plantings.

Table 1. World wheat market at a glance

	2021/22	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>	Change: 2023/24 over 2022/23
	<i>million tonnes</i>			<i>%</i>
WORLD BALANCE				
Production	777.7	800.9	776.7	-3.0
Trade¹	195.9	199.6	193.7	-3.0
Total utilization	774.6	779.7	780.3	0.1
Food	524.0	530.7	535.0	0.8
Feed	147.7	151.2	153.0	1.2
Other uses	89.9	92.7	91.7	-1.1
Ending stocks²	295.1	310.7	308.5	-0.7
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/yr)	67.1	67.1	67.0	-0.1
LIFDC (kg/yr)	39.2	38.8	38.7	-0.3
World stocks-to-use ratio (%)	37.8	39.8	38.9	
Major exporters stocks-to-disappearance ratio ³ (%)	16.0	19.1	17.7	
FAO WHEAT PRICE INDEX⁴ (2014-2016=100)	2021	2022	2023 <i>Jan-May</i>	Change: Jan-May 2023 over Jan-May 2022 %
	132	165	138	-32%

¹ Trade refers to exports based on a common July/June marketing season.

² May not equal the difference between supply (defined as production plus carryover stocks) and total utilization due to differences in individual country marketing years.

³ Major exporters include Argentina, Australia, Canada, the European Union, Kazakhstan, the Russian Federation, Ukraine and the United States of America.

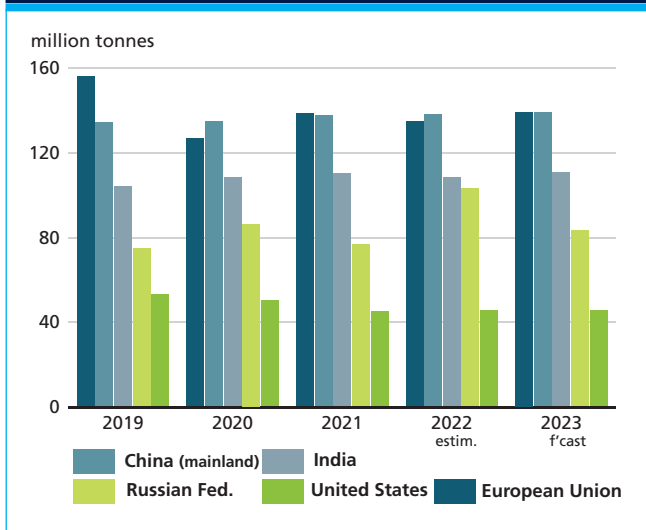
⁴ Derived from the International Grains Council (IGC) wheat index.

Table 2. Wheat production: leading producers*

	2021	2022 <i>estim.</i>	2023 <i>f'cast</i>	Change: 2023 over 2022
	<i>million tonnes</i>			<i>%</i>
China (Mainland)	136.9	137.7	138.5	0.6
European Union	138.1	134.1	138.8	3.5
India	109.6	107.7	110.0	2.1
Russian Federation	76.1	102.7	82.8	-19.3
United States of America	44.8	44.9	45.2	0.6
Australia	36.2	39.2	28.2	-28.1
Canada	22.4	33.8	34.3	1.5
Pakistan	27.5	26.4	26.8	1.6
Ukraine	32.2	20.2	17.0	-15.8
Türkiye	17.7	19.8	18.8	-5.1
United Kingdom of Great Britain and Northern Ireland	14.0	15.5	14.4	-7.6
Kazakhstan	11.8	16.4	14.1	-14.0
Iran (Islamic Rep Of)	10.1	13.0	13.0	0.0
Others	100.4	89.4	94.9	6.1
World	777.7	800.9	776.7	-3.0

* Countries listed according to their position in global production (average 2020-2022).

Figure 3. Wheat production in major wheat producers



In *Asia*, wheat prospects in **India** have been buoyed by record high plantings, although untimely rains and heatwaves have limited the production of grains and raised concerns about the quality of the crop. Production is pegged at 110 million tonnes in 2023, about 7 million tonnes above the five-year average. In **Pakistan**, despite earlier concerns around constrained access to inputs and land due to floods in 2022, the planted area remained close to the near-average level in 2022. Weather conditions have also been mostly favourable, lifting yield prospects. Consequently, wheat production in 2023 is pegged at an above-average level of 26.8 million tonnes. In **China (mainland)**, despite elevated inputs costs, prospects of favourable financial returns for wheat have helped to maintain in 2023 a similar area to the previous year. In combination with beneficial soil moisture conditions throughout the winter season, production is forecast to climb marginally to 138.5 million tonnes. In *Near East Asia*, abundant rains since March in **Türkiye**, the leading producer in the subregion, have alleviated earlier soil moisture deficits and lifted 2023 yields prospects from earlier expectations. Production is pegged at 18.8 million tonnes, moderately lower than the last five-year average.

In *North Africa*, apart from **Egypt**, which produces wheat under irrigation, production prospects have been severely hindered by extensive and widespread rainfall deficits. Consequently, below-average harvests are expected for a second consecutive year in 2023. The least-affected country is **Morocco**, where an increase in wheat sowings is expected to support an upturn in wheat production to 3.7 million tonnes; however, the effects of dryness will likely keep production 35 percent below the average. In **Algeria**

and **Tunisia**, substantial soil moisture deficits have severely impeded yield potential and wheat outputs are pegged well below the five-year averages.

The planting of the 2023 wheat crop is underway in the Southern Hemisphere. In **Australia**, following two years of bumper wheat harvests, wheat production could fall by about 10 million tonnes in 2023 due to anticipated shortfalls in precipitation associated with an El Niño event in the latter half of 2023 and a likely cutback in the sown area. In South America, wheat production is expected to rebound strongly in **Argentina** following the drought-stricken harvest of 2022. This is based on a return to more conducive rains and larger plantings underpinned by favourable producer prices.

TRADE

Trade likely to fall in 2023/24 from the 2022/23 record

World trade in wheat in 2023/24 (July/June) is forecast to fall by 3.0 percent from the 2022/23 record level, down to 194 million tonnes. Most of the foreseen decline reflects anticipated smaller imports by **China (mainland)** and the **European Union** compared to their record purchases in 2022/23.

In *Asia*, aggregate wheat imports are set to decline for a second consecutive season in 2023/24, to 101 million tonnes, down 5.7 percent from 2022/23. Making up the bulk of the decline, a 4.5 million-tonne drop in wheat imports by **China (mainland)** is anticipated due to a slight rise in domestic production and lower use of wheat for animal feed. Ample domestic supplies due to relatively high carry-in stocks are also expected to reduce purchases by the **Islamic Republic of Iran** and **Türkiye**.

In *Europe*, wheat imports in 2023/2024 are forecast to fall by nearly 27 percent from their 2022/23 level, attributed to a sharp fall in imports by the **European Union**. Following high imports in 2022/23, which reflected large flows from Ukraine through the Solidarity Lanes, wheat imports by the European Union are expected to fall by as much as 40 percent in 2023/24 to 6.3 million tonnes, with production anticipated to increase in the European Union and to decrease in Ukraine as a consequence of the war.

In *Latin America and the Caribbean*, 2023/24 wheat imports are forecast at almost 23 million tonnes, remaining nearly stable compared to the 2022/23 levels. **Brazil** is set to remain the region's largest wheat importer, with purchases predicted to increase slightly to 5.8 million tonnes, due to a fall in production. Wheat imports by other main importers in the region, including **Ecuador, Chile, Mexico and Peru** are forecast to remain

near their respective levels of last season.

In *Africa*, the continent's total wheat imports are forecast to rise by 5.4 percent to 54.8 million tonnes. The largest increase is expected in **Egypt** to meet domestic demand and maintain stock levels. Following reduced imports by Egypt in 2022/23 when currency depreciation and high debt levels made importing wheat at high international price levels difficult, expectations of lower international prices could support a rebound in Egypt's wheat imports in 2023/24 to 12 million tonnes, re-establishing the country as the top wheat importer in the world. Similarly, imports by **Nigeria** could rebound after last season's decline. **Algeria** is also expected to import more to compensate for a forecasted fall in production, while slightly higher imports are anticipated for **Ethiopia** and the **Sudan** to meet domestic demand.

Turning to export prospects for 2023/24, trends are mixed among the major exporters. After two record export seasons, shipments from **Australia** are expected to fall by 28 percent in 2023/24 on account of tighter supplies because of projected production declines. Shipments from **Ukraine** are forecast to fall for a second consecutive season in 2023/24 by 32 percent, as a result of the continued impact of the war. Although the Black Sea Grain Initiative was implemented in July 2022, allowing Ukraine to ship wheat from its Black Sea ports, there have been several logistical challenges that have hindered the pace of shipments. In addition to inspection delays, uncertainty about the initiative's extension when it is up for renewal has affected the pace of shipments. Ukraine's wheat production is also foreseen down year-on-year, reducing its exportable surplus. Tight domestic supplies and uncompetitive prices are behind an expected 5-percent fall in exports from the **United States**, reaching their lowest level since 1971/72. Although they could drop slightly from last season, exports by the **Russian Federation** are forecast to remain robust, reaching 45 million tonnes and maintaining the country's position as the world leading exporter of wheat.

By contrast, **Argentina** is forecast to more than double its sales from the decline in 2022/23, supported by an anticipated rebound in production. The **European Union** is also seen increasing its sales in 2023/24 by 9 percent, reflecting competitive prices, ample supplies and less competition from Ukraine to meet the strong demand from Africa, where the **European Union** also has the advantage of geographic proximity. Exports by Canada are also predicted to rise slightly, supported by an ample exportable surplus. After rising to a record level in 2022/23, exports by **Kazakhstan** will likely remain stable in 2023/24.

UTILIZATION

Consumption to remain nearly stable in 2023/24

Global total wheat utilization in 2023/24 is forecast at 780 million tonnes, only fractionally (0.1 percent) above the estimated level for 2022/23 and slightly (0.7 percent) below the ten-year trend. World food consumption is forecast to expand by 0.7 percent, to nearly 539 million tonnes, maintaining its 69 percent share of the total use of wheat. At this level, the average world per capita wheat consumption would remain nearly steady at around 67.0 kg per annum.

By contrast, global feed use of wheat is forecast to decline by 1.3 percent, to 151 million tonnes in 2023/24. The biggest declines are expected in **China (mainland)** and **India**, where higher prices of wheat relative to other feed grains should reduce the use of wheat for feeding animals in both countries. In the **European Union**, the largest market for feed wheat, the use of wheat for feed is forecast to remain near the 2022/23 level, supported by ample domestic supplies and a stagnant demand.

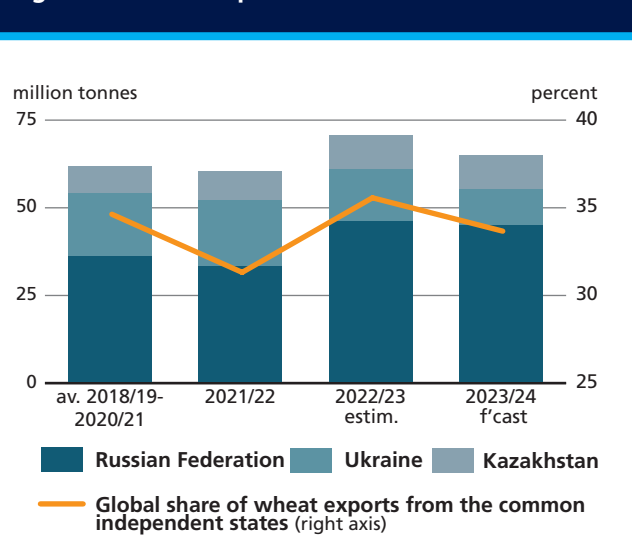
Other uses of wheat, which include the industrial sector, seed and postharvest losses, are also forecast to decline to 90 million tonnes in 2023/24, down 1.4 percent from 2022/23. Making up the bulk of this decline is an anticipated fall in the industrial use of wheat in **India**, due to elevated domestic prices.

STOCKS

Wheat inventories to fall slightly in 2023/24

World wheat stocks are forecast to contract by 0.7 percent from their record-high opening levels, down

Figure 4. Wheat exports from the Black Sea



The bulk of the year-on-year anticipated reduction in global wheat inventories is concentrated in the **Russian Federation**, where stocks are forecast to drop by 24 percent because of expectations of a fall in production and a second consecutive season of record high exports. Stock drawdowns are also anticipated in the **United States**, reaching the lowest level in 16 years, following back-to-back below-average harvests, and in **Kazakhstan**, due to a forecast fall in production.

Offsetting some of those drawdowns, wheat inventories are set to rise above their opening levels in both **China (mainland)** and **India** with the expected production increases. In India, the official planned procurement target of 34.15 million tonnes for the 2023/24 marketing year also indicates an anticipated increase in official stocks from the multiyear low reached last season

At current forecast levels, the world wheat stocks-to-use ratio in 2023/24 would stand at 38.9 percent, down from the record high of 39.8 percent reached in 2022/23 but still the third highest level on record since 1982/83. The ratio of the major wheat exporters' closing stocks to total disappearance (defined as domestic utilization plus exports), which is considered a better measure of global availabilities, is expected to fall from 19.1 percent in 2022/23 to 17.7 percent in 2023/24. With the exception of **Argentina** and **Canada**, where carryovers are set to increase slightly, stocks held by all other major exporters are seen heading for declines in 2023/24, especially in the **Russian Federation**.

Figure 5. Wheat exports: top 10 wheat exporters

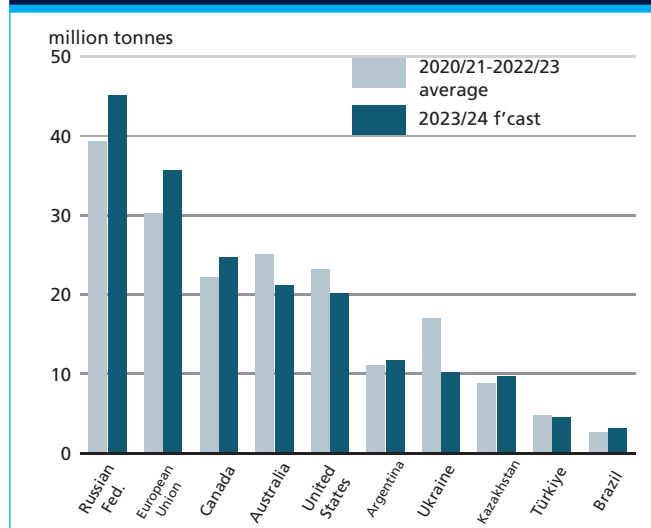


Figure 6. Wheat imports: top 10 wheat importers

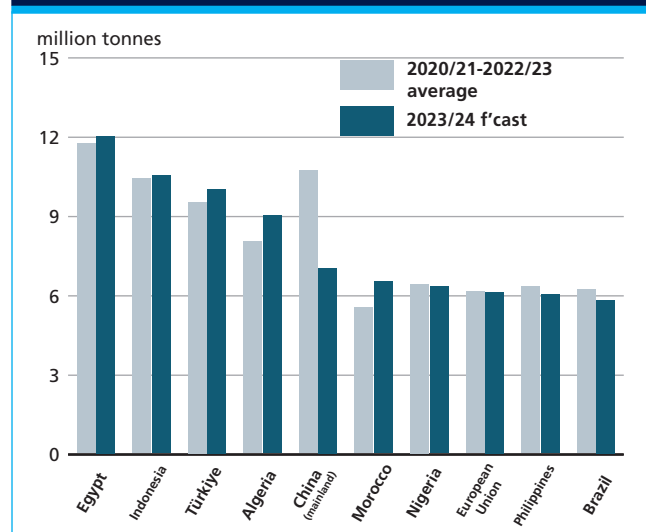


Figure 7. Global wheat utilization

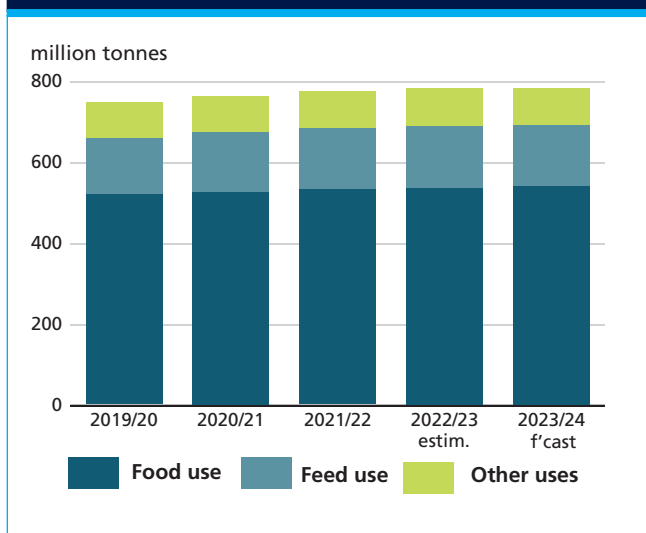


Figure 8. Wheat stocks of major exporters

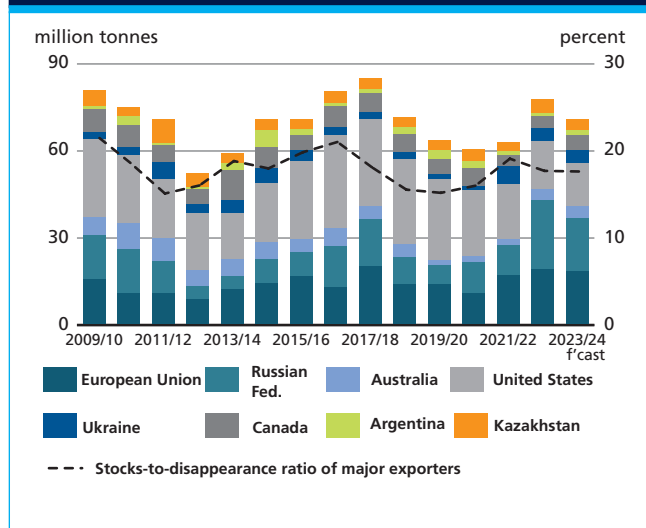


Figure 9. Wheat stocks of top importers

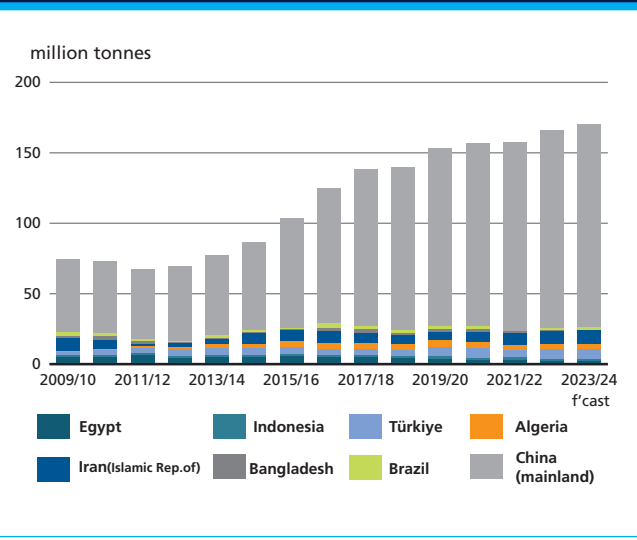
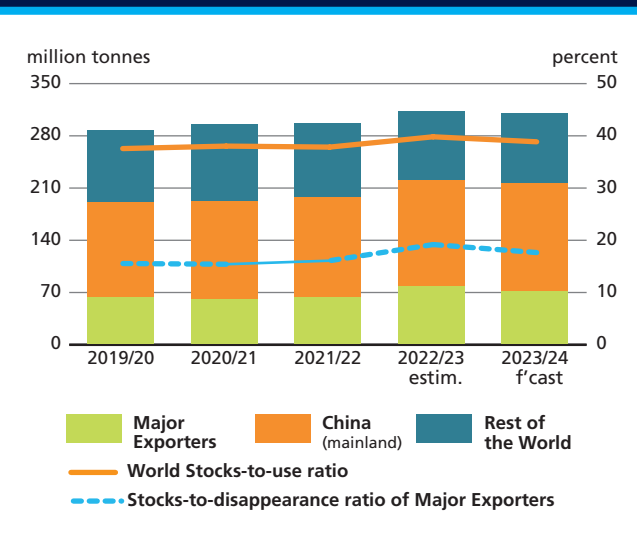


Figure 10. Wheat stocks and ratios



COARSE GRAINS*



* Coarse grains include maize, barley, sorghum, millet, rye, oats and NES (not elsewhere specified)

PRICES

Prices down from record level reached in 2022

After reaching a record high in 2022, following the disruptions created by the war in Ukraine, international prices of coarse grains have dropped to their pre-war 2021 levels. Prices fell quickly with the reopening of Ukraine's Black Sea ports under the Black Sea Grain Initiative (BSGI) in July 2022, before remaining generally stable for the

remainder of 2022, except for short-lived periodic increases mostly caused by uncertainty around the extension of the BSGI. In 2023, international coarse grain prices eased again, falling by 9 percent between January and May 2023, mostly reflecting higher seasonal availabilities with the start of maize harvests in South America, an expected record maize harvest in Brazil and an anticipated larger output in the United States of America (United States), pointing to a likely recovery in global supplies in 2023/24. By May 2023,

Figure 1. Maize export price (US No. 2 yellow, Gulf)

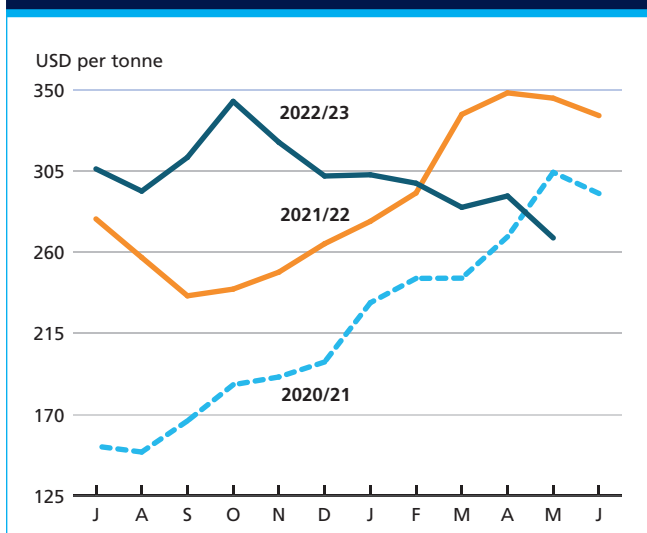
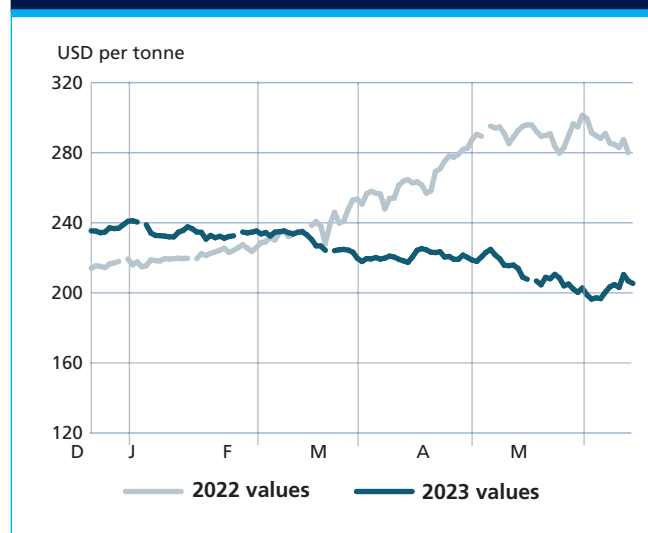


Figure 2. CBOT maize December futures



international coarse grain prices were 28 percent below their May 2022 levels.

Prospects for improved export availabilities in the 2023/24 season, underpinned largely by expected larger maize harvests in Brazil and the United States, have also weighed on futures prices recently. The Chicago Board of Trade (CBOT) maize futures for delivery in December 2023, which is the benchmark delivery month for the new US crop, averaged USD 206 per tonne in May, down 12 percent from January 2023. However, high volatility in maize futures indicates that the overall softer outlook is coupled with heightened vulnerability in the market. More detailed analysis of the futures markets can be found in the Market Indicators section of this report.

PRODUCTION

Production forecast to rise to record high

At 1 513 million tonnes, FAO's first forecast for global coarse grains production in 2023 suggests a 3 percent year-on-year increase, with the bulk of the growth linked to an anticipated upturn in maize production.

Global maize output is forecast at 1 212 million tonnes in 2023, 4.2 percent above the previous year's level and on par with the record outturn in 2021. In *Northern America*, where a large proportion of the global increase is concentrated, the **United States** is expected to harvest a record maize crop in 2023, pegged at 387.8 million tonnes, 11.2 percent up year-on-year. The growth primarily rests on an expected significant expansion in sowings, underpinned by good profit prospects, amid easing input prices and a positive yield outlook. In **Canada**, largely driven by a pullback in plantings, maize production in 2023 is forecast to decline to a near-average level of 13.9 million tonnes.

In *Europe*, the impact of the war in **Ukraine**, including significant financial constraints across the sector and severe logistical disruptions, points to a further sizeable cut to the maize area in 2023. With yields also likely to decrease, reflecting limited input use, production is forecast well below the past five-year average. In the **Russian Federation**, a small upturn in plantings is foreseen, which should foster an increase in maize production in 2023 to a level slightly above the five-year average. In the **European Union**, the forecast for maize production in 2023 is pegged at 64.6 million tonnes, a steep 24 percent increase over the reduced output gathered last year, but still a below-average level. The foreseen rebound reflects a likely increase in yields, bolstered by recent abundant rains, although the heavy downpours have also delayed sowings and could contain the area planted.

In *South America*, maize production in **Brazil** is forecast to break recent records to reach an all-time high of 126 million tonnes in 2023. This expectation largely rests on an increase in maize plantings on account of strong price incentives stimulated by robust domestic and international demand. Yields are also expected to be above average, despite earlier concerns over hot and dry weather during the minor first season. By contrast, maize production in **Argentina** is anticipated to drop sharply to 41 million tonnes in 2023, significantly short of the five-year average, owing to harsh dry weather conditions.

In *Africa*, sowing of the 2023 maize crop has started in East and West Africa, while crops are being harvested in Southern Africa. In **South Africa**, the continent's leading producer, the maize harvest is pegged at 16.5 million tonnes, the third highest level on record and marginally above last year's output. This expectation is based on good yield prospects, which are expected to offset the effects of a cutback in plantings amid ample domestic supplies and high input costs in 2022. In neighbouring Southern African countries, adverse weather, including cyclones and rainfall deficits, have capped production outlooks; however, several countries are still likely to register harvest upturns in 2023, following the drought-stricken outputs in 2022.

In *Asia*, maize production in **China (mainland)** in 2023 is forecast at an above-average level of 281 million tonnes, up moderately on a yearly basis. Moderate production increases are predicted in most other key producing countries in Asia.

The world production of sorghum is pegged at 60.2 million tonnes in 2023, a 6.3 percent year-on-year increase. This outlook almost entirely reflects a forecast

Figure 3. Major maize producers

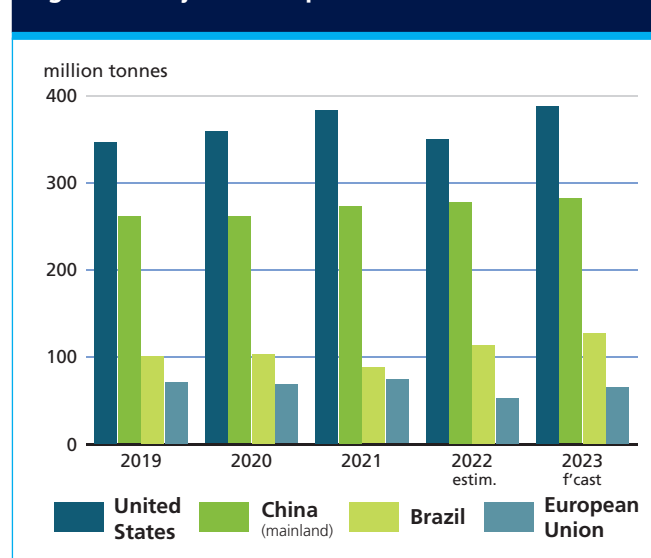


Table 1. World coarse grain market at a glance

	2021/22	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>	Change: 2023/24 over 2022/23
	<i>million tonnes</i>			<i>%</i>
WORLD BALANCE				
Production	1 509.7	1 468.8	1 513.0	3.0
Trade¹	230.9	218.4	221.4	1.4
Total utilization	1 504.4	1 478.2	1 503.3	1.7
Food	224.4	227.8	229.5	0.8
Feed	878.2	855.3	875.2	2.3
Other uses	401.7	395.1	398.6	0.9
Ending stocks²	364.8	352.6	366.2	3.9
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/yr)	28.4	28.6	28.5	-0.3
LIFDC ³ (kg/yr)	60.9	61.5	61.0	-0.8
World stocks-to-use ratio (%)	24.7	23.5	23.6	
Major exporters stocks-to-disappearance ratio ⁴ (%)	13.0	13.0	14.4	
FAO COARSE GRAIN PRICE INDEX (2014-2016=100)	2021	2022	2023 <i>Jan-May</i>	Change: Jan-May 2023 over Jan-May 2022 %
	145	169	154	-0.2

¹ Trade refers to exports based on a common July/June marketing season.

² May not equal the difference between supply (defined as production plus carryover stocks) and total utilization due to differences in individual country marketing years.

³ Low-income Food-Deficit countries.

⁴ Major exporters include Argentina, Australia, Brazil, Canada, the European Union, the Russian Federation, Ukraine and the United States of America.

Table 2. Coarse grain production: leading producers*

	2021	2022 <i>estim.</i>	2023 <i>f'cast</i>	Change: 2023 over 2022
	<i>million tonnes</i>			<i>%</i>
United States of America	398.1	358.8	402.4	12.1
China (Mainland)	283.5	287.5	291.5	1.4
European Union	157.2	133.9	148.4	10.8
Brazil	90.8	117.8	132.0	12.1
Argentina	70.0	67.2	49.4	-26.4
India	51.3	51.9	51.5	-0.9
Russian Federation	40.4	43.1	41.6	-3.5
Ukraine	53.4	34.4	28.7	-16.5
Mexico	33.0	32.2	32.9	2.0
Canada	25.2	30.6	28.1	-8.2
Indonesia	22.7	23.0	23.2	0.9
Ethiopia	22.8	22.1	22.1	0.0
Nigeria	21.5	21.6	21.4	-0.9
Australia	18.3	18.7	14.5	-22.5
South Africa	17.6	16.6	17.1	3.0
Türkiye	13.2	17.7	14.8	-16.2
Pakistan	11.2	10.4	10.5	0.8
Other countries	179.6	181.3	182.9	0.9
World	1.509.7	1.468.8	1.513.0	3.0

* Countries listed according to their position in global production (average 2020-2022).

increase in production in the United States, where yields are seen recovering following drought impacts in 2022.

Global barley production is expected to fall by 4.3 percent to 145.9 million tonnes in 2023. The bulk of this decline is attributed to two key producers, **Australia** and the **Russian Federation**, where yields are foreseen to fall, following the highs achieved in 2022. The expected drop in yields is likely to be particularly pronounced in Australia, where rainfall shortages are anticipated, owing to an imminent return of the El Niño weather phenomenon. A sizeable decrease in barley production is also forecast in Türkiye, with yields seen retreating after the well above-average levels in 2022.

TRADE

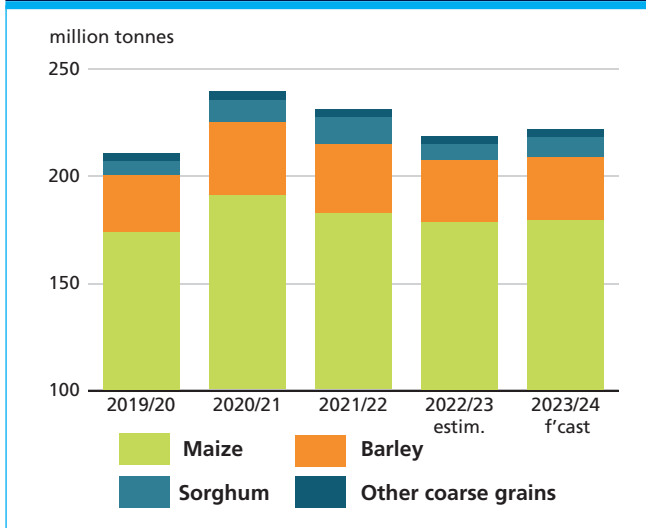
World trade in coarse grains to increase slightly in 2023/24

FAO's first forecast for world trade in coarse grains in 2023/24 (July/June) is pegged at 221 million tonnes, up 1.4 percent from 2022/23. A robust rise is forecast in global sorghum trade, while global trade in maize is seen rising marginally and barley trade is expected to remain near last season's level.

Global trade in sorghum is anticipated to increase by 31 percent to reach 9.5 million tonnes in 2023/24. The predicted increase is on the back of a rebound in shipments from the **United States** underpinned by an expected production recovery from the low output last season. On the import side, larger purchases are expected by **China (mainland)** to meet feed demand, supporting the higher trade expectations.

Global maize trade in 2023/24 (July/June) is pegged at 179 million tonnes, up 0.5 percent from 2022/23. In Asia, higher demand for maize in feed rations and lower international maize prices relative to domestic prices are driving expectations of an 11 percent increase in maize imports by **China (mainland)**, reaching 20 million tonnes. Purchases by the **Islamic Republic of Iran**, **Japan**, the **Republic of Korea**, and **Thailand** are all predicted to rebound from their reduced levels of 2022/23, supported by lower international maize prices. Along with a predicted increase in imports by **Türkiye** to compensate for lower domestic production, these increases are seen boosting total maize imports into Asia by 7 percent to 95 million tonnes in 2023/24. Aggregate maize imports in Africa are also forecast to increase by 5 percent to 20 million tonnes, reflecting a rebound in purchases by **Egypt** from a reduced level in 2022/23. Likewise, in Latin America and the Caribbean, aggregate maize imports are expected to rise by 3 percent in 2023/24, on the back of higher purchases by

Figure 4. Global trade of coarse grains by type

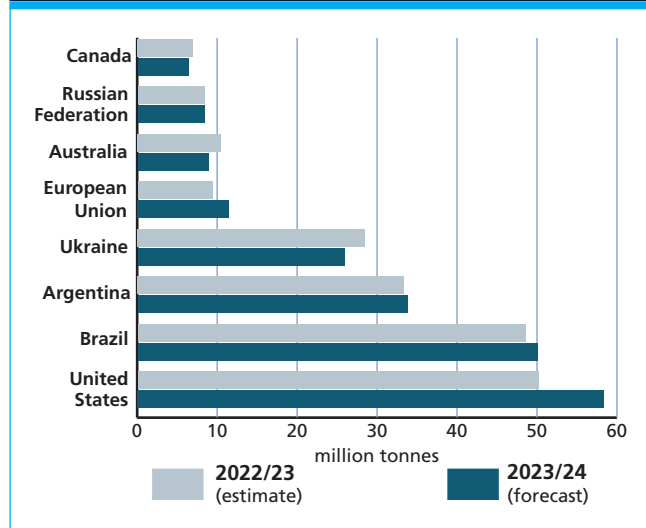


Mexico, the region's largest importer, following a foreseen reduced output and low carryover stocks from 2022/23. Partly offsetting these increases, imports into Europe are set to fall by 26 percent, attributed to an anticipated decline in imports by the **European Union**, supported by good production prospects, from its elevated level in 2022/23 to compensate for the reduced production last year.

Regarding maize exports, prospects vary across the main suppliers. The largest increase in sales is predicted for the **United States**, where an increase in domestic production could push up exports by 13 percent to 53 million tonnes, potentially re-establishing it as the world's leading maize exporter after being succeeded by **Brazil** in 2022/23. Shipments from Brazil are also anticipated to rise by 3 percent in 2023/24, reaching 50 million tonnes, which would represent a second consecutive record-breaking sales season, supported by back-to-back record harvests. By contrast, a fall in production is seen to limit sales by Argentina in 2023/24 to 28.5 million tonnes, representing a 3 percent decline from 2022/23. Exports in 2023/24 are also forecast to fall for **Ukraine** to 23 million tonnes, down 10 percent, reflecting the significant impact of the war on export logistics and domestic production.

In line with the estimated trade for the 2022/23 season, FAO's forecast for world trade in barley (excluding malt) in 2023/24 is pegged at 29 million tonnes. Strong feed demand is expected to boost imports by **China (mainland)** in 2023/24, up 2 million tonnes. In the **European Union**, ample supplies – following a year of elevated purchases and an anticipated production increase – are seen reducing imports and simultaneously raising exports. By contrast, sales by **Australia** could contract in view of the expected decline in the country's production.

Figure 5. Coarse grain exports: major exporters



UTILIZATION

Total utilization of coarse grains to rebound in 2023/24

World utilization of coarse grains in 2023/24 is forecast to reach 1 503 million tonnes, 1.7 percent higher than in 2022/23 but still marginally below the 2021/22 record level. The main driver behind the rebound is a forecast 2.3 percent rise in feed utilization of coarse grains, seen reaching 875 million tonnes. Accounting for the majority of the growth, maize feed use is anticipated to surpass its 2022/23 level by 2.6 percent to reach 711 million tonnes. After a significant slump last season, when domestic supplies were tight and prices were high, higher production and lower expected prices are seen supporting a strong rebound (7 percent) in feed use of maize in the United States in 2023/24. Lower maize prices, especially imported versus domestic, relative to other grains underpin prospects of a 3 percent increase in maize used for feed in China (mainland). A strong rise (7 percent) in feed use of maize is also expected in Brazil, supported by large domestic supplies and robust demand from the livestock sector, along with a smaller (2 percent) increase anticipated in the European Union.

World food consumption of coarse grains in 2023/24 is expected to rise by 0.8 percent from 2022/23, to 230 million tonnes. At the current forecast level, food consumption of coarse grains represents about 15 percent of total utilization. Food consumption of maize, which accounts for the largest share, is predicted to increase by 0.8 percent in 2023/24 to 149 million tonnes, with the greatest increases foreseen in Africa and Asia, while the highest per capita consumption continues to be in Central America and the Caribbean. Food consumption of barley is also projected

Figure 6. Maize exports: top 10 maize exporters

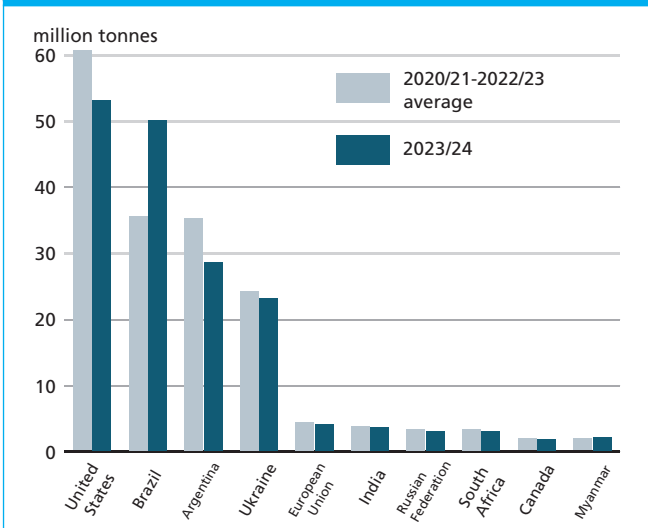


Figure 7. Maize imports: top 10 maize importers

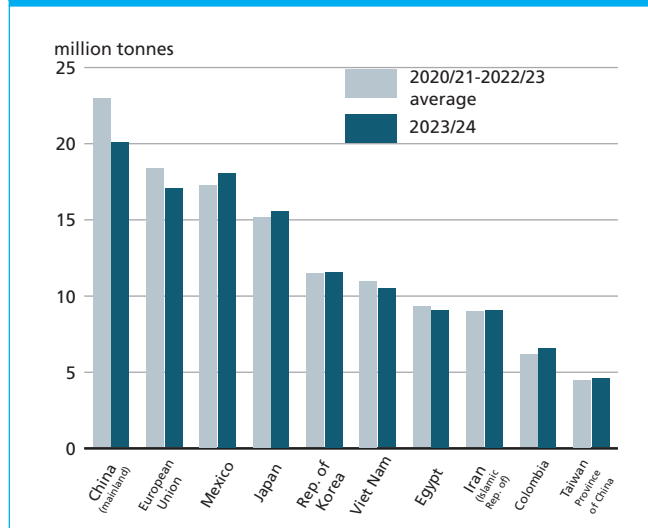


Figure 8. Sorghum exports: top 5 sorghum exporters

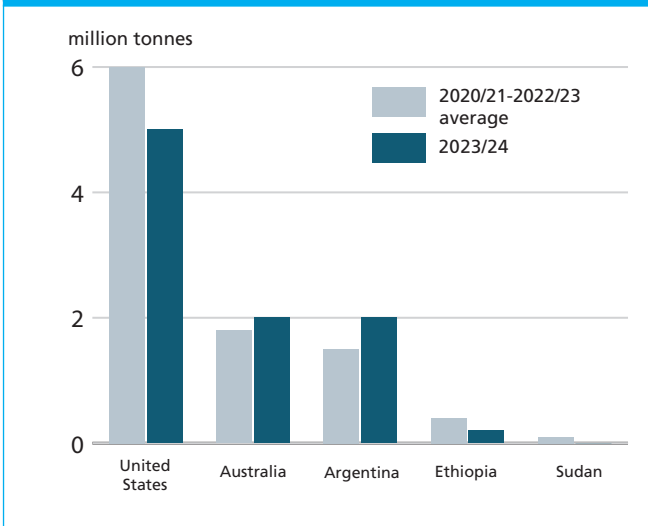


Figure 9. Sorghum imports: top 5 sorghum importers

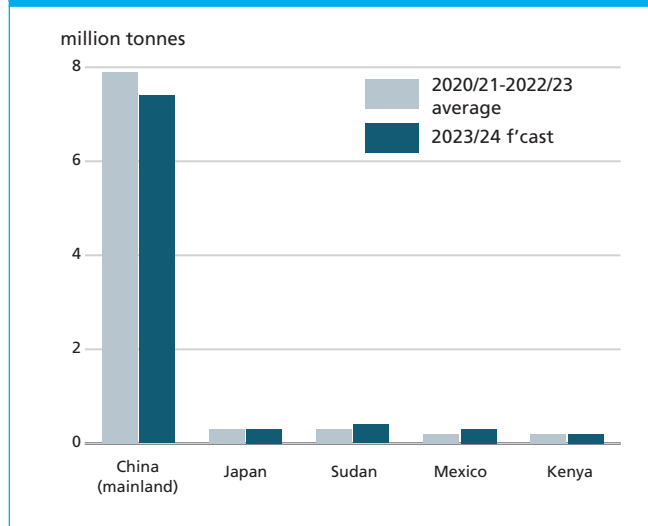


Figure 10. Barley exports: top 10 barley exporters

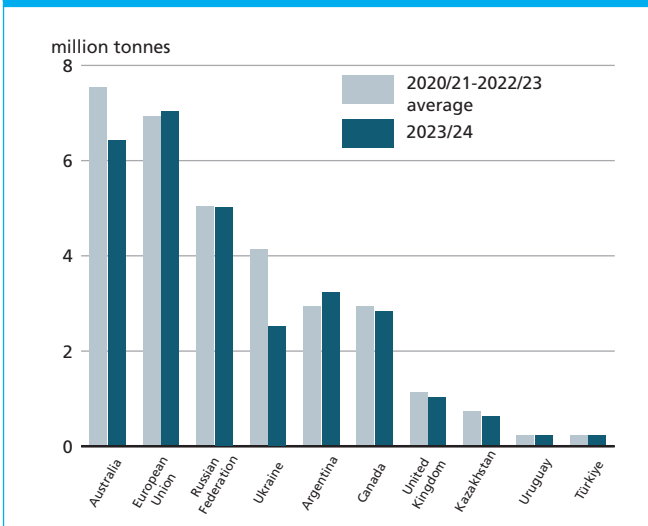
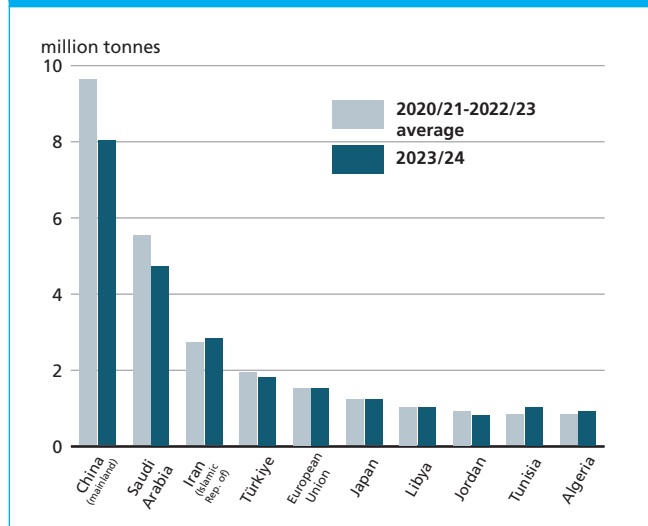


Figure 11. Barley imports: top 10 barley importers



to expand by 1.2 percent in 2023/24, reaching 8 million tonnes, led by higher intakes in India. Similarly, sorghum food consumption is forecast to increase by 0.6 percent in 2023/24 to 30 million tonnes, attributed to foreseen higher consumption in several African countries and the European Union.

Industrial use of coarse grains is forecast to increase by 0.9 percent in 2023/24, underpinned mostly by a 1.0 percent predicted rise in the industrial use of maize. The increase is attributed to higher use of maize for ethanol in the United States, where gasoline consumption and the ethanol inclusion rate are expected to grow, and in Brazil, given the ample maize supplies.

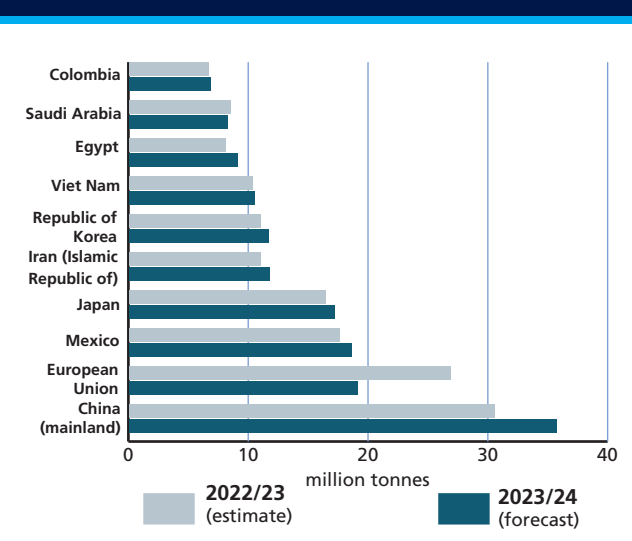
STOCKS

World inventories of coarse grains seen recovering in 2023/24

After contracting in 2022/23, world stocks of coarse grains are forecast to recover in 2023/24 with a 3.9 percent increase from their opening levels, reaching 366 million tonnes by the end of seasons in 2024. Given the predicted rise in both world stocks and utilization, the world stocks-to-use ratio of coarse grains in 2023/24 is likely to stay near the 2022/23 level, up only fractionally (0.1 percent), from 23.5 percent to 23.6 percent. The ratio of major exporters' closing stocks to their total disappearance (defined as domestic utilization plus exports) is likely to increase from 13.0 percent in 2022/23 to 14.5 percent in 2023/24, indicating an increase in availabilities from a global perspective. However, this increase largely reflects the forecast rise in inventory levels in the United States (up 20.9 million tonnes).

Nearly all of the anticipated increase in world inventories of coarse grains would be due to a rise in maize stocks, which are expected to increase by 4.6 percent from their opening levels to 302 million tonnes, representing a partial rebound from their fall last season. Making up the bulk of the increase, maize inventories in the United States are set to rise by 57 percent to 56 million tonnes in 2023/24, after remaining at tight levels for the past three consecutive seasons, as a

Figure 12. Top 10 Coarse Grains importers



result of the anticipated rise in production. Higher domestic production is also seen boosting maize inventories in Brazil, the European Union, the Russian Federation, and Serbia and Montenegro. These increases are seen outweighing expected maize inventory drawdowns in Argentina, China (mainland) and Ukraine.

Among other major coarse grains, global inventories of barley are also predicted to increase in 2023/24, up 3.4 percent from their opening levels to 35 million tonnes. Leading that forecast increase, a rise in barley inventories is expected in the European Union, stemming from slightly higher production amid lower consumption in 2023/24, combined with elevated import levels in 2022/23 and 2023/24. Smaller increases in barley stocks are expected in Kazakhstan and the United States. By contrast, global sorghum inventories could drop by 4.4 percent to 6.5 million tonnes. Most of the decline is seen in the European Union, on account of consumption outweighing production, and in the Sudan, following an anticipated smaller domestic production.

Table 3. Maize use for ethanol (excluding non-fuel) in the United States

	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23 estim.	2023/24 (f'cast)
Maize production	345.506	384.778	371.096	364.262	345.962	358.447	382.893	348.751	387.749
Ethanol use	132.085	132.695	137.978	142.373	136.607	127.716	135.286	133.355	134.625
Yearly change (%)	1.5	0.5	4.0	3.2	-4.0	-6.5	5.9	-1.4	1.0
As of production (%)	38.2	34.5	37.2	39.1	39.5	35.6	35.3	38.2	34.7

Source: WASDE-USDA 12 May 2023 and FAO estimates.

Figure 13. Maize exports from the Black Sea

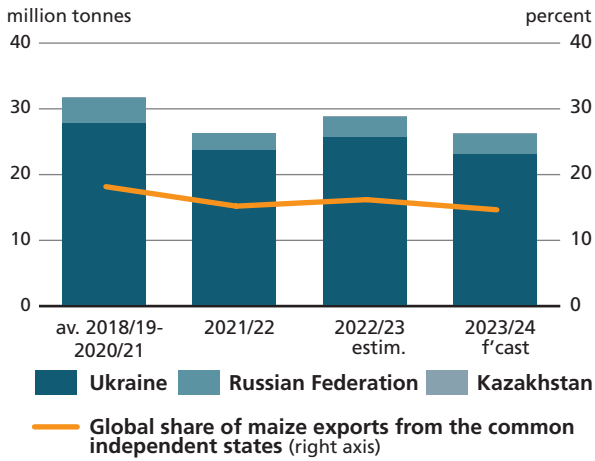


Figure 14. Global coarse grains utilization

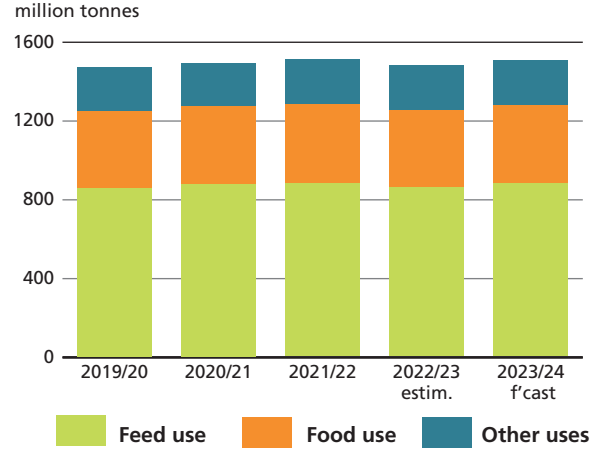


Figure 15. Global barley and maize consumption

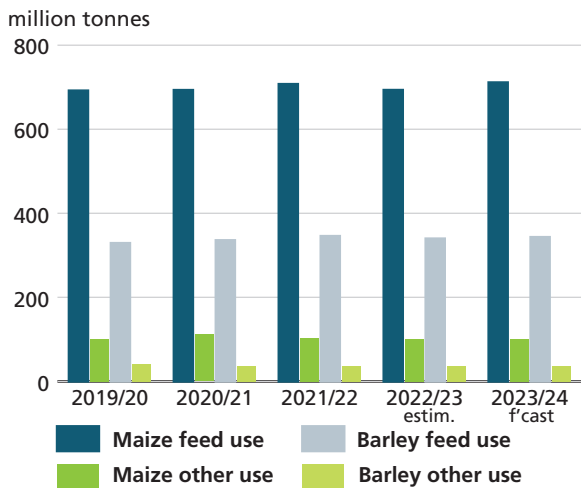


Figure 16. Maize stocks for major exporters

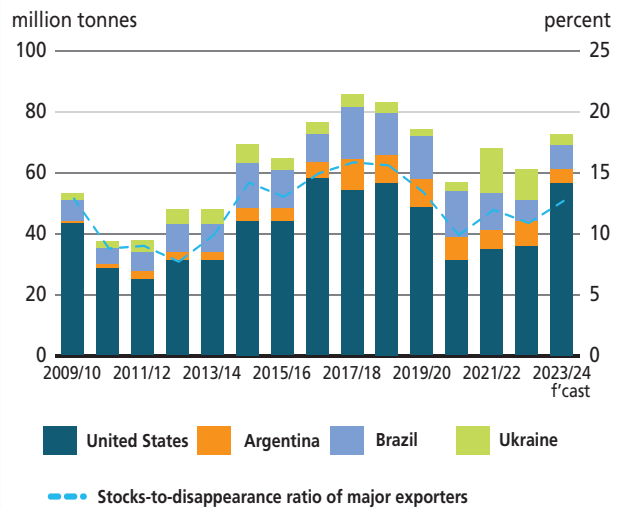


Figure 18. Coarse grain stocks and ratios

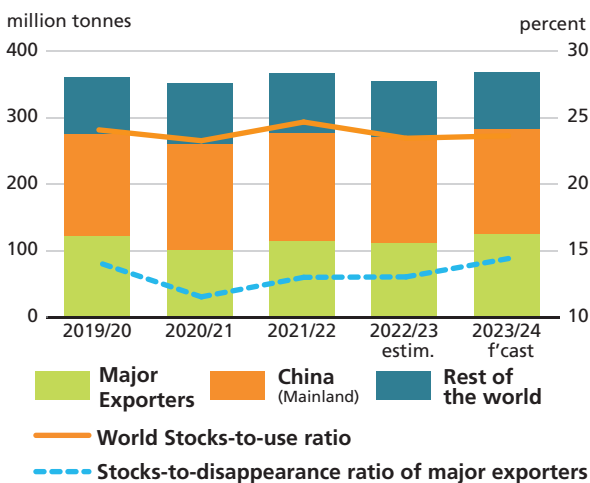
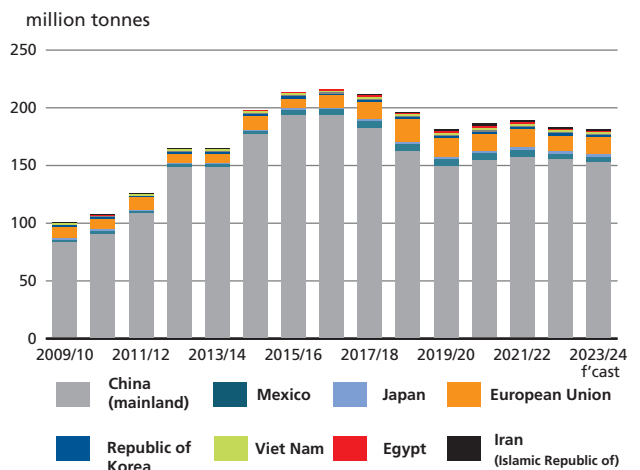


Figure 17. Maize stocks for top importers



RICE



PRICES

Rice export prices at their highest since October 2011

After rising for much of 2022, international rice prices have remained on an upward trajectory in 2023, as reflected by the **FAO All Rice Price Index**, rising by 7.5 percent since the close of 2022 to 127.8 points in May 2023, its highest level since October 2011. Indica and Aromatic quotations have spearheaded this increase, rising, respectively, by 9.5

and 7.0 percent since the onset of 2023. These increases were influenced by a combination of demand and supply side factors. On the demand side, prices have drawn support from strong purchases by Asian buyers, often resulting from public efforts to keep domestic prices in check and/or to reconstitute reserves. In Pakistan, in the lead up to the country's wheat harvest, local demand for rice was also strong. All the while, exportable availabilities tightened in some major suppliers, due to production disruptions in 2022/23 resulting from poor weather and/or hikes in production costs. In India, where Indica

Figure 1. FAO All Rice Price Index

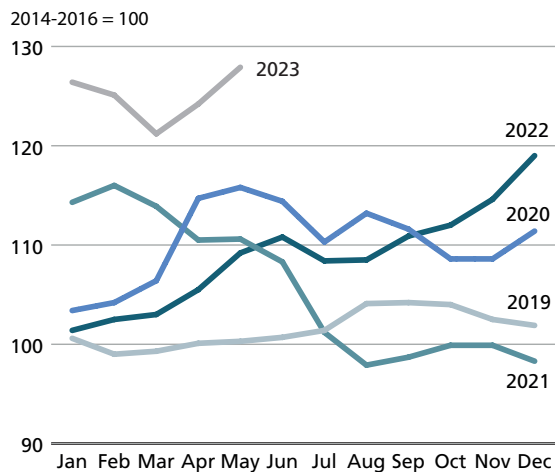
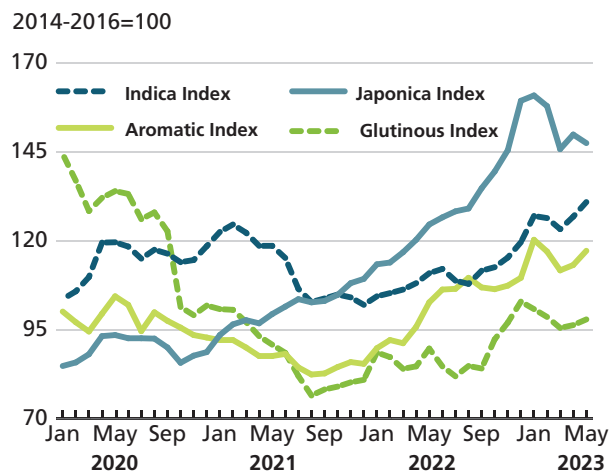


Figure 2. FAO Rice Price Indices



white rice remained subject to a 20-percent export tax, further support was provided by consistently strong government domestic purchases, despite reductions in its main crop output. More recently, concerns over the potential production impacts of the emergence of an El Niño phenomenon have tended to add to the price bullishness. The firmness, however, has not extended to all rice market segments. After reaching all-time nominal highs in January 2023, Japonica quotations have eased by 7.5 percent, weighed by low buying interest, the arrival of freshly harvested supplies in Viet Nam and expectations of a rebound in Californian Calrose production. Glutinous prices have also shed 4.8 percent of their value since the close of 2022, depressed by lacklustre demand, especially from China.

PRODUCTION

Production seen staging a recovery, but weather uncertainties persist

Reflecting the positive incentives provided by generally higher producer prices, easing fertilizer costs and continuing government assistance measures, global rice production is forecast at 523.5 million tonnes (milled basis) in 2023/24. This would represent a 1.3 percent upturn from the 2022/23 reduced level, while still representing a comparatively subdued output expansion.

The global production outlook is highly influenced by expected developments in *Asia*, the world's rice granary. With a total forecast harvest of 471.5 million tonnes, Asian production in 2023/24 could end 1.0 percent above the 2022/23 level while still falling somewhat short of the 2021/22 all-time high. Indeed, evidence of good results is

already emerging where the season is more advanced, for instance in **Bangladesh** and **Indonesia**, where plantings expanded, and in **Sri Lanka**, where availability of, and access to, urea improved. This adds to expectations of output expansions in **Cambodia**, the **Lao People's Democratic Republic**, **Myanmar** and **Thailand**. At the same time, however, many uncertainties persist for secondary crops being currently planted along and south of the equator and for main crops being sown in the Northern Hemisphere. These uncertainties primarily surround weather conditions, given the high probability of an El Niño event emerging during the Northern Hemisphere summer and its association with reduced rainfall over parts of Southern and Southeastern Asia. In India, however, expectations of production shortfalls due to the phenomenon are tempered by generally above-average water supplies in major reservoirs ensured by abundant pre-monsoon rains, as well as forecasts calling for the concomitant emergence of the Indian Ocean Dipole, with its positive influence on monsoon performance. If realised, this could help India to replicate the record output performance of 2022/23. A return to more normal temperatures, compared to the heat wave conditions of last year, could also enable output to recover in **China (mainland)**, where, however, the pace of production growth may be limited by competition with other crops, given ongoing efforts to boost oilseed production in the country. After the dismal outcomes registered last season, output is also forecast to recover in **Pakistan** and **Sri Lanka**. This is even if successive seasons of reduced potassic and phosphatic fertilizer applications are set to curb yield recoveries in Sri Lanka, and high electricity and fuel prices could impede a full upturn in plantings in Pakistan. The outlook is instead negative for **Afghanistan**, **Iraq**, **the Islamic Republic of Iran** and **Türkiye**, which may see tight irrigation water supplies depress output, in the **Republic of Korea** and **Japan**, where poor price prospects are envisaged to curb planting, and in **Nepal**, where forecasts of possible rainfall deficits in parts of the Terai cloud output expectations.

Production prospects are positive for *Africa*, which could see its aggregate harvest rise by 5.3 percent in 2023/24 to reach a fresh peak of 25.8 million tonnes, underpinned by anticipated expansions namely in **Egypt**, **Ghana**, **Madagascar**, **Mali**, **Nigeria**, **Senegal** and **Sierra Leone**. The outlook assumes a normal climatic unfolding of the Northern-Hemisphere summer in the region, which could help to avert flood losses, such as those experienced last season in Chad, Mali and Nigeria, among others, while also permitting producers to respond to generally high prices by expanding plantings. Governments are likely to provide additional support, often through self-sufficiency

Figure 3. Global paddy production and area



Table 1. World rice market at a glance

	2021/22	2022/23 <i>f'cast</i>	2023/24 <i>f'cast</i>	Change: 2023/24 over 2022/23
	<i>million tonnes, milled equivalent</i>			<i>%</i>
WORLD BALANCE				
Production	526.0	516.9	523.5	1.3
Trade ¹	56.0	53.6	56.6	5.5
Total utilization	522.7	519.8	520.1	0.1
Food	419.1	422.3	424.8	0.6
Ending stocks²	197.0	194.8	198.3	1.8
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/yr)	53.0	53.0	52.8	-0.3
LIFDC (kg/yr)	51.5	51.1	51.1	0.1
<i>World stocks-to-use ratio (%)</i>	37.9	37.5	37.8	
<i>Major exporters stocks-to-disappearance ratio³ (%)</i>	28.7	29.5	30.6	
FAO RICE PRICE INDEX (2014-2016=100)				
	2021	2022	2023 <i>Jan-May</i>	Change: Jan-May 2023 over Jan-May 2022 <i>%</i>
	106	109	125	19.7

¹ Calendar year exports (second year shown).

² May not equal the difference between supply (defined as production plus carryover stocks) and total utilization due to differences in individual country marketing years.

³ Major exporters include India, Pakistan, Thailand, the United States of America and Viet Nam.

Table 2. Rice Production: leading producers*

	2021/22	2022/23	2023/24 <i>f'cast</i>	Change: 2023/24 over 2022/23
	<i>million tonnes, milled equivalent</i>			
China (mainland)	145.8	142.8	143.4	0.4%
India	129.5	130.8	131.0	0.1%
Bangladesh	37.8	38.3	38.9	1.8%
Indonesia	34.8	35.1	35.4	1.0%
Viet Nam	28.5	27.7	27.8	0.3%
Thailand	21.8	22.8	23.0	1.0%
Myanmar	16.5	14.8	15.6	5.0%
Philippines	13.0	12.9	12.9	-0.1%
Pakistan	9.3	7.0	8.7	24.6%
Brazil	8.0	7.3	6.8	-7.8%
Japan	7.5	7.3	7.2	-0.4%
Cambodia	7.3	7.1	7.4	4.5%
United States of America	6.1	5.1	6.1	20.2%
Nigeria	5.0	5.1	5.4	5.9%
Egypt	3.4	3.7	3.9	5.7%
World	526.0	516.9	523.5	1.3%

* Countries listed according to their position in global production (average of 2021/22-2023/24).

programmes that make inputs available to producers and seek to expand irrigation coverage. In the case of **Egypt**, however, area expansions are anticipated to be limited by the similarly attractive prices of competing crops, including maize, while government efforts to conserve scarce water resources by capping plantings continue to be implemented in the country. In the Sahel, much will also depend on the prevailing security situation and whether farmers will be able to access fields, productive inputs and markets. This would be especially so for **Mali**, where production has remained below-normal levels for two successive seasons because of insecurity in important central producing areas. Expectations are more subdued in eastern parts of the continent, where a third successive season of rainfall deficits under the influence of the now dissipated La Niña phenomenon has hampered production. This includes the **United Republic of Tanzania**, where, however, somewhat improved precipitation since March could sustain a partial recovery from the reduced 2022/23 crop.

Marking its second successive contraction, production in *Latin America and the Caribbean* is forecast at 17.7 million tonnes in 2023/24, down 2.2 percent year-on-year. Much of this fall would be imputable to **Argentina** and **Brazil**, where plantings and yields were impaired by dryness associated with the La Niña phenomenon, which lingered throughout much of the 2023/24 crop growing period. However, for Central American and Caribbean producers who are about to, or in the process of, planting their main 2023/24 crops, the likely emergence of an *El Niño* event, with its associated repressed rains, also dampen prospects. Indeed, amid erratic rains and/or profitability constraints, often linked to competition with imports and persistently high production costs, only a few producing countries in the region will likely see output expand in 2023/24, namely **Bolivia**, **Chile**, **Guyana**, **Nicaragua** and, especially, Colombia and Paraguay. In **Paraguay**, despite some planting delays, more ample water supplies and positive price prospects are expected to lift the country's output 37.6 percent above the 2022/23 drought-affected result to 830 000 tonnes, while **Colombia's** harvest is forecast to stage a 6.9 percent, price-driven, upturn to 1.9 million tonnes.

In *Northern America*, 2023/24 production in the **United States of America** is forecast to rebound by 20.2 percent year-on-year to 6.1 million tonnes, as improved margins encourage farmers to bring area back under long-grain varieties and easing drought conditions in California enable Japonica plantings in the state to return closer to the 2021/22 level. In *Europe*, output in the **Russian Federation** is forecast to see a 15.9 percent upturn to 0.7 million tonnes, amid expectations of fewer losses in its

main growing region relative to those registered last year as a result of the collapse of an important irrigation dam. At the same time, however, prolonged dryness in the lead up to plantings kept water availability for irrigation very limited in the **European Union's** largest rice producers, Italy and Spain, obstructing farmers' capacity to respond to high Japonica prices by expanding plantings. This is expected to cause output in the European Union to fall 1.8 percent below the already reduced outcome of 2022/23 to 1.2 million tonnes. In **Australia**, *Oceania's* leading producing country, ample water supplies for irrigation and strong margins boded well for the season. Yet, untimely rains at planting time impeded farmers from fully realizing their planting intentions and pushed a portion of plantings beyond the optimal sowing window. As a result, and although still remaining nearly ten-times higher than the 2020/21 drought-reduced harvest, Australian output may fall 27.8 percent below the 2022/23 good result to 333 000 tonnes.

TRADE

Tighter exportable availabilities and higher import costs to depress international trade in 2023

International trade in rice is forecast to register its first contraction in four years in 2023 (January–December), passing from a record high of 56.0 million tonnes in 2022 to 53.6 million tonnes this year. *Asia*, the prime destination of global rice flows, is expected to take delivery of nearly half of this volume, or some 25.6 million tonnes, 4.7 percent less than the 2022 high. **China (mainland)** is predicted to account for a large share of this contraction, with purchases expected to drop by 1.1 million tonnes to 5.0 million tonnes, as a reduction in exportable availabilities of fully broken rice and consequent price increases are anticipated to render imported broken rice a less attractive animal feed ingredient in the country. Purchases by **Viet Nam** are seen falling under similar circumstances. Sufficient local supplies are likewise forecast to enable the **Philippines** to reduce its imports from the record highs registered in 2022, while imports by **Bangladesh** and **Sri Lanka** are expected to be affected by the lingering weakness of their local currencies. On the other hand, faced with high domestic rice prices or broader inflationary pressure, some governments continue to take steps to facilitate rice inflows from abroad through duty concessions or public sector imports, thus likely contributing to keep total Asian purchases abundant in 2023. This has been most notably the case of **Indonesia**, which will likely see its imports rise to a five-year high, as well as **Türkiye**, and

Figure 4. Rice imports by region

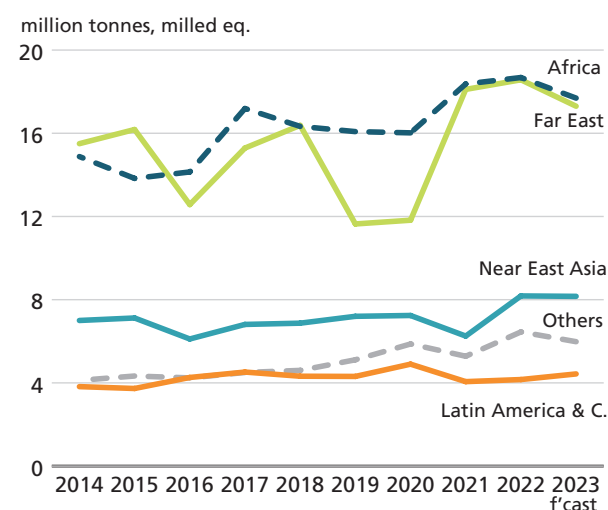


Figure 5. Rice exports by origin

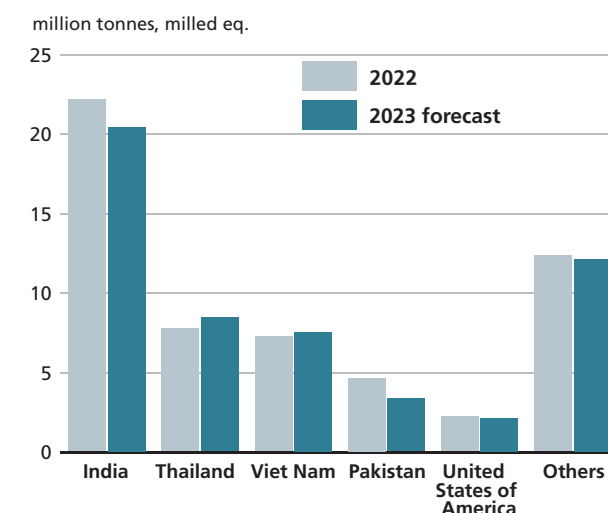
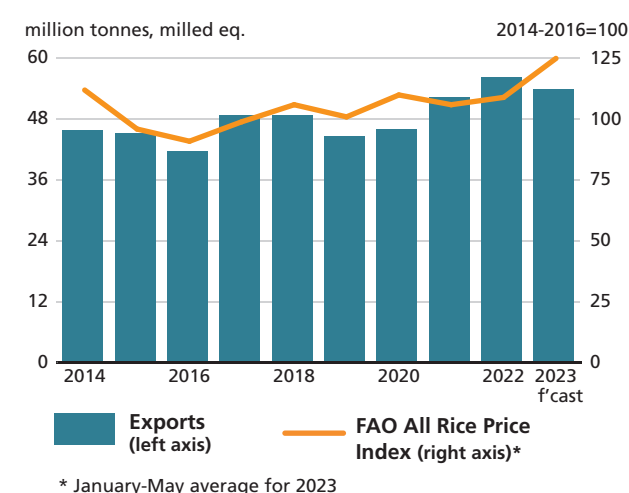


Figure 6. Global rice trade and FAO All Rice Price Index



Bangladesh, Iraq, and the **Islamic Republic of Iran**, which could see their 2023 rice purchases remain robust by historical standards.

Amid high domestic rice prices and weather-induced production disruptions, some governments in *Africa* have also taken steps to facilitate imports. This has been the case of **Guinea-Bissau, Kenya** and the **United Republic of Tanzania**, where import expansions are expected to be facilitated by such measures. Demand-driven increases are likewise anticipated for **Liberia, Mauritania** and **Nigeria**. At the same time, however, **Egypt, Ethiopia, Ghana**, and **Sierra Leone** could see their imports constrained by higher international prices, currency depreciations against the United States dollar and higher import financing costs, adding to the disruptions to trade of fully broken rice that could also cut deliveries to **Senegal**, in particular. As a result, 2023 consignments to Africa, on aggregate, could fall 5.3 percent below the 2022 level to 17.7 million tonnes.

Elsewhere, expectations of cuts in broken rice purchases are also behind forecast import falls in the **European Union** and the **United States of America**, with an anticipated rebound in local Calrose production also expected to contribute to reduce imports in the latter. Among the various regions, only *Latin America and the Caribbean* is seen importing more in 2023. Indeed, **Brazil, Mexico, Panama** and **Peru** may need to raise imports to make up for production shortfalls, offsetting forecast reductions, namely in **Venezuela**, due to more ample local availabilities, and in **Haiti**, where insecurity problems and the weakness of the gourde could continue to affect purchases.

On the export side, various international suppliers, including **Argentina, Brazil**, the **Russian Federation**, the **United States of America** and especially **Pakistan** are expected to see their 2023 rice exports hampered by supply tightness stemming from output reductions. Strong local demand and macroeconomic constraints could compound the supply tightness in Pakistan, while also limiting export growth in **Myanmar**, where stringent requirements regarding the conversion of export earnings into the kyat have been in place since last year. **India's** retreat from the broken export market, following its September 2022 prohibition of shipments of fully broken rice, is anticipated to add to these reductions, lowering the country's overall shipments 7.9 percent below the 2022 high to 20.4 million tonnes. However, at this level, Indian deliveries would still be well over their pre-2021 levels, since, amid no dearth in local supplies, Indian export prices of non-fully broken rice remain competitive relative to other origins and the Indian Government has approved various relaxations to

the broken export ban and the export taxes it imposed last year. **Australia, Cambodia, Guyana, Thailand** and **Viet Nam** are all seen counting on sufficient supplies to step-up shipments in 2023, or to keep them at overall high levels, as is expected to be the case in **Paraguay** and **Uruguay**.

UTILIZATION

Continued cuts in use of rice for animal feed to forestall growth in overall rice utilization

Preliminary prospects for 2023/24 point to a moderation in world rice use, as an expansion in food use could be largely offset by cuts in non-food uses, particularly for animal feed. As a result, global rice utilization could remain at a total of 520.1 million tonnes (milled basis), just 0.1 percent above the 2022/23 level. Although traditionally accounting for a small share of overall rice utilization, the use of rice for animal feed emerged as an important driver of rice utilization between 2020/21 and 2021/22, as abundant rice availabilities in the context of high prices of alternative feedstuffs rendered rice, namely fully broken rice, an attractive feed ingredient. This trend was partly reversed in 2022/23, when tighter exportable availabilities of brokens and easing international grain prices caused feed use to decline. Barring major disruptions, this tendency is expected to continue over the course of 2023/24, which could lower overall volumes of rice destined for non-food uses by 2.2 percent to 95.2 million tonnes.¹ Expectations are more buoyant on the food use side. Amid prospects of generally abundant supplies in the new season, which could contribute to bring domestic rice prices down in various countries, food consumption is seen closely tracking or exceeding predicted population growth in most regions. This could bring global food use volumes to a total of 424.8 million tonnes in 2023/24, up 0.6 percent year-on-year. However, considering that the bulk of global consumption of rice in the new season will not occur until late 2023 and well into 2024, much will likely depend on the economic context prevailing then as well as government policies. Indeed, easing inflationary pressure and improved economic growth prospects could encourage some governments, particularly in Asia, to wind-down the expanded food distribution schemes that they have implemented since the onset of the COVID-19 pandemic and that were further reinforced last year in the context of high grain prices. This, coupled with increasingly tighter supplies in Latin America and the Caribbean, could cause global per capita food intake to drop slightly from 53.0 kilos in 2022/23 to 52.8 kilos in 2023/24.

¹ Other than volumes destined for animal feed, non-food uses include seeds, postharvest losses and non-food industrial uses.

Figure 7. Global closing stocks and stocks-to-use ratio

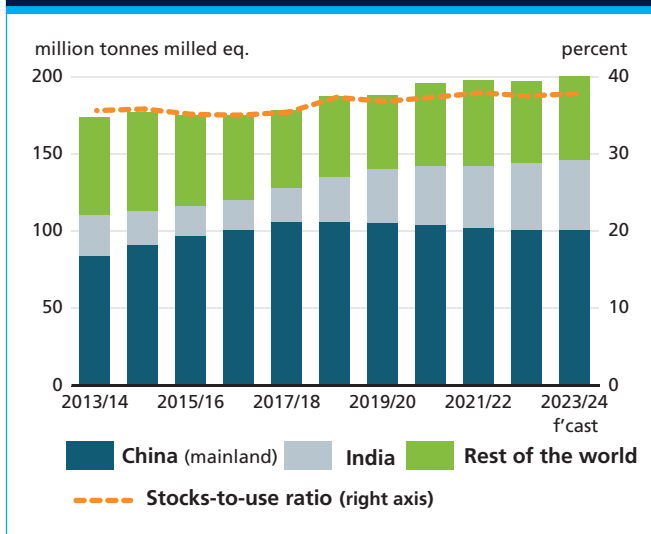
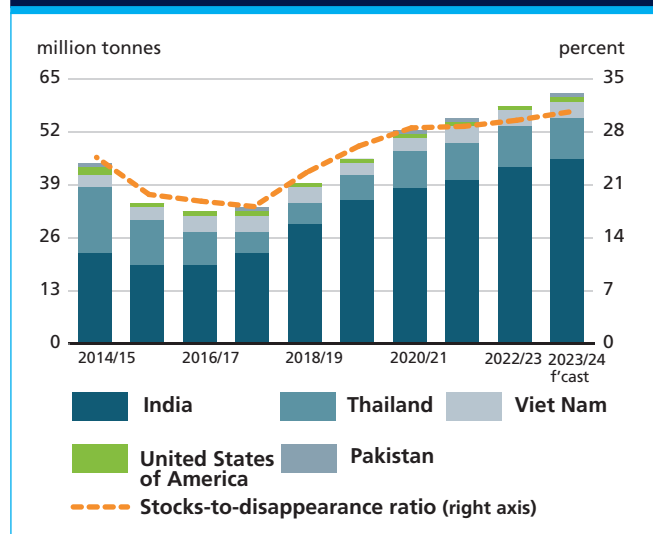


Figure 8. Stocks held by the five major rice exporters and stocks-to-disappearance ratio



STOCKS

World rice reserves seen rebounding to an all-time high

With global rice production forecast to surpass expected utilization in 2023/24, world rice stocks at the close of 2023/24 marketing seasons are predicted to expand by 1.8 percent to 198.3 million tonnes. If confirmed, this would be an all-time record high, being sufficient to cover 4.5 months of projected global consumption.

Rice exporting countries are anticipated to drive the forecast rebound in rice carry-overs, lifting their aggregate level of reserves by 3.2 percent year-on-year to a peak of 66.7 million tonnes. Much of this increase would be imputable to **India**, where another abundant harvest and the wind down of extraordinary rice distribution over and above levels normally envisaged by the National Food Security Act could result in stocks expanding by 4.0 percent year-on-year to 44.5 million tonnes. Output recoveries could also enable **Pakistan** and the **United States of America** to reconstitute their reserves, with another accumulation also seen taking place in **Thailand**, while stocks in **Viet Nam** are expected to be little changed. By contrast, **Australia**, **Cambodia**, **Myanmar** and **Uruguay** may all need to draw on their reserves to meet expected consumption and export needs, with a drought-hit crop also anticipated to lead to a sizeable drawdown in **Brazil**, while keeping inventories low in **Argentina**. Based on these tendencies, the five major exporters² stock-to-disappearance ratio³ could reach 30.6 percent in 2023/24, up from 29.5 percent in 2022/23.

² India, Pakistan, Thailand, the United States of America and Viet Nam.

³ Defined as the sum of domestic utilization and exports.

Rice importing countries are also predicted to increase the size of their reserves, albeit by a more moderate rate of 1.1 percent, to 131.6 million tonnes. Within this group, after successive seasons of reserve reductions, **China (mainland)** and **Indonesia** could see their carry-overs expand. This is even if in China (mainland), the level of stock replenishment may be moderated by the restrained pace of production growth envisaged for the season, while in Indonesia, much of the forecast increase would reflect a reconstitution of state reserves through increased domestic procurement and imports. Among other traditional importers, **Iraq**, the **Republic of Korea**, **Malaysia**, **Nepal**, **Nigeria** and the **Philippines** are all seen increasing their stocks at the close of their respective seasons, while reserves could end lower in **Bangladesh**, **Japan** and **Sri Lanka**.

OILCROPS, OILS AND MEALS¹



PRICES²

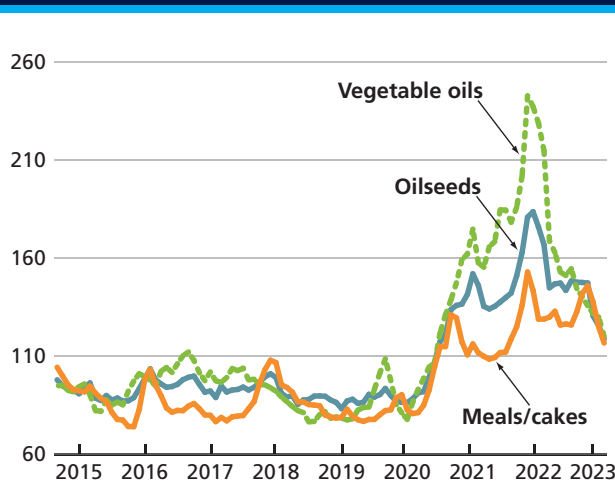
International prices of oilseeds and derived products fell from record highs registered in 2022

After hitting all-time highs in early 2022, the international prices of oilseeds and derived products fell in the following months, largely due to improved global supplies that coincided with demand rationing. In May 2023, FAO's price indices for oilseeds, oilmeals and vegetable oils stood, respectively, 33.2, 10.0 and 48.2 percent below their year-earlier levels.

The decline in the oilseed price index was mostly driven by lower soybean, rapeseed and sunflower seed quotations. International soybean prices fell markedly from their peak in mid-2022 and then drifted in a narrow range until early 2023. Besides the impact stemming from the harvest

pressure in the United States of America and subdued global import demand, quotations were weighed by higher farmer sales from Argentina, following two rounds of the 'soy dollar' scheme that provided favourable exchange rates to soybean producers. World soybean prices have declined further since March 2023, underpinned by prospects of a record harvest in Brazil that would more than compensate for considerably lower production in Argentina. Meanwhile, international rapeseed prices have been on a downward trajectory since May 2022, largely reflecting ample global supplies tied to abundant production across Australia,

Figure 1. FAO monthly international price indices for oilseeds, vegetable oils and meals/cakes (2014-2016=100)



¹ Almost the entire volume of oilcrops harvested worldwide is crushed to obtain oils and fats for human nutrition or industrial purposes, and to obtain cakes and meals that are used as feed ingredients. Therefore, rather than referring to oilseeds, the analysis of the market situation is mainly undertaken in terms of oils/fats and cakes/meals. Production data for oils and meals are derived from domestic production of the relevant oilseeds in a specific year, i.e. they do not reflect the outcome of actual oilseed crushing in a given country and period. Regarding oilseed trade, situations where oilseeds are produced in one country but crushed in another are reflected in national oil/meal consumption figures. It is important to note that data on trade in oils (meals) refer to the sum of trade in oils (meals) plus the oil (meal) equivalent of oilseeds traded. Similarly, stock figures for oils (meals) refer to the sum of oil (meal) stocks plus the oil (meal) equivalent of oilseed inventories.

² For details on prices and corresponding indices see statistical appendix, table 24.

Figure 2. FAO monthly price index for oilseeds (2014-2016=100)

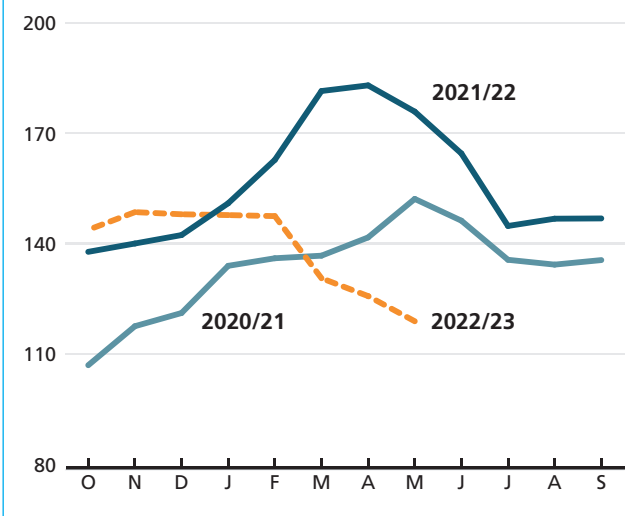


Figure 3. FAO monthly price index for oilmeals/ cakes (2014-2016=100)

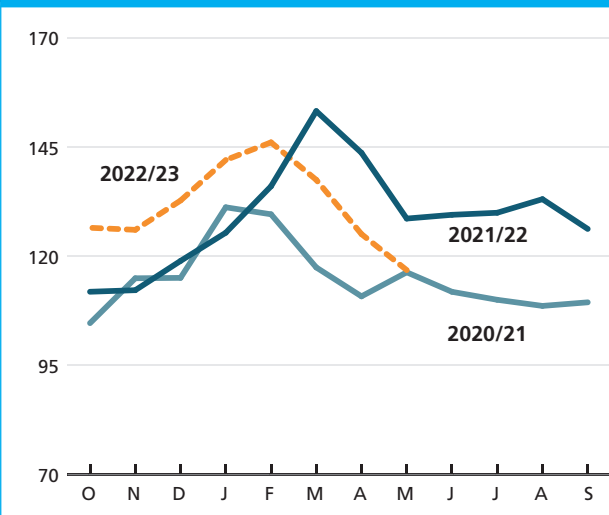
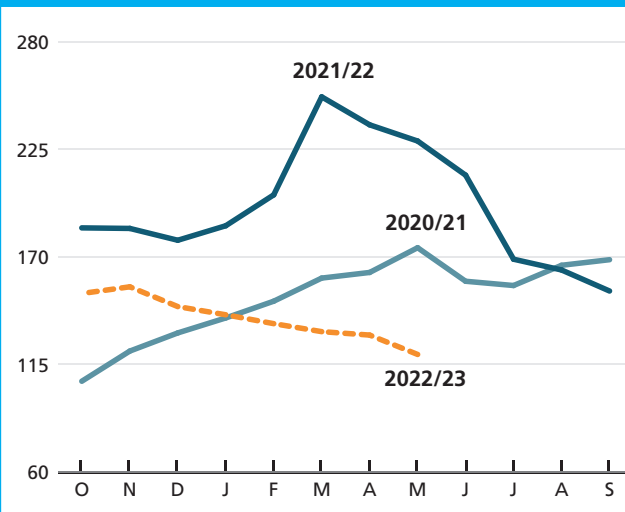


Figure 4. FAO monthly price index for vegetable oils (2014-2016=100)



Canada and the European Union. Similarly, in the case of sunflower seed, lower world quotations were mainly prompted by a bumper crop in the Russian Federation, despite a markedly lower output in Ukraine due to the war.

Contrasting with the downward trend observed in world oilseed prices, international oilmeal prices rebounded noticeably in early 2023, after falling from multiyear highs in the second half of 2022. The recovery was primarily driven by sharply lower soybean crushings and exportable supplies from Argentina, the world's leading soymeal exporter. However, as global protein meal demand remained sluggish due to low profit margins in the livestock sector, particularly in China, world soymeal prices dropped in recent months.

As for vegetable oils, the FAO price index declined almost uninterruptedly since reaching its historic high in March 2022. Rising export availabilities following relaxed restrictions by Indonesia, combined with reduced global demand amid sharply higher import costs, resulted in markedly lower international palm oil prices. Likewise, decreases in world rapeseed and sunflower oil prices chiefly reflected abundant global supplies, with the latter also benefiting from the Black Sea Grain Initiative, which allowed Ukraine to resume much of its sunflower oil shipments from its seaports. As for soyoil, notwithstanding persistent, robust demand from the United States to support biodiesel production, international prices declined, mainly weighed by a sluggish global import demand resulting from uncompetitive prices compared with those of other oils. Lower crude oil prices also contributed to the downward pressure on world vegetable oil prices.

OILSEEDS

Global oilseed production seen recovering in 2022/23

Following a marginal contraction in the 2021/22 season, global total oilseed production is forecast to rebound in 2022/23, potentially climbing to a record high of 638.4 million tonnes. The recovery would mainly be driven by expected higher outputs of soybean and rapeseed, more than offsetting smaller production levels foreseen for sunflower seed and other oilseeds.

Global soybean production in 2022/23 is pegged at 371.2 million tonnes, matching the all-time high registered in 2020/21, largely underpinned by anticipated output recoveries in the Southern Hemisphere, despite mixed trends across major producers. Harvests in **Brazil** and **Paraguay** are forecast to rebound markedly from the previous season, primarily due to improved yields amid conducive growing conditions in most of the producing regions. By contrast, **Argentina** is expected to harvest its smallest crop in the

Table 1. World production of major oilcrops

	2020/21	2021/22 est.	2022/23 f'cast	Change 2022/23 over 2021/22
	million tonnes			%
Soybeans	371.5	356.8	371.2	4.0
Rapeseed	76.5	76.1	89.2	17.2
Sunflower seed	51.6	58.0	53.3	-8.0
Groundnuts (unshelled)	47.3	47.7	46.8	-1.9
Cottonseed	40.3	41.1	40.2	-2.3
Palm kernels	18.6	19.2	19.5	1.5
Copra	6.1	6.5	6.0	-8.0
Total	611.8	605.5	626.2	3.4

Note: The split years bring together northern hemisphere annual crops harvested in the latter part of the first year shown, with southern hemisphere annual crops harvested in the early part of the second year shown. For tree crops, which are produced throughout the year, calendar year production for the second year shown is used.

last 20 years following one of the country's worst droughts in decades, associated with a third consecutive year of La Niña event. In the Northern Hemisphere, production in the **United States** is seen moderately down from the record level reached in the preceding season, due to lower yields. In **China**, the soybean crop is set to increase markedly, largely reflecting increased plantings in response to supportive policy incentives, while anticipated production gains in **India** are linked to increases in both harvested areas and yields.

World rapeseed production in 2022/23 is also seen growing year-on-year to 89.2 million tonnes, marking a historical high. The increase would be broadly tied to a higher output in **Canada**, due to a pronounced recovery of yields from the previous season, despite somewhat reduced plantings. Production in **Australia** is also estimated to rise markedly for the third successive season to a new record level, following continued area expansions and exceptional growing conditions. Moreover, outputs in **China**, the **European Union** and **India** are all expected to increase further, underpinned by a combination of larger harvested areas and higher yield levels.³

By contrast, global sunflower seed production is estimated to drop by 8 percent from the 2021/22 level. The anticipated contraction mainly reflects considerably lower outputs in **Ukraine**, as the protracted war not only disrupted sowing operations in the country, but also limited access to agricultural inputs, resulting in much lower yield potentials. Production in the **European Union** is also set to decline due to unfavourable weather conditions during the growing season. On the other hand, the **Russian**

³ From the 2020/21 season onwards, the EU is defined as EU27 rather than EU28 to take account of Brexit

Federation is expected to harvest a bumper crop, facilitated by an excellent yield outcome.

OIL AND FATS⁴

World oils/fats production to increase slightly in 2022/23

The crop prospects outlined above, combined with a steady increase in global palm oil output, are likely to translate into a record world oils/fats production forecast at 253.4 million tonnes, which is 2.7 percent above its year-earlier level. Regarding individual oils, forecast gains in palm, soy and rapeseed oils are expected to more than offset reduced outputs of sunflower, olive and, to a lesser extent, copra oils. Global palm oil output is forecast to rise modestly in 2022/23. In **Indonesia**, while production is foreseen to continue expanding year-on-year, the growth rate will likely remain below the past five-year average level. In addition to the impact of localized excessive rainfalls during early 2023, the country's palm oil output is expected to be affected by sliding yield potentials due to a lack of replanting and a decrease in mature oil palm areas in recent years. Similarly, in **Malaysia**, despite a gradual alleviation of the labour shortage issues that were caused by the COVID-19 pandemic, the growth rate could also remain subdued. As for soy and rapeseed oils, the anticipated production increases are linked to the predicted expansions of the respective oilseed harvests, whereas a drop in sunflower seed production in the Black Sea region is seen causing a decline in global sunflower oil output.

⁴ This section refers to oils of all origins, which – in addition to products derived from the oilcrops discussed under the section on oilseeds – include palm oil, marine oils and animal fats.

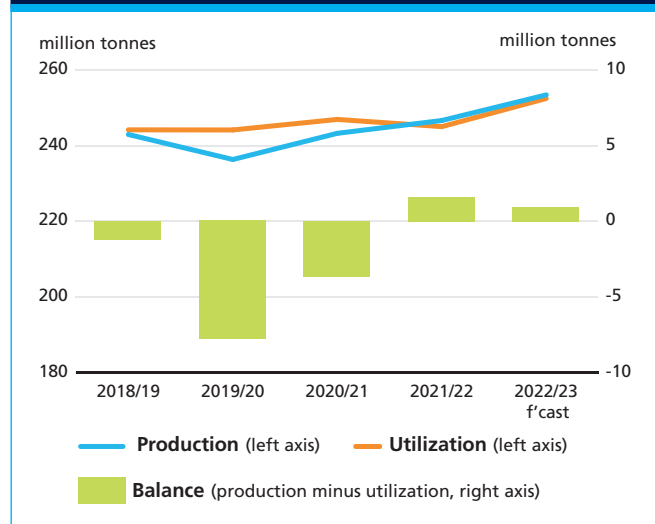
Figure 5. Global production and utilization of oils/fats

Table 2. World oilcrops and product market at a glance

	2020/21	2021/22 <i>estim.</i>	2022/23 <i>f'cast</i>	Change: 2022/23 over 2021/22
	<i>million tonnes</i>			<i>%</i>
TOTAL OILCROPS				
Production	624.1	617.3	638.4	3.4
OILS AND FATS¹				
Production	243.2	246.7	253.4	2.7
Supply ²	278.3	278.9	285.9	2.5
Utilization ³	246.9	245.0	252.4	3.0
Trade ⁴	133.6	126.8	137.2	8.2
<i>Global stocks-to-use ratio (%)</i>	<i>13.0</i>	<i>13.3</i>	<i>13.5</i>	
<i>Major exporters stocks-to-disappearance ratio (%)⁵</i>	<i>9.7</i>	<i>10.2</i>	<i>9.8</i>	
MEALS AND CAKES⁶				
Production	161.4	158.5	163.9	3.4
Supply ²	191.9	187.3	189.3	1.1
Utilization ³	160.3	160.7	162.1	0.9
Trade ⁴	103.1	101.4	106.1	4.7
<i>Global stocks-to-use ratio (%)</i>	<i>18.0</i>	<i>15.8</i>	<i>16.0</i>	
<i>Major exporters stocks-to-disappearance ratio (%)⁷</i>	<i>10.0</i>	<i>9.2</i>	<i>8.3</i>	
FAO PRICE INDICES (Oct-Sept) (2014-2016=100)				
	2021	2022	2023 <i>Jan-May</i>	Change: Jan-May 2023 over Jan-May 2022 %
Oilseeds	139	158	134	-21.7
Oilmeals/cakes	116	133	133	-3.0
Vegetable oils	165	188	131	-40.6

Note: Kindly refer to footnote 1 on page 30 for overall definitions and methodology.

¹ Includes oils and fats of vegetable, animal and marine origin.

² Production plus opening stocks.

³ Residual of the balance.

⁴ Trade data refer to exports based on a common October/September marketing season.

⁵ Major exporters include Argentina, Brazil, Canada, Indonesia, Malaysia, Ukraine and the United States.

⁶ All meal figures are expressed in protein equivalent; meals include all meals and cakes derived from oilcrops as well as meals of marine and animal origin.

⁷ Major exporters include Argentina, Brazil, Canada, India, Indonesia, Malaysia, Paraguay, the Russian Federation, Ukraine, the United States and Uruguay.

Global supplies of oils/fats, which include the 2021/22 carry-over stocks that fell to multiyear lows, are forecast to recover slightly from the previous season. Domestic availability is expected to rise in **Brazil, Canada, India, Indonesia, Malaysia** and the **Russian Federation**, mostly owing to higher production. On the other hand, supplies in **Argentina, the European Union, Ukraine** and the **United States** are seen declining amid output shortfalls. In the case of **China**, despite rising oils/fats production, domestic supplies could also drop year-on-year due to markedly lower carry-in stocks.

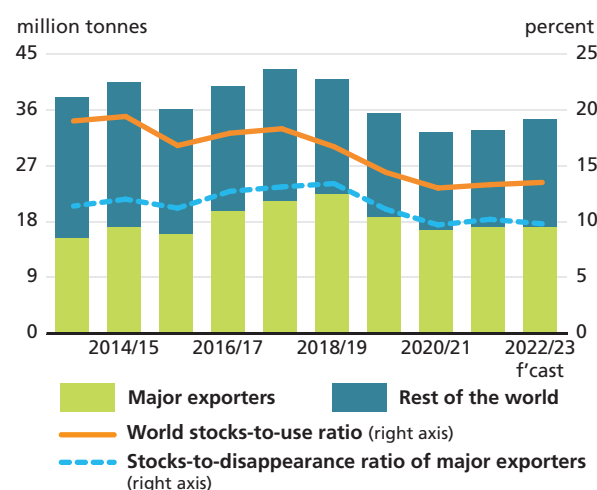
Global oils/fats consumption to revive growth in 2022/23

After stagnating during the previous three consecutive seasons, global oils/fats utilization is predicted to increase by 3 percent in 2022/23. World consumption of palm, soy, rapeseed and sunflower oils is projected to grow, more than compensating for reductions expected in the use of groundnut, olive and other oils.

Much of the anticipated consumption increase would take place in Asia, where China is forecast to lead the growth. After registering an exceptional contraction in 2021/22, the country's vegetable oil uptake is expected to recover, thanks to the revival of economic activities following the removal of COVID-19-related restrictions. In addition, utilization in Brazil, the European Union, India, Indonesia and the United States is also seen increasing due to anticipated robust demand, in part linked to falling edible oil prices from the record highs observed during the previous season. By contrast, setbacks in domestic production in Argentina and Ukraine could result in lower consumption in these nations.

In addition to rising demand foreseen for food uses, the uptake by the biodiesel sector is also expected to expand. In the United States, the demand for vegetable oils as feedstock is forecast to continue growing due to favourable processing margins and a boost in biodiesel production capacity. Moreover, national admixture mandates have been raised in a couple of leading biodiesel-producing countries. In particular, Indonesia's blending mandate was increased from 30 to 35 percent in February 2023, while the blending requirement in Brazil was lifted by 2 percent to 12 percent in April, with a view to progressively increasing the mandate to 15 percent by 2026.

Figure 6. World stocks and ratios of oils/fats (including the oil contained in seeds stored)



Global inventories of oils/fats to recover by 5 percent from reduced levels last season

With world oils/fats production forecast to surpass utilization by a small margin, global ending stocks of oils (including the oil contained in stored oilseeds) are predicted to recover moderately to 34.2 million tonnes in 2022/23. Inventory replenishments of palm and rapeseed oils are expected to more than offset stock drawdowns in sunflower and olive oils, while world soyoil stocks could stagnate at their multiyear lows.

Nearly all major stockholders are expected to build up their reserves, including **Brazil, Canada, China, India, Indonesia, Malaysia** and the **United States**. By contrast, stock contraction is foreseen in **Argentina** due to its significantly lower soybean production prospects, while **Ukraine** will likely release its unusually large inventories, which accumulated during the war.

Based on these forecasts, the global stocks-to-use ratio for oils/fats should rebound slightly from the previous season, while the stocks-to-disappearance ratio for the major exporting countries could fall marginally, with both indicators expected to remain below their respective average levels over the last five years.^{5,6}

World oils/fats trade seen rebounding in 2022/23

After declining for two consecutive seasons, international trade in oils/fats is forecast to grow by about 8 percent in 2022/23, reaching 137.2 million tonnes (including the oil contained in traded oilseeds). Global transactions in palm, soy, rapeseed and sunflower oils are all expected to expand, based on greater buying interests amid lower import costs. Palm oil would remain the leading traded oil in terms of volume, with its market share lingering around 37 percent, followed by soyoil at around 30 percent.

On the import side, purchases by **China** are forecast to rebound sizeably, linked to restored domestic demand for vegetable oils and the need to replenish stocks, while imports by **India** are also foreseen to increase steadily on continued income growth. Notably, purchases by the **United States** are expected to raise steeply, in order to support its booming biodiesel production.

As for exports, vegetable oil sales by **Indonesia** are projected to increase in the wake of relaxed export restrictions, although shipments remain subject to certain national requirements aiming to secure sufficient domestic supplies. Consignments by **Brazil, Canada** and **Malaysia** are also

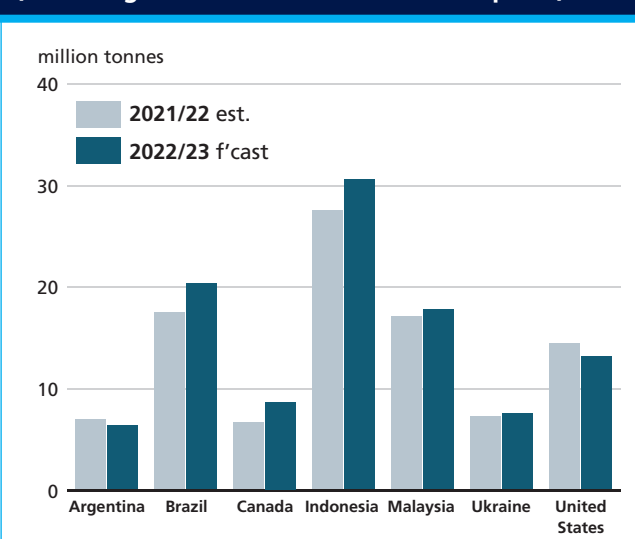
⁵ Disappearance is defined as domestic utilization plus exports.

⁶ The group of major exporting countries consists of Argentina, Brazil, Canada, Indonesia, Malaysia, Ukraine and the United States.

Figure 7. Total oils/fats imports by region or major country (including the oil contained in seed imports)



Figure 8. Oils/fats exports by major exporters (including the oil contained in seed exports)



anticipated to grow, mainly due to ample exportable supplies. In the case of **Ukraine**, exports are seen expanding under the Black Sea Grain Initiative, although this would depend on the extension of the agreement. Conversely, **Argentina's** exports are expected to decline for the third consecutive season, following successive reduced soybean harvests.

MEALS AND CAKES⁷

Global meals/cakes production to grow in 2022/23

Consistent with the predicted recovery in global oilseed output, global production of meals/cakes

⁷ This section refers to meals of all origins. In addition to the products derived from the oilcrops (discussed under the section on oilseeds), fishmeal and meals of animal origin are included.

in 2022/23 is expected to rise by 3.4 percent to 163.9 million tonnes (expressed in protein equivalent). As regarding individual meals, soy and rapeseed meal outputs are forecast to increase, while that of sunflower meal is anticipated to drop.

Global supplies of meals/cakes, which comprise the closing stocks of the preceding season, are pegged marginally above its year-earlier level, chiefly linked to expectations of higher meal outputs. This is the case for **Brazil, Canada, the European Union, India** and the **Russian Federation**. By contrast, markedly lower meal production in **Argentina** is expected to result in reduced supplies for the fourth consecutive season. Domestic availabilities in **China** and the **United States** could also decline, due to much lower carry-in stocks and smaller oilmeal production, respectively.

Growth in world meals/cakes consumption to remain subdued in 2022/23

World utilization of meals/cakes is forecast to continue growing at a below-average rate of 0.9 percent in 2022/23, primarily due to a lingering lacklustre demand from the livestock industry. Commodity wise, the consumption of soymeal, the product with a predominant share in total meals, is expected to stagnate, while the uptake of rapeseed and sunflower meals could register moderate growth.

The foreseen subdued growth of global meals/cakes utilization is largely tied to an anticipated soft demand in **China**, as protracted low margins in the live hog sector continue to weigh on protein meal consumption. Furthermore, the country keeps seeking to diminish its reliance on oilseed imports, with the latest action plan released in mid-April aiming to reduce the soymeal inclusion ratio in domestic animal feed in the coming years. Elsewhere, oilmeal consumption is expected to expand in **Brazil, the European Union, Mexico, Thailand, the United States** and **Viet Nam**, amid lower costs relative to the previous season.

Global meals/cakes inventories to recover in 2022/23

With global production of meals/cakes forecast to exceed utilization, ending stocks (including the meal contained in seed stocks) are expected to recover year-on-year to 26.0 million tonnes (expressed in protein equivalent) in 2022/23. Inventories of soy and rapeseed meals are projected to increase from the previous season, outweighing a foreseen reduction in sunflower meal stocks.

Figure 9. Global production and utilization of meals/cakes (in protein equivalent)

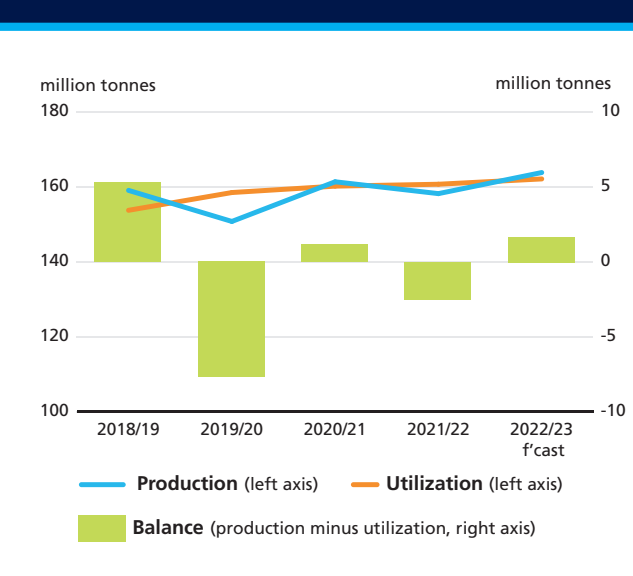
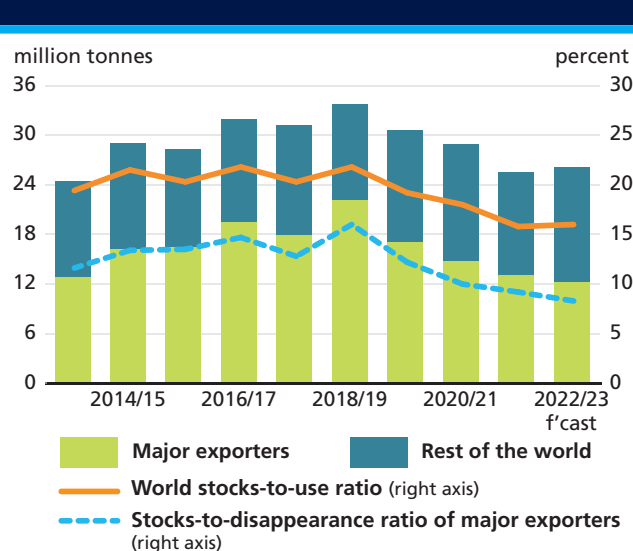


Figure 10. World stocks and ratios of meals/cakes (in protein equivalent and including the meal contained in seeds stored)



Reserves in **Brazil, Canada** and the **Russian Federation** are anticipated to accumulate, mainly on account of rising domestic supplies, while **China** is expected to replenish its inventories after having to release stocks during the preceding season. By contrast, expected lower domestic outputs are predicted to prompt considerable stock drawdowns in both **Argentina** and **Ukraine**.

Based on these forecasts, the global stocks-to-use ratio for meals/cakes is forecast to recover somewhat from the

Figure 11. Total meal/cake imports by region or major country (in protein equivalent and including the meal contained in seed imports)

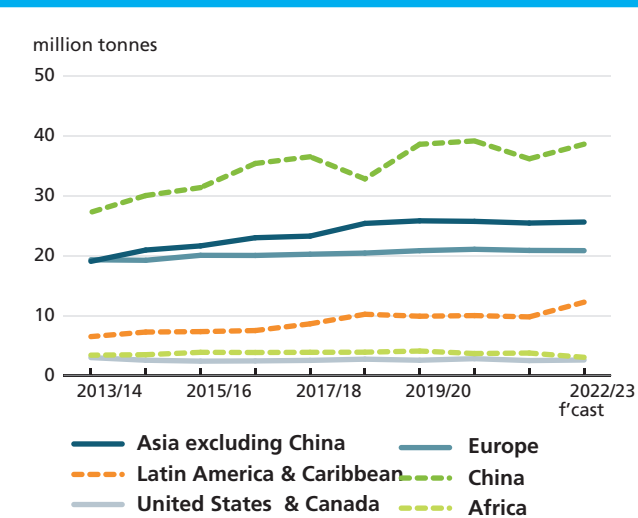
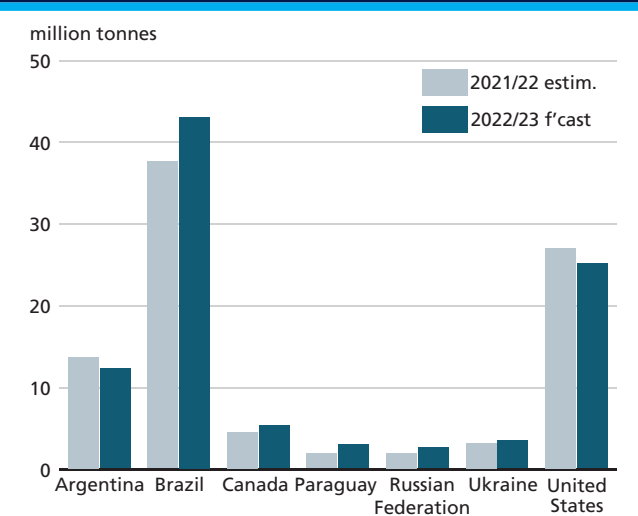


Figure 12. Meal/cake exports by major exporters (in protein equivalent and including the meal contained in seed exports)



level registered in 2021/22, while the major exporters' stocks-to-disappearance ratio could decline for the fourth consecutive season, marking a multiyear low, due to lower forecasts for stocks in several exporting countries.⁸

International meals/cakes trade likely to rebound in 2022/23

Global trade in meals/cakes (including the meal contained in traded oilseeds) in 2022/23 is forecast to rebound by

⁸ The group of major exporting countries consists of Argentina, Brazil, Canada, India, Indonesia, Malaysia, Paraguay, the Russian Federation, Ukraine, the United States and Uruguay.

4.7 percent after contracting in the last two seasons.

Transactions in soy, rapeseed and sunflower meals are all anticipated to increase.

Regarding imports, purchases by **China** are set to bounce back to the near-record level registered in 2019/20 in order to rebuild the country's reserves. Imports by **Mexico, Thailand and Viet Nam** are also forecast to rise, in line with expectations of rising domestic demand. Nevertheless, imports by the **European Union** could stagnate due to ample local availabilities following a favourable rapeseed production. In addition, imports by **Egypt** may drop drastically, reflecting foreign exchange shortages and currency depreciation.

As for exports, shipments from **Brazil, India** and the **Russian Federation** are anticipated to expand due to growing domestic supplies, while recovered rapeseed production could facilitate a marked increase in **Canada's** exports. By contrast, **Argentina** and the **United States** are forecast to export smaller volumes than a year ago, primarily due to lower availabilities.

EARLY PRODUCTION OUTLOOK FOR 2023/24

With the 2022/23 season still ongoing, it is early to make concrete world supply and demand forecasts for 2023/24. Only limited information concerning the new crops is currently available for selected Northern Hemisphere countries, where sowing is underway. In the Southern Hemisphere, planting activities will not start until the last quarter of 2023. As international prices for oilseeds continue to linger above recent averages, the total planted areas could further expand, while yield potentials are also expected to increase, assuming normal growing conditions. Consequently, world oilseeds production is preliminarily predicted to hit an all-time high in 2023/24.

With regard to individual crops, foreseen increases in the global production of soybean, sunflower seed, groundnut, cottonseed and palm kernel could more than compensate for an anticipated lower output of rapeseed. World soybean production is forecast to achieve a new record in 2023/24. In the **United States**, while plantings could stagnate according to intention surveys, an expected increase in yields – thanks to favourable weather thus far – should lead to a bumper harvest. Likewise, an anticipated production recovery in **Argentina** would be chiefly yield-driven, whereas a higher output forecast in **Brazil** would hinge on continued area expansion. Global sunflower seed production is predicted to rebound from the previous season, largely driven by an expected partial output recovery in **Ukraine** due to higher margins relative to grains, although the war could still hinder sowing. By

contrast, world rapeseed production is forecast to drop slightly from the record level registered in 2022/23. While crops in **Canada**, **China** and the **European Union** are all anticipated to continue to expand, a repeat of an outstanding production season in **Australia** is deemed unlikely, with additional uncertainties stemming from the potential return of an El Niño event later in the season.

These highly tentative crop forecasts, combined with prospects of higher global palm oil output, could translate into increased supplies for both vegetable oils and oilmeals for a second consecutive season in 2023/24. Assuming

a continuation of modest growth in global utilization, the forecast world supplies should be sufficient to satisfy projected demand in both markets, and therefore further replenishments of inventories for these products could be expected. This outlook remains subject to numerous uncertainties, notably concerning climate conditions in major producing regions, the evolution of the war in Ukraine, developments in the energy markets, the implementation of national biodiesel blending mandates, and the global economic recovery.

SUGAR



PRICES

International sugar prices at their highest level since October 2011

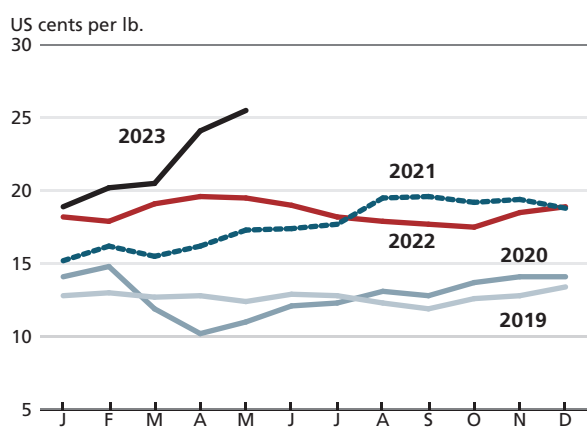
Since the release of the last issue of the Food Outlook report in November 2022, international sugar prices, as measured by the International Sugar Agreement's daily prices for raw sugar, have generally increased. Quotations rose for two consecutive months in November and December 2022, increasing from US 17.5 cents per pound (USD 386.8 per tonne) in October 2022 to US 18.9 cents per pound (USD 417.4 per tonne) in December. After

retreating slightly in January 2023, prices resumed their upward trend in the following months, reaching US 25.4 cents per pound (USD 560.0 per tonne) in May 2023, the highest level since October 2011.

A tighter global sugar balance, following reduced production expectations in **China**, the **European Union**, **India**, **Mexico** and **Thailand**, underpinned the increases in world sugar prices. The slow start of the 2023 harvest in Brazil due to above-average rains, which also raised concerns over the sugar recovery rate, provided additional support to prices. International sugar prices are also influenced by movements in the Brazilian currency, which affects export demand and producer-selling decisions. The Brazilian real has generally appreciated against the United States dollar since December 2022, restraining exports and contributing to raising world sugar prices. Another key element influencing world sugar prices is movements in crude oil prices, which affect the demand for sugarcane-based ethanol. International crude oil prices have generally decreased since mid-2022, encouraging a greater use of sugarcane for sugar production and thus increasing supplies and limiting the increase in prices.

At the current levels, world sugar prices are above production costs for the vast majority of world producers, including Brazil, where the costs of production are estimated at US 16 cents per pound (USD 352.7 per tonne), incentivizing sugar production. In addition, present market conditions point to a higher profitability for millers in Brazil using sugarcane to produce sugar rather than ethanol. The

Figure 1. International sugar prices*



* as measured by the International Sugar Agreement (ISA)

global economy is predicted to rebound in 2024, particularly in emerging economies and low- and middle-income countries, which should boost sugar consumption. Based on these assumptions, preliminary forecasts for the 2023/24 season point to a consecutive year of global production surplus, although modest. The positive outlook for the 2023 sugarcane crops in Brazil, despite harvest delays, combined with the expected global production surplus in 2023/24, should weigh on world sugar prices.

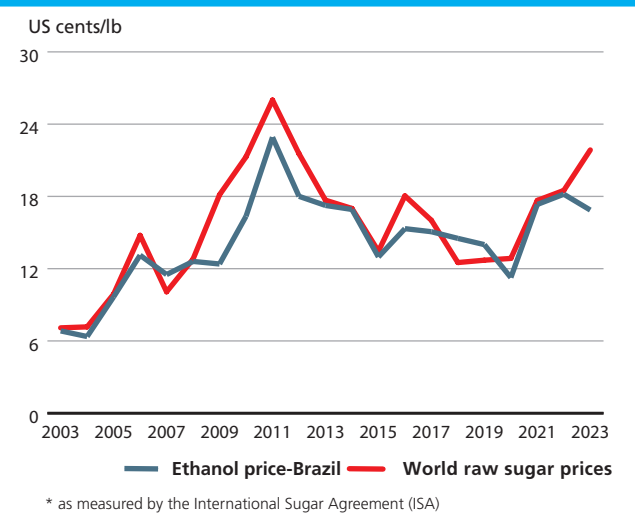
PRODUCTION

World sugar production in 2022/23 revised downwards

World sugar production in 2022/23 (October/September) is forecast at 177.5 million tonnes, up 1.9 million tonnes, or 1.1 percent, from 2021/22, mainly as a result of a foreseen production recovery in **Brazil**. However, this forecast is below FAO's preliminary expectations, presented in the November 2022 issue of Food Outlook, due to lower-than-earlier-anticipated outputs in **China**, the **European Union**, **India**, **Mexico** and **Thailand**.

In *South America*, latest indications point to a likely significant production recovery in 2022/23, mostly due to a bumper sugarcane crop anticipated in **Brazil**, the world's largest producer and exporter of sugar. Favourable weather conditions, benefiting both crop yields and sugar recovery rates, are foreseen to trigger the increase in output. Production is forecast to rise to 40 million tonnes, 24.6 percent up from the reduced level in 2021/22. Brazil's sugar output is also influenced by changes in the ethanol parity price – the price of raw sugar below which it becomes more profitable to produce ethanol instead of

Figure 3. World sugar prices* and Brazil ethanol prices, in raw sugar equivalent



sugar. Based on current market conditions, the estimated parity price of US 10.6 cents per pound (USD 233.1 per tonne) is well below the current level of international raw sugar prices, indicating a higher profitability from producing sugar than ethanol. In the key producing area of São Paulo, 51 percent of the sugarcane harvest was used to produce sugar from October 2022 to April 2023, the highest share recorded in the corresponding period in most recent years. Elsewhere in South America, sugar production is anticipated to decline slightly in **Argentina**, while it is forecast to remain relatively stable in **Colombia**, the region's second largest producer.

In *Central America and the Caribbean*, 2022/23 sugar production in **Mexico** is forecast sharply down from the previous year. Despite the increase in the harvested area,

Figure 2. World sugar production by region

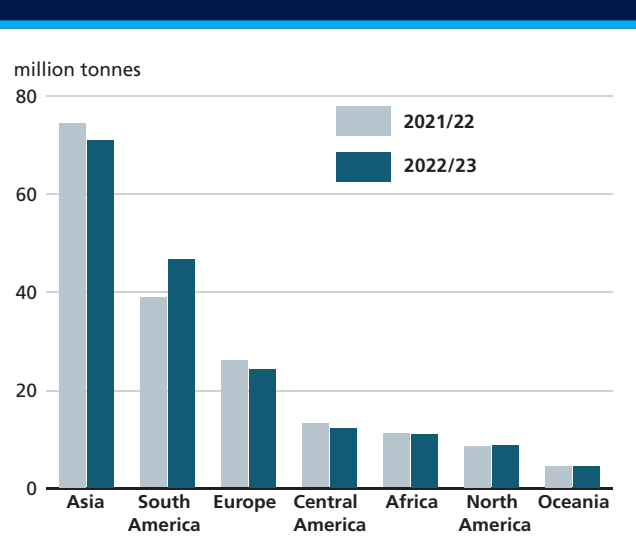


Figure 4. Sugar production in major producing countries

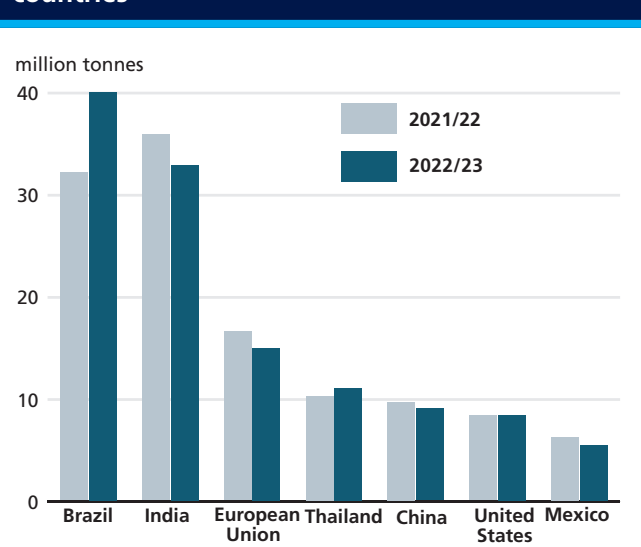


Table 1. World sugar market at a glance

	2020/21	2021/22 <i>estim.</i>	2022/23 <i>f'cast</i>	Change: 2022/23 over 2021/22
	<i>million tonnes</i>			<i>%</i>
WORLD BALANCE				
Production	169.1	175.6	177.5	1.11
Trade	60.8	61.3	60.7	-1.00
Total utilization	170.0	174.5	176.1	0.93
Ending stocks	111.8	112.6	113.8	1.03
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/yr)	21.7	22.1	22.1	0.09
LIFDC (kg/yr)	12.8	13.0	12.9	-0.61
World stocks-to-use ratio (%)	65.7	64.5	64.6	0.10
ISA DAILY PRICE AVERAGE (US cents/lb)	2021	2022	2023 <i>Jan-May</i>	Change: Jan-May 2023 over Jan-May 2022 %
	17.67	18.49	21.83	15.87

unfavourable weather conditions and reduced use of fertilizers due to higher costs have negatively affected both sugarcane yields and sugar recovery rates, leading to successive downsizing of the production forecast. In **Guatemala**, sugar output is also expected to decline slightly due to unfavourable weather conditions. In **Cuba**, input shortages and logistical constraints are anticipated to negatively affect the 2022/23 sugar production.

In **Africa**, total sugar production for 2022/23 is set to remain close to its 2021/22 level, with a lower output in **Egypt**, the continent's largest producer, likely to be offset by a larger crop in **South Africa**. The decline in **Egypt** mostly rests on a lower sugarbeet output forecast, while sugarcane production is anticipated to remain relatively steady. By contrast, an increase in outturn is expected in **South Africa**, the continent's second largest producer, due to higher crop yields as well as greater sugar recovery rates, more than offsetting a decline in the area due to higher input costs.

In **Asia**, total sugar production in 2022/23 is forecast to decline for the first time in the past two years. Most of the decrease stems from lower outputs foreseen in **China**, **India** and **Pakistan**, more than offsetting an expected increase in **Thailand**, where production is below earlier expectations. In **China**, below-average rains in Guangxi, the largest sugar producing region, affected sugarcane yields, leading to a lower-than-earlier expected sugar production forecast, nearly 6 percent lower than in 2021/22. Similarly, in **India**, sugar production in 2022/23 is

forecast to decline by more than 8 percent from last year's record crop. While preliminary forecasts pointed to a slight year-on-year decline due to a higher diversion of sugarcane to ethanol production, adverse weather conditions during the season affected sugarcane yields and dampened further production prospects. In **Thailand**, the 2022/23 sugarcane harvest is estimated to be nearly 2 percent higher than in 2021/22, but more than 10 percent below previous expectations on the back of dry weather conditions and elevated fertilizer prices, which limited fertilizer application and area expansion. Output is also set to decline in **Pakistan** due to crop damage from flooding last year. By contrast, in **Türkiye**, sugar production in 2022/23 is anticipated to increase from the previous year, mainly reflecting an expansion in planted area in response to higher government purchasing prices.

In **Europe**, the latest forecast points to a 7-percent production fall from last year, mainly mirroring a drop in the **European Union**. Latest official estimates for the **European Union** indicate a nearly 10-percent decline in sugar output in 2023/23, due to a decline in area and lower crop yields along with a lower sugar recovery rate, affected by severe summer drought conditions in several countries. Similarly, in the **United Kingdom of Great Britain and Northern Ireland**, production in 2022/23 is anticipated to decline mainly on account of lower yields, due to adverse weather. By contrast, in the **Russian Federation**, production in 2022/23 is expected to increase, following a growth in plantings and an increase in average sugarbeet yield. Sugar production in **Ukraine** is set to decline due to a contraction in the sugarbeet area and operational constraints associated with the ongoing war. Nevertheless, production is foreseen to meet domestic requirements, while planting of the 2023/24 crops is progressing, and early indications point to a 20-percent increase in area.

In the rest of the world, production in the **United States of America (United States)** is forecast to grow, mainly reflecting an increase in sugarcane output stemming from higher yields, while the sugarbeet outturn is forecast to remain at around its level in 2021/22. In **Australia**, the 2022/23 sugar production is anticipated to be only slightly higher year on year, as unseasonal rains during harvest benefited sugarcane yields but negatively affected the sugar recovery rate.

UTILIZATION

Sugar consumption seen increasing moderately in 2022/23

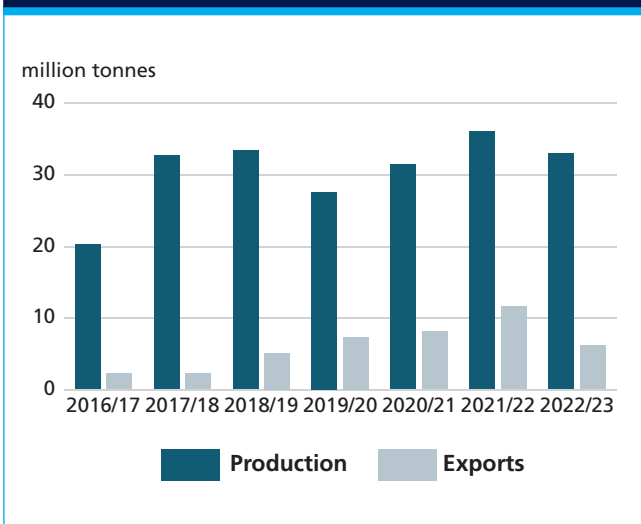
Global sugar consumption is forecast to reach 176.1 million tonnes in 2022/23, up 1.6 million tonnes or 0.9 percent from 2021/22. Although consumption is foreseen to increase for the third successive season in 2022/23, the growth is anticipated to be moderate due to a projected deceleration in global economic growth in 2023 and high world sugar prices. According to the World Economic Outlook of the International Monetary Fund (IMF), growth in the global economy in 2023 is projected to fall from 3.4 percent in 2022 to 2.8 percent in 2023. Economic growth mostly affects the derived demand for sugar as the beverage and food processing sectors – which account for the bulk of aggregate sugar use – are influenced by changes in economic conditions. The anticipated expansion in global sugar intake, combined with the downward revision to global production, should result in a smaller world sugar production surplus in 2022/23, down from the 4.9 million tonnes predicted in November 2022 to 1.4 million tonnes.

The year-on-year increase in world sugar consumption in 2022/23 is expected to be driven by countries in Asia and Africa, mainly as a result of population and income growth, although economic activity is projected to slow down in 2023. In **India**, the world's largest sugar consuming country, consumption is expected to increase by 1.3 percent to 27.5 million tonnes. In **China**, the world's second largest sugar consumer, the rebound of the country's economy after COVID-19-related containment measures were lifted in December 2022 is expected to support a growth in

sugar consumption in 2022/23. Similarly, in **Indonesia**, with a significant decline in the number of COVID-19 cases reported, the economy is projected to continue to recover, while demand for sugar, including from the food processing sector, is expected to grow by 2.6 percent in 2022/23. In Africa, the decline in the economic growth foreseen in sub-Saharan African countries in 2023 will likely limit sugar consumption in 2022/23. In Latin America and the Caribbean, sugar consumption in 2022/23 is foreseen at a moderately higher level, while in Europe, intake is expected to decrease from a year earlier level, mainly due to high prices. According to the latest available information, the average price of white sugar in the European Union in February 2023 was 83 percent higher than in the corresponding period in 2022 due to the smaller harvest and increasing cost of sugar refining. Consumption is also anticipated to drop in **Ukraine** because of the outflow of a large number of people from the country, coupled with the limited production capacity of the domestic food industry because of the war. Elsewhere, consumption is predicted to grow by 1 percent in the **United States**. With the current prospects, global per capita sugar consumption in 2022/23 is estimated at 22.1 kg, virtually unchanged from 2021/22.

Several elements of uncertainty further characterize the prospects for sugar consumption. These relate to the future developments regarding the war in Ukraine as well as concerns about the recent financial sector turmoil and high inflation levels, which could further deteriorate the global economic outlook. Changes in crude oil prices, a key element for the profitability of sugar crop-based ethanol production, remain a major source of uncertainty for the sector, which could impact sugar availability for consumption. Developments in world and domestic sugar prices and movements in the value of currencies with respect to the United States dollar will be key drivers to monitor.

Figure 5. India sugar production and trade



TRADE

World sugar trade to contract slightly in 2022/23

FAO's forecast for world trade in sugar in 2022/23 (October/September) is currently pegged at 60.7 million tonnes, down 1 percent from the previous season. The anticipated contraction is the result of reduced exportable supplies in the **European Union, India** and **Mexico**, more than offsetting foreseen greater exports from **Brazil**.

Brazil's exports in 2022/23 are forecast to increase by more than 10 percent from the previous season's reduced level to 28.5 million tonnes, reflecting an expected significant rebound in production. The country is seen

as accounting for nearly 47 percent of world exports in 2022/23, consolidating its position as the world's largest sugar exporter. The bulk of Brazilian sugar sales is in raw form, which, in the current season, has mainly been shipped to **Algeria, China, Morocco and Nigeria**. Following an increase in sugar output, **Thailand's** exports are forecast to recover for the second consecutive year in 2022/23 and reach 9 million tonnes. In the current season, Thailand's sugar, both in raw and refined forms, has been shipped mostly to neighbouring countries, including **Cambodia, Indonesia, the Philippines, and South Korea**. **India's** exports in 2022/23 are forecast at 6 million tonnes, nearly half their record level in the previous season. This follows the government's decision in November 2022 to limit exports in order to ensure adequate domestic availabilities and keep prices in check. Since June 2022, sugar exports have only been allowed with permission from the Department of Food and Public Distribution under the Ministry of Consumer Affairs, Food and Public Distribution. Shipments from **Australia**, the world's fourth largest raw sugar exporter, are forecast to increase in 2022/23, while those from **Mexico** are expected to fall significantly due to lower domestic availabilities. Similarly, the expected reduced output in the **European Union** will likely result in a sharp year-on-year decline in sugar exports. By contrast, sugar exports from **Ukraine** have surged in the current season, reflecting higher exports to the European Union. This follows the regulation adopted by the European Union in May 2022 to support Ukrainian exports, allowing for full trade liberalization for one year starting in June 2022. In early May 2023, the regulation was extended for an additional year until 5 June 2024.

On the import side, slower global economic activity, coupled with high world sugar prices, have reduced global demand. Purchases by Asian countries are forecast to decrease in 2022/23 by 1.2 percent year on year, mainly reflecting lower imports by **China**. Despite expectations of a contraction in production and a rebound in consumption, high world sugar prices and adequate domestic availabilities are likely to curb purchases. In the first seven months of the season, the country's imports were 12 percent below the volume imported during the corresponding period in 2021/22. In **Indonesia**, the world's largest sugar importer, purchases are forecast to remain broadly unchanged year-on-year. Imports by African countries are also forecast to contract in 2022/23. This mainly reflects lower demand by **Nigeria** compared to a record level of purchases in the previous season, when consumption registered a significant rebound from the COVID-19-related contraction. In Europe, imports by the **European Union** in 2022/23 are forecast to exceed those of the previous season by more than

30 percent, on the back of high domestic sugar prices and lower production. In the first five months of the current season, **Brazil** followed by **Ukraine** and the Everything-but-Arms and Economic Partnership Agreement countries were the main import origins. In the rest of the world, purchases by the **United States** are forecast to decline in 2022/23, mainly reflecting lower volumes from **Mexico** and a year-on-year decline in imports outside the quota volume.

Figure 6. World sugar exports by region

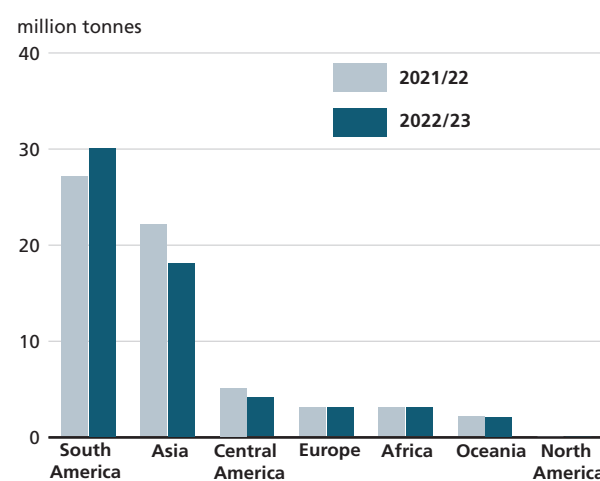
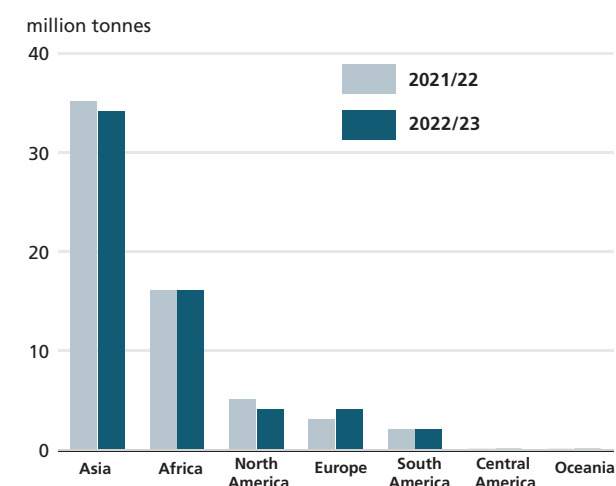


Figure 7. World sugar imports by region



MEAT AND MEAT PRODUCTS

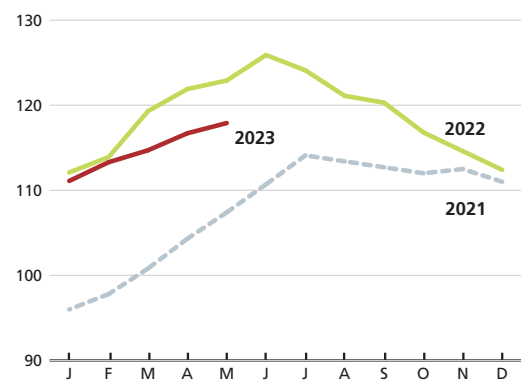


PRICES

International meat prices trended downward due to subdued global demand

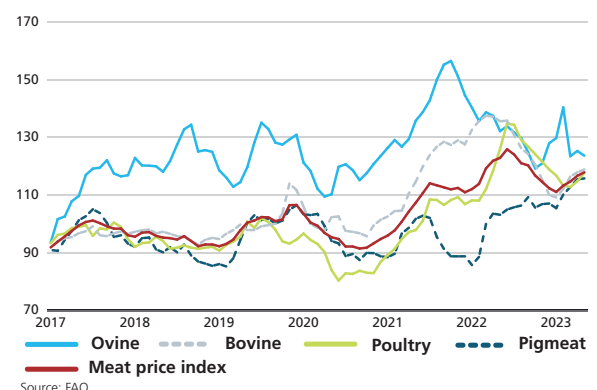
In May, the FAO Meat Price Index averaged 117.9 points, an 8.1 points decline from its all-time high in June 2022. The decline was underpinned by decreases in price indices for poultry, bovine and ovine meats, which were principally driven by subdued import purchases stemming from economic hardships, depreciation of national currencies and limited food services sales. Poultry meat imports by China – the world's largest poultry meat importer – were relatively subdued in the second half of 2022 as a decline in domestic pig meat prices led consumers to switch to their preferred red meat protein, exerting downward pressure on international poultry prices. Moreover, poultry meat export availabilities also rose in some leading exporting countries, although at a slower pace, despite high input costs and the impact of Highly Pathogenic Avian Influenza (HPAI) outbreaks, further weighing on poultry meat prices. However, poultry prices rebounded in April 2023 following nine months of continuous declines, as import demand increased from Asia while supply limitations arising from widespread HPAI outbreaks continued in many regions. As for bovine meat in the latter part of 2022, the availability of exportable supplies increased mainly as a result of significantly increased production and limited internal demand in leading meat exporting countries, especially Australia and Brazil, putting downward pressure on

Figure 1. FAO monthly meat price index (2014-2016 =100)



Source: FAO.

Figure 2. FAO monthly international price indices for bovine, ovine, pig and poultry meats (2014-2016 =100)



Source: FAO.

international prices. Nevertheless, bovine meat prices moved upwards from February 2023 on supply tightness in the United States and increased demand from China after the removal of a one-month ban imposed on Brazilian bovine meat due to an atypical case of mad cow disease detected in the South American country by the end of February 2023. International ovine meat prices also trended downward since reaching an all-time high in October 2021, reflecting increased supplies, especially from Australia.

Following the near-uninterrupted month-on-month increases last year, international pig meat prices continued to increase in 2023, principally due to constrained supplies from leading exporters, especially the European Union, amid scaled-down production in anticipation of lower demand and ASF-related import restrictions imposed by leading importing countries.

Table 1. World meat market at a glance

	2021	2022 <i>estim.</i>	2023 <i>f'cast</i>	Change: 2023 over 2022
	<i>million tonnes (carcass weight equivalent)</i>			%
WORLD BALANCE				
Production	356.9	362.6	363.9	0.4
Bovine meat	74.9	76.3	76.1	-0.2
Poultry meat	138.2	140.8	142.7	1.3
Pig meat	120.9	122.3	121.7	-0.5
Ovine meat	16.4	16.7	16.8	1.0
Trade	42.0	41.8	42.1	0.6
Bovine meat	12.1	12.6	12.8	1.2
Poultry meat	15.8	16.3	16.4	1.0
Pig meat	12.7	11.5	11.4	-1.0
Ovine meat	1.1	1.1	1.1	5.2
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	45.0	45.2	45.0	-0.4
Trade - share of prod. (%)	11.8	11.5	11.6	0.2
FAO MEAT PRICE INDEX (2014-2016=100)	2021	2022	2023 <i>Jan-May</i>	Change: Jan-May 2023 over Jan-May 2022 %
	108	119	115	-2.8

OVERALL PRODUCTION AND TRADE

World meat output expected to expand marginally in 2023

Global meat production is forecast to reach 364 million tonnes (carcass weight equivalent) in 2023, up marginally (+0.4 percent) from 2022, as expected

output increases in **Brazil, China, Pakistan, Australia** and **Viet Nam**¹ more than offset anticipated contractions in the **European Union**, the **United Kingdom of Great Britain and Northern Ireland (United Kingdom)**, **Argentina** and **Canada**.

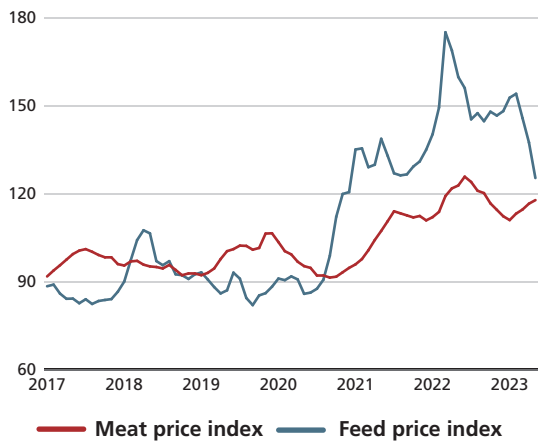
Brazil's overall meat output is forecast to expand by 2.3 percent to 32 million tonnes, reflecting the anticipated gains in poultry meat output due to rising global demand amid limited supplies from elsewhere, as well as bovine meat production on high supplies of slaughter-ready cattle and lower calf prices. In **China**, meat production is forecast to expand by 0.6 percent, to around 95 million tonnes, on rising farm productivity and higher demand from the hotel, restaurant and institution (HRI) sector with the end of the zero-COVID-19 policy. Despite a recent spike in ASF outbreaks, China's pig meat production is likely to increase slightly in 2023, sustained by improved biosafety systems, better farm management, and stable domestic prices. In **Pakistan**, rising internal demand and recent investments underpin poultry and bovine meat production expansions, leading to the overall growth of meat output. Meanwhile, increased slaughter volumes and heavier carcass weight should boost bovine and ovine meat production in **Australia**, assuming labour shortages are unlikely to constrain meat-processing activities. In **Viet Nam**, pig meat production is likely to increase, driven by a sow replenishment and the implementation of biosecurity systems to contain ASF outbreaks.

Meat output in the **European Union** is predicted to fall for the second consecutive year in 2023, with a significant drop in pig meat resulting from a smaller breeding herd, scaled-down operations in the face of ASF outbreaks and high operational costs. While efforts to bolster smallholder farm productivity – as part of the new Common Agriculture Policy (CAP) 2023-2027 – may contain the drop, they may be insufficient to reverse the decline this year. Negative farm margins could result in a breeding herd contraction, causing pig meat output to drop in the **United Kingdom**. **Argentina's** meat output is expected to decline on account of lower bovine meat output amid a reduction in the calf crop, high input costs and poor pasture conditions. Meanwhile, labour shortages and high operating costs could constrain pig meat production, lowering the country's overall meat output.

Regarding meat output by main categories, poultry production is forecast to drive the overall meat output expansion, with a marginal gain in ovine meat and declines in pig and bovine meats.

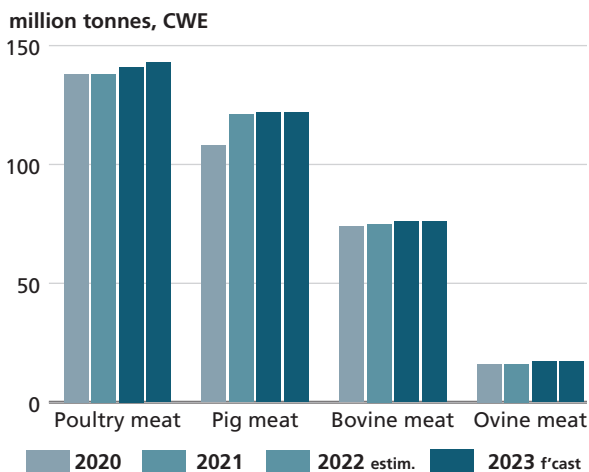
¹ Unless otherwise stated, names of regions and countries throughout this chapter are listed by the magnitude of the volume change.

Figure 3. FAO meat and feed price indices (2014-2016 =100)



Source: FAO.

Figure 4. Global meat production by type



Source: FAO.

Increased food services sales to drive global meat trade

Global trade in meat and meat products are pegged at 42 million tonnes (carcass weight equivalent) in 2023, up 0.6 percent from 2022. The increase mainly reflects the likely rebound in meat import demand by **China** after two years of contraction, with increased food services sales following the end of the country's COVID-19-related restrictions. Elsewhere, high imports are also projected for **Saudi Arabia**, the **European Union**, **Iraq** and **Canada**, among others, primarily due to tight domestic supplies. However, these foreseen import expansions will likely be almost entirely offset by significantly lower imports by the **United States** stemming from rising supplies due to production increases in the poultry and pig meat

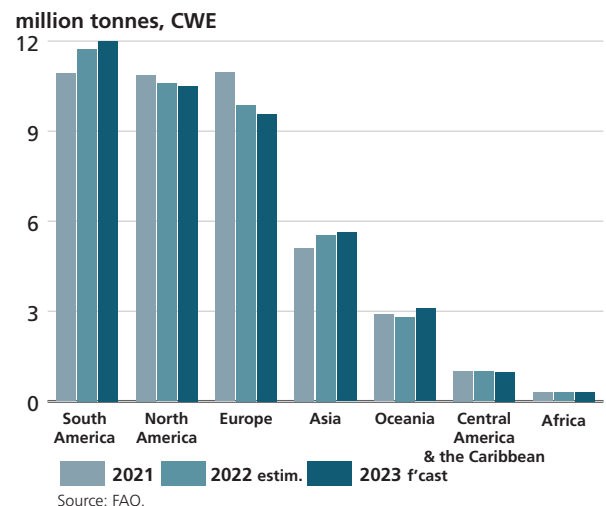
sectors, and in the **Russian Federation** and **Japan**, due to increases in overall domestic availabilities.

Exports by **Brazil**, **Australia**, **India** and **China**, among other countries, are predicted to grow in 2023. In **Brazil**, meat exports are forecast to increase by 5 percent, facilitated by the country's animal disease-free status, competitive prices and the diversification of export markets, consolidating Brazil's share in global meat trade at around 23 percent. With growing bovine and ovine meat production, **Australia** is likely to increase its shipments, especially to North America and East Asia. Benefiting from price competitiveness and streamlined halal certification, **India** is expected to export more bovine meat (carabeef²) to Southeast Asia, especially Malaysia and Viet Nam, and some Middle Eastern markets, namely Iraq and Saudi Arabia, although exports to Egypt may fall further due to the country's currency depreciation. In **China**, the export growth results from foreseen increased pig meat exports to neighbouring countries with rising demand from the HRI sector.

Lower exports are forecast for the **European Union**, the **United States** and most South American countries, particularly **Argentina**, **Chile**, **Uruguay** and **Paraguay**. Production losses due to animal diseases, especially ASF and HPAI, and disease-related trade restrictions in importing countries underpin much of the anticipated export drop in the **European Union**. Meanwhile, an anticipated drop in bovine meat production is behind the expected export reduction in the **United States**. In **Argentina**, tight supplies, government controls and HPAI detections in commercial farms could cause meat exports

² Meat derived from water buffalo

Figure 5. Global meat trade by region



Source: FAO.

to fall. In **Chile**, the anticipated decline is due mainly to the spread of HPAI and consequent export suspensions. Import restrictions imposed by the Russian Federation could curtail meat exports from **Uruguay**, while the anticipated decline in exports from **Paraguay** stems from the softening demand from China.

POULTRY MEAT

Production to expand despite widespread avian influenza outbreaks

Global poultry meat output is forecast to reach 143 million tonnes in 2023, up 1.3 percent year-on-year, with much of the growth forecast to be concentrated in the **United States** and **Brazil**. Moreover, after two years of decline, a rebound in production is expected in the **European Union**, while production contractions are likely in **Egypt** and the **Islamic Republic of Iran**.

Despite concerns over widespread HPAI outbreaks in several South American countries, **Brazil's** poultry meat output is forecast to rise by 2.7 percent, consolidating its position as the third largest poultry meat producer in the world, benefitting from the country's disease-free status, despite a case of HPAI detected, but so far limited to wild birds, lower maize prices and ample supplies. The **United States** and the **European Union** are forecast to increase their poultry meat production, helped by a noticeable decline in new HPAI outbreaks. Meanwhile, significant increases in poultry meat production are also forecast for several countries, including **Pakistan, China, Mexico** and **Viet Nam**, due to increases in food services sales and, in some cases, rising demand for poultry meat as a more affordable alternative to more expensive red meat. By contrast, significant production downturns are foreseen in **Egypt, the Islamic Republic of Iran** and **Japan** in response to lower domestic demand.

Globally, elevated feed prices continue to impact most commercial poultry farms, although increasing maize and soybean availabilities and the price declines augur well for the industry.

Poultry meat import demand to remain strong amid tight supplies

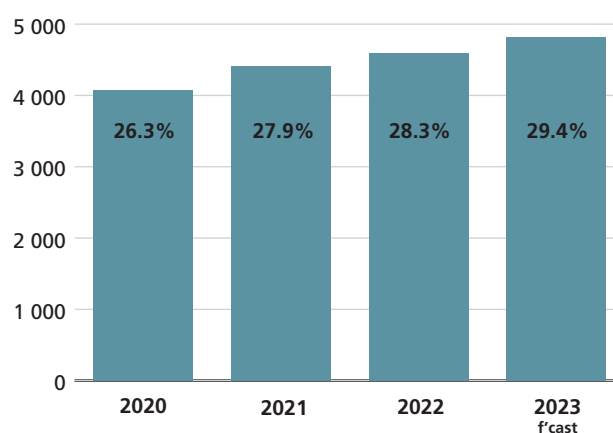
Global poultry meat trade are forecast to reach 16.4 million tonnes in 2023, up 1 percent from 2022, driven by likely expansions in imports by Asia and Central America and the Caribbean, which could be partially offset by downturns expected in other regions. Significant increases in poultry meat imports are expected for **China, Saudi Arabia, Iraq, the European Union** and **South Africa**, as well as in the **Philippines, Canada** and the

Democratic Republic of the Congo, due to growing internal demand amid tight domestic supplies, high prices, more active food services sales and the relative affordability. By contrast, significant import curtailments are predicted for **Angola, the United Kingdom, Viet Nam** and the **Republic of Korea**, mostly on recoveries in domestic production.

Regarding exports, bolstered by its disease-free status and competitive prices, **Brazil** could supply as much as 29 percent of global poultry exports in 2023, while nearly 25 percent are expected to be supplied by the **United States**, fostered by regionalization agreements with key importing partners that limit import bans only to those regions affected by HPAI. Poultry meat exports are also forecast to expand from Ukraine due to the duty free access granted by the European Union, and Türkiye on strong demand from neighbouring countries. By contrast, poultry meat export contractions are likely in **Argentina, Chile** and the **European Union** due to HPAI-related import restrictions by key trading partners and narrow price competitiveness.

Figure 6. Brazil poultry meat exports and its global market shares

thousand tonnes, CWE



Source: FAO, based on Trade Data Monitor (TDM)

BOVINE MEAT

Global production to decline marginally

World bovine meat production in 2023 is pegged at 76 million tonnes, down marginally from last year, as output drops in the **United States, Argentina** and the **European Union** are likely to more than offset foreseen gains in **Brazil, China, Australia** and **India**. In the **United States**, a decline in the cattle inventory and the retention of heifers for breeding amid high calf prices are likely to result in a drop in bovine meat production. Likewise, a

decline is expected in **Argentina**, where La Niña weather pattern has resulted in forage shortages and higher feed costs. In the **European Union**, lack of forage, high feed costs and declining herd numbers could lead to the fifth consecutive year of production drops, even after accounting for an increase in dairy cattle slaughter due to weak farm gate milk prices and high beef valuations.

In **Brazil**, increased cattle slaughter, amid lower calf prices and strong domestic and international demand, should lift bovine meat output, whereas in **China**, high carcass weight, resulting from investments in genetic improvements and fattening efficiency, along with increased demand from the HRI sector following the lifting of the COVID-19 restrictions, are behind the foreseen expansion in bovine meat output. In **Australia**, increasing slaughter volumes following a recent herd-rebuilding phase and increased carcass weight (due to greater feed availability and improved pasture conditions) could lift bovine meat output. Meanwhile, output in **India** could rise by about 2 percent, bolstered by a higher demand from the Middle East and Southeast Asia and relatively smooth processing activities.

Higher exportable supplies in Australia will drive trade expansion

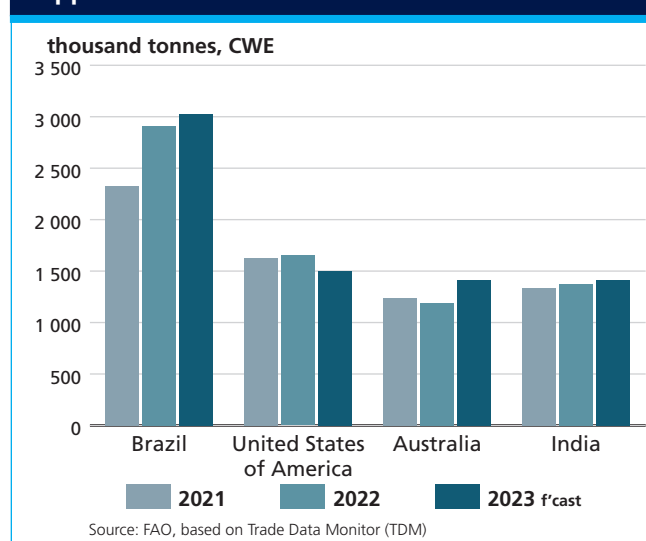
World bovine meat trade are forecast at 12.8 million tonnes in 2023, up 1.2 percent year-on-year, principally sustained by anticipated increases in imports by the **United States, Viet Nam, European Union** and **Indonesia**, mostly on tight internal supplies. While **China** is expected to be the largest bovine meat importer, accounting for 31 percent of global imports, its purchases in 2023 are likely to remain stable, in view of the rising national production.

Much of the increased import demand for bovine meat is expected to be met by increased exports from **Australia, Brazil, India** and **Mexico**. By contrast, sales by the **United States, Argentina, Uruguay** and **Paraguay** will likely contract, while those by the **European Union** and **New Zealand** could decline slightly. In **Australia**, increased production and higher import demand from the country's main trading partners should support a rebound in exports in 2023 after three successive years of decline, allowing Australia to regain its position as the world's third-largest bovine meat exporter. **Brazil's** exports may reach a historical peak of over 3 million tonnes, rising by around 4 percent, on account of the country's export price competitiveness, weaker Brazilian currency real and tight exportable availabilities from competitor countries. China is expected to be Brazil's main destination of bovine meat exports amid export licenses granted to more Brazilian processing plants and the quick end to the ban on bovine meat imports imposed at the

end of February after the detection of an atypical case of bovine spongiform encephalopathy (BSE). Exports from **India** are heading towards a 2 percent expansion due to its competitive prices and new arrangements with countries in the Middle East and East Asia requiring halal certifications. Similarly, **Mexico** could see its exports grow in 2023, owing to increased bovine meat production and the rising global demand for speciality cuts and leaner beef.

By contrast, lower exportable availabilities and limited price competitiveness are expected to cause exports from the **United States** and **Argentina** to drop, although the removal of a 20-year ban by Mexico on Argentinian imports could partially offset the decline. Exports from **Uruguay** could fall due to lower exportable availabilities and potentially lower import purchases by China. Meanwhile, shipments from **Paraguay** are likely to fall due to the import prohibition on its four largest bovine meat exporting establishments imposed by the Russian Federation in September 2022. Likewise, limited exportable supplies in the **European Union** and **New Zealand** should lead to export contractions.

Figure 7. Bovine meat exports by global leading suppliers



PIG MEAT

Global production to contract mainly due to output declines in Europe

Global pig meat production is pegged at 121.7 million tonnes in 2023, a decline of 0.5 percent from 2022, with significant decreases expected in the **European Union, the United Kingdom, Canada** and **Ukraine**, among others, partially counterbalanced by increases foreseen in **China, the United States** the **Russian Federation** and **Viet Nam**. Despite some declines expected in feed prices, pig meat production in

the **European Union**, is forecast to fall by as much as 5 percent year-on-year to 21.1 million tonnes in 2023 on weaker producer margins, ASF outbreaks and smaller breeding herds. Similarly, a production scale-down is expected in the **United Kingdom** due to a sharp decline in breeding herds, lower carcass weight and a decline in pig meat demand. Whereas in **Canada**, an output decline could result from lower slaughter numbers and a reduction in carcass weights from the highs reached in 2022. In **Ukraine**, the damages to farms and infrastructure caused by the ongoing war are behind the anticipated decline in pig meat production.

Although at a slower pace than in the previous two years, production in **China** is expected to continue growing with improved farm management, together with elevated slaughter due to farmers' efforts to minimize potential financial losses in the face of ASF outbreaks. In **Viet Nam**, higher sow replenishment, improved biosecurity arrangements and stricter transportation controls against ASF spread may spur production growth. A production rebound is also expected in the **United States** on a higher slaughter numbers and heavier weights, whereas, in the **Russian Federation**, a further increase in pig meat production is likely amid rising productivity.

Global trade seen declining marginally

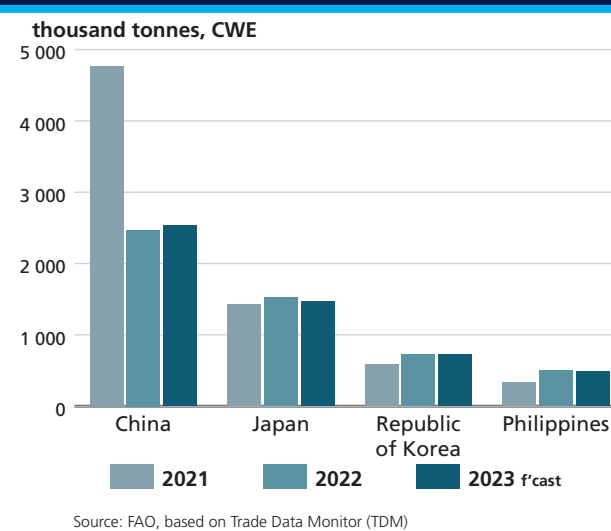
Global trade in pig meat is forecast at 11.4 million tonnes in 2023, down 1 percent from 2022, principally due to tight exportable availabilities in leading exporting countries and limited import purchases amid rising domestic production and high stocks, especially in East Asia. The latest forecasts point to reduced pig meat imports by the **United States, Japan, Mexico, Viet Nam** and the **Philippines**, with likely higher imports by the **United Kingdom, China, Canada, Uruguay** and the **Republic of Korea**. A production rebound from 2022 is likely to lead the **United States** and **Japan** to import less this year. Similarly, domestic production recoveries could lead to subdued imports by **Viet Nam** and the **Philippines**, even though the continuation until 31 December 2023 of the reduced import tariff in the latter may encourage more imports. In **Mexico**, the expected continuation of the production growth should prompt lower imports; however, the decrease might be partially countered by the reopening of its market in November 2022 to competitively-priced Brazilian pig meat.

Limited supplies from internal sources could trigger higher imports by the **United Kingdom** and **Canada**, while in a number of countries, including **China** and **Uruguay**, increasing domestic demand may induce high imports. This is the case, for instance, with regard to

the end of China's zero-COVID-19 policy, which could trigger more demand, particularly from the HRI sector. In the **Republic of Korea**, the temporary tariff reduction introduced last year and the lifting of an import ban in December 2022 on pig meat imports from the United Kingdom will likely raise purchases, although weaker economic conditions may moderate the increase.

Regarding exports, sales by **Brazil, the United States, Chile, China** and the **Russian Federation** are likely to expand, fostered by rising national production and improved trade relationships. By contrast, exports from the **European Union** to China, Japan and the Republic of Korea are expected to drive a reduction of sales in 2023 mainly due to limited price competitiveness amid rising input costs. Pig meat shipments by **Canada** could also fall due to lower exportable availabilities, although increased access to Asian markets may offer export opportunities.

Figure 8. Pig meat imports by leading Asian importers



OVINE MEAT

Positive prospects for ovine meat production anticipated

Global ovine meat output is forecast at 17 million tonnes in 2023, up 1 percent year-on-year, driven by foreseen production increases, especially in **Australia, China, Türkiye** and the **United Kingdom**, more than offsetting potentially lower outputs in **Ethiopia** and the **European Union**. Production in **New Zealand**, the world's second-largest ovine meat exporter, is expected to remain broadly stable as increased carcass weights could nearly offset a decline in production due to lower flock size. Favourable weather conditions, high breeding levels and genetic improvements are anticipated to boost sheep flock

growth this year in **Australia**, increasing carcass weights and slaughter and favouring more production. Rising domestic demand and high prices may stimulate ovine meat production in **China** and **Türkiye**. A high carryover of animals from last year and some increases in breeding stock may increase ovine meat production in the **United Kingdom**, notwithstanding the high input costs.

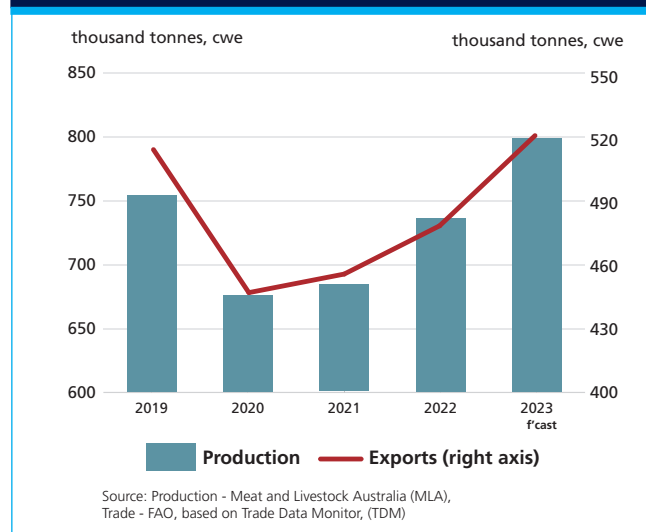
By contrast, a production downturn is foreseen in **Ethiopia** amid the continued poor pasture conditions and water shortages, which have led to a large number of livestock deaths in southern pastoral areas and a significantly shrinking herd size. Likewise, ovine meat output in the **European Union** is forecast to decline on constrained supplies of slaughter-ready animals in line with a lower national sheep flock.

Trade to expand amid easing supplies

World ovine meat exports are forecast to increase in 2023 by 5.2 percent to 1.1 million tonnes, reflecting higher shipments from Oceania to Asian destinations. **Australia's** exports are pegged at 521 000 tonnes, 9 percent above last year, with an increased supply of high-quality sheep meat and emerging market opportunities under the Australia-United Kingdom free trade agreement. Higher exports are also forecast for the **United Kingdom** and **New Zealand**, catering to increased demand from the European Union and China. By contrast, **Ethiopia** and **Uruguay** may export less in 2023 due to shortages in domestic supplies, while for the **European Union**, lower production and high prices could further affect export potential this year.

With regard to imports, **China** is predicted to purchase more ovine meat this year as higher consumer demand is seen exceeding supplies from domestic sources. Imports by the **European Union** are also foreseen to rise, sourced mainly from the United Kingdom. In the **Republic of Korea**, imports could also increase, with a high percentage sourced from Australia, which represented more than 90 percent of the imported ovine meat last year. Solid consumer demand and relative ease in sourcing supplies from Oceania amid abundant supplies could trigger more imports by countries in the Middle East.

Figure 9. Australia ovine meat production and exports



MILK AND MILK PRODUCTS



PRICES

Dairy prices trended downward on subdued import demand despite tight global supplies

The FAO Dairy Price Index (DPI) averaged 118.7 points in May, down 31 points (21 percent) from June 2022, when it reached its highest value over the previous eight years. The decline in prices continued almost uninterruptedly throughout the last eleven months, mostly reflecting lacklustre global demand, especially for spot supplies, notwithstanding generally tight supplies from leading global exporters. Compared to their respective highs in March and April 2022, the price of skim milk powder (SMP) declined the most, followed by whole milk powder (WMP) and butter, primarily driven by sluggish import demand, especially from China, the world's largest dairy importer. However, this was partially compensated by increased imports by countries in the Middle East and Southeast Asia. Market uncertainties stemming from continued market lockdowns caused by the "zero-COVID-19" policy in China, weaker country currencies against the United States dollar and bleak economic growth prospects compounded the price declines. Moreover, market expectations of imminent price declines led to less active buying, further weighing on price quotations. However, by the third quarter of 2022, much of the market apprehension began dissipating when supplies from Oceania's 2022/23 production cycle began entering markets. In addition, steady increases in milk deliveries to processing plants in Western Europe during the fourth quarter of 2022 led to higher

Figure 1. FAO monthly dairy price index (2014-2016=100)

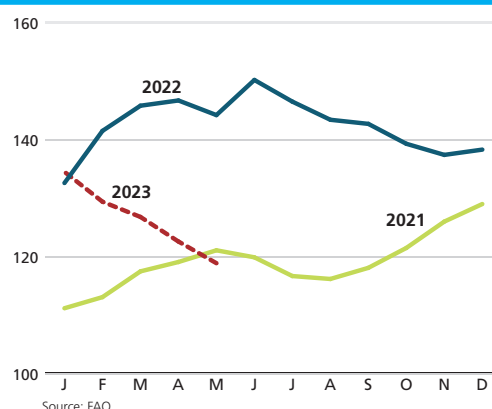
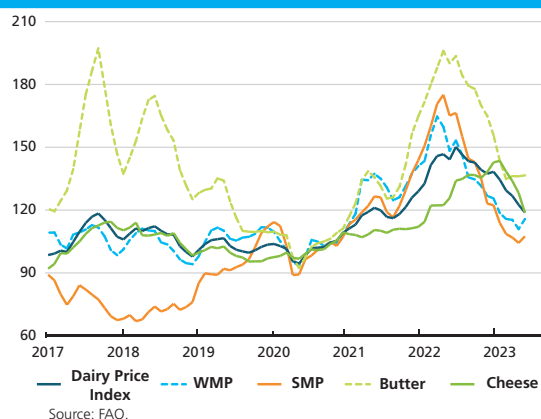


Figure 2. FAO monthly international price indices for butter, cheese, SMP and WMP (2014-2016=100)



export availabilities, further weighing on the prices of most dairy products. By contrast, international cheese prices trended upward with occasional month-on-month declines, reflecting persistent import demand. At the same time, supplies remained tight due to limited milk deliveries and solid internal demand, especially in Western Europe.

International dairy prices could have fallen more steeply had it not been for market apprehensions about supply limitations, as milk production tracked lower during the summer months in Europe and North America, combined with concerns around limited production potential due to high energy costs and extreme weather events. Heightened internal demand from the food services sector in the Northern Hemisphere, especially during the summer of 2022, led to low export availabilities, preventing prices from falling significantly.

Table 1. World dairy market at a glance

	2021	2022 <i>estim.</i>	2023 <i>f'cast</i>	Change: 2023 over 2022
	<i>million tonnes, milk equiv.</i>			%
WORLD BALANCE				
Total milk production	931.1	935.9	944.0	0.9
Total trade	88.6	84.6	85.0	0.5
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	117.7	117.4	117.4	0.0
Trade - share of prod. (%)	9.5	9.0	9.0	-0.4
FAO DAIRY PRICE INDEX (2014-2016=100)	2021	2022	2023 <i>Jan-May</i>	Change: Jan-May 2023 over Jan-May 2022 %
	119	142	126	-11.1

MILK PRODUCTION

Global milk production likely to register a moderate expansion

World milk production in 2023 is forecast to reach nearly 944 million tonnes, rising by 0.9 percent year-on-year. If confirmed, this would indicate a slightly higher year-on-year growth rate. Milk production growth is expected to be driven by Asia, North America, and Central America and the Caribbean¹ in 2023, partially offset by anticipated moderate to marginal declines in South America, Africa and Oceania, with stagnation in Europe.

¹ Unless otherwise stated, names of regions and countries throughout this chapter are listed by the magnitude of the volume change.

Milk output in Asia in 2023 is predicted to reach 429 million tonnes, up 1.8 percent from 2022, underpinned by likely expansions in **India, China** and **Pakistan**. In **India**, milk output is pegged at 230 million tonnes, up 1.8 percent from 2022 due to higher yields, assuming regular fodder availability during the monsoon season. However, this growth rate represents a slower pace than historical year-on-year expansions, reflecting some cattle losses due to the spread of the Lumpy Skin Disease. In **China**, milk output is pegged at 43.5 million tonnes, up 6.5 percent from 2022; this forecast considers rising milk yields in large-scale dairy farms established under the dairy revitalization strategy in 2018, although high feed costs and weaker milk prices remain concerns. **Pakistan's** milk production is expected to increase, although at a slow pace, reflecting the 2022 floods that damaged milk farms with the loss of cattle. Elsewhere in Asia, **Uzbekistan, Kazakhstan** and **Bangladesh** are forecast to register significant increases in milk output in 2023 due to rising cattle numbers, dairy farm expansion and better farm management.

Milk output in **Japan** is likely to remain stable since rising milk yields – facilitated by government subsidies for producers of raw materials who market processed dairy foods – could compensate for the higher feed costs and a likely drop in dairy cattle numbers. By contrast, milk output is anticipated to fall in **Türkiye** due to reduced cattle numbers amid a possible increase in cattle turnoffs to minimize financial losses from rising input costs and low farm gate prices. Milk output in the **Republic of Korea** may drop for the third consecutive year, reflecting a continuing decline in dairy farms and the falling demand for dairy products, with the exception of cheese, which continues to experience solid demand.

In **North America**, milk output is predicted to reach 113.7 million tonnes in 2023, increasing by nearly 1 percent year-on-year, principally reflecting likely expansions in the **United States** and **Canada**, with an increase in milk cows compared to 2022. However, such favourable prospects rest on the assumption that producer margins and cull cow prices will remain at the current level for the rest of the year, especially in the United States.

In **Central America and the Caribbean**, milk output is forecast at 20 million tonnes in 2023, up 1.3 percent from 2022; this increase is mainly driven by expectations that production in **Mexico** – the region's largest milk producer – will rise on the back of high milk yields on dairy farms featuring cattle with genetic improvements and modern processing technologies, although high feed costs remain a challenge. Milk output in several other countries in the region, including **Cuba, Puerto Rico** and **El Salvador**, is likely to be stable, given that increased feed availability

and genetic improvements in cattle may help to contain negative fallout from extreme weather events. By contrast, milk production in the **Dominican Republic** and **Costa Rica** may drop due to rising feed costs and constrained fodder availability under drier conditions.

In *Europe*, milk output is forecast at 233 million tonnes, virtually unchanged from 2022, following two years of moderate declines. Anticipated output drops in the **European Union** and **Ukraine** will likely be offset by foreseen expansions in the **Russian Federation**, **Belarus** and the **United Kingdom of Great Britain and Northern Ireland (United Kingdom)**. In the **European Union**, milk production is expected to decline slightly (0.2 percent) on account of reduced milk cow numbers, high feed costs and extreme weather events, which are only partially countered by an expected increase in yields. By contrast, rising yields in modern dairy farms are helping the **Russian Federation** to sustain milk production growth despite disruptions to dairy processing by raw material shortages. Similarly, in **Belarus**, rising production efficiency in modern farms and cattle breeding improvements could support milk output expansion. In the **United Kingdom**, moderate production growth is expected due to increasing yields, improved pastures and favourable weather, but this could be constrained by labour shortages and higher production costs.

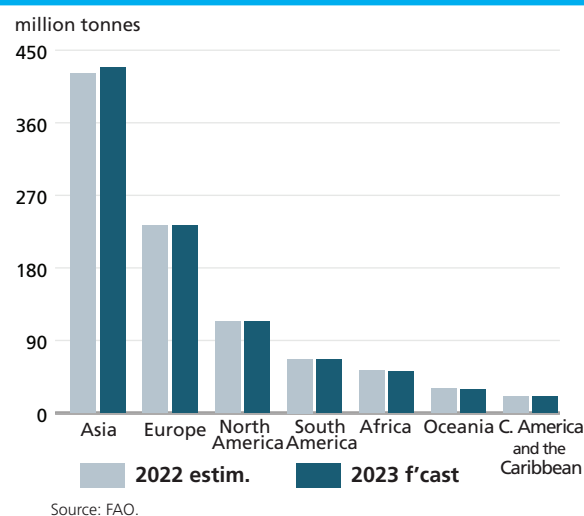
In *South America*, milk production is forecast at 66 million tonnes, down by 0.6 percent from 2022, marking the third consecutive annual decline. The anticipated decline is underpinned by expected output drops in **Brazil**, **Argentina**, **Colombia** and **Chile**, principally owing to a multiyear drought that damaged pastures as well as high input costs and reduced consumer purchasing power. However, **Brazil's** milk output may benefit from potentially ample maize supplies.

In *Oceania*, milk production is forecast at 29.4 million tonnes, marginally lower (0.2 percent) from 2022. If confirmed, this would imply a nearly 5 percent lower milk output in Oceania in 2023 compared to 2020, considering 0.2 percent and 4.6 percent declines in output in 2021 and 2022, respectively. In **Australia**, milk production is expected to fall, reflecting labour shortages and lower profit margins compared to other sectors. Such factors induce farmers to exit the industry, despite favourable weather conditions, the availability of sufficient water, lower water prices and the easing of input costs. By contrast, milk production in **New Zealand** is predicted to increase slightly mainly due to favourable weather conditions, contributing to fodder availability; however, reduced cattle numbers and high input costs may offset much of the increase. While, demand from China

is expected to rise for cheese, SMP and whey powder, given better economic performance and more lively food services sales, benefiting New Zealand's dairy exports and stimulating production.

In *Africa*, the continent's milk production is pegged at 52 million tonnes, down 0.7 percent from 2022, reflecting anticipated decreases in **Kenya**, **Egypt**, **Ethiopia** and **Morocco**, as well as **Mozambique**, **Madagascar** and **Zimbabwe**, mostly due to poor pasture conditions and constrained fodder availability as a result of ongoing drought conditions and rainfall deficits.

Figure 3. World milk production by region



INTERNATIONAL TRADE IN DAIRY PRODUCTS

A slight expansion in global dairy trade is anticipated in 2023

Global trade in dairy products is likely to expand slightly (0.5 percent) in 2023 following a 4.6 percent drop last year, up to 85 million tonnes (in milk equivalents). This is principally due to an anticipated increase in import demand by **Algeria**, **Mexico**, **Australia**, **Indonesia**, **Saudi Arabia** and the **Philippines** reflecting a combination of higher demand from the food processing industry as well as rising consumer demand that exceeds potential supplies from internal sources. By contrast, import contractions are forecast for **China**, the **European Union**, **Malaysia** and **Viet Nam**. The projected decline in imports by **China** - the world's largest dairy importer - reflects higher stocks and increasing supplies from internal sources, more than offsetting possible increases in imports due to the expansion in food services sales, high demand from the food processing and the bakery sectors, with the end of the zero-COVID-19 policy. In addition, dairy imports are

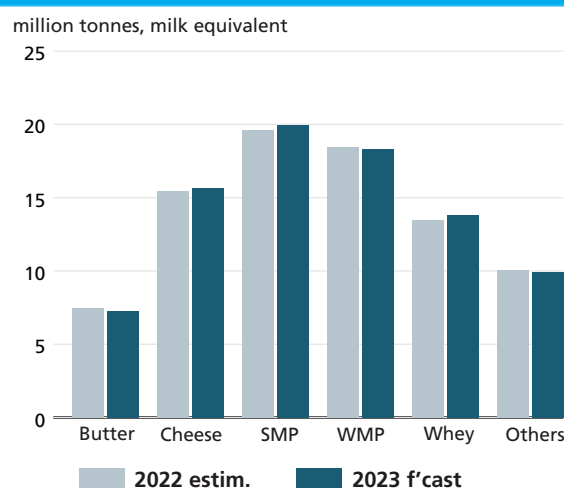
predicted to fall in the **European Union**, mostly related to expected drops in butter imports. In **Viet Nam**, import reductions are primarily due to anticipated declines in demand for milk powders caused by economic growth slowdowns, while in **Malaysia**, mainly due to currency depreciation, especially against the Euro.

Regarding exports, shipments from **New Zealand** may increase by 3.3 percent, reflecting higher supplies and import demand by Eastern Asian countries and, to some extent, the Middle East and North Africa. Moreover, more significant exports are anticipated from the **European Union**, the **United States** and **Belarus**. Shipments by the **European Union**, especially of SMP, whey powder and cheese, could rise in 2023 amid stable production and available stocks, with destinations, especially to Southeast Asia, the Middle East and Africa. Likewise, solid demand in Latin America, the Middle East, North Africa and Japan could lead to high shipments from the **United States**, especially of cheese, SMP and whey powder. However, exports may decrease in **Australia**, reflecting tight supplies

and smaller purchases by Asia. Exports from **Ukraine** and **Uruguay** may also contract due to high internal demand and challenging production conditions.

World trade in whey powder is forecast to register the highest volume gain year-on-year, followed by SMP and cheese, while a decline in butter and WMP trade is anticipated in 2023.

Figure 4. Composition of global dairy exports



Source: FAO.

Table 3. Trade in dairy products: Principal exporting countries

	Average 2020-21	2022 estim.	2023 f'cast	Change 2023 over 2022
	<i>thousand tonnes (product weight)</i>			
WHOLE MILK POWDER				
World	2 751	2 430	2 413	-0.7
New Zealand	1 570	1 328	1 367	3.0
European Union	322	241	227	-5.8
Argentina	147	154	141	-8.8
Uruguay	140	130	128	-1.3
SKIM MILK POWDER				
World	2 622	2 585	2 623	1.5
United States	849	831	839	1.0
European Union	810	711	750	5.6
New Zealand	339	357	393	10.1
Australia	142	154	123	-20.0
BUTTER				
World	1 037	1 127	1 105	-2.0
New Zealand	411	451	456	1.0
European Union	287	254	258	1.3
Belarus	86	88	90	2.3
United States	42	82	74	-10.9
United Kingdom	57	48	49	0.6
CHEESE				
World	3 501	3 511	3 560	1.4
European Union	1 393	1 338	1 347	0.6
United States	381	454	468	3.0
New Zealand	344	340	345	1.4
Belarus	286	302	307	1.6
United Kingdom	172	176	179	1.8

Whole milk powder

WMP trade is likely to contract moderately

Global WMP trade in 2023 is forecast to amount to 2.4 million tonnes (product weight), down 0.7 percent year-on-year; this would represent a second consecutive contraction following the 13.3 percent drop in 2022. The anticipated decline is mostly due to foreseen reduced imports by **China** as a result of the high stocks accumulated since the record-high purchases in 2021 and high domestic availability due to increased local production. Rising availabilities from **Viet Nam's** dairy processing plants could reduce the country's need to import more WMP, while limited foreign exchange reserves, currency depreciations and challenging economic conditions are behind expected declines in WMP imports by **Sri Lanka** and **Nigeria**. Much of the expected decrease in imports may be offset by rising purchases by **Algeria**, **Brazil**, **Iraq**, the **United Arab Emirates** and **Saudi Arabia**. The anticipated rise in imports into the Middle East primarily reflects growing consumer demand and high household incomes.

Concerning exports, WMP shipments from the **European Union**, **Argentina** and **Australia** are anticipated to decrease. On the other hand, exports from **New Zealand**, **Belarus**, **Saudi Arabia** and the **United States**, among others, will most likely expand. For **New**

Zealand, despite the subdued demand from China, higher milk supplies and robust global import demand may result in the country's WMP exports increasing in 2023 by 3 percent, rebounding after a drop in 2022. Similarly, **Belarus** should continue to expand exports, predominantly to the Russian Federation. However, tight supplies may lower exports from the **European Union**, where more milk is expected to be channelled into producing other dairy products with high internal and external demand, such as butter and cheese. Meanwhile, tight domestic milk deliveries could lower exportable availabilities in **Australia** and some Southern Common Market (Mercosur) countries, namely **Argentina, Uruguay** and **Paraguay**.

Figure 5. Global WMP imports and China import share



Skim milk powder

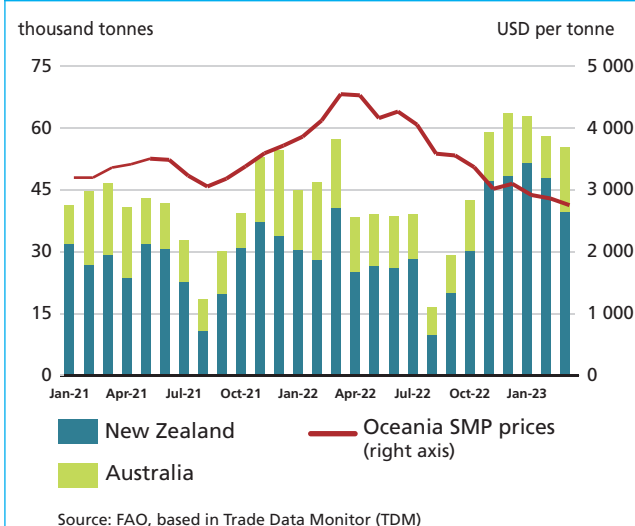
Intense price competitiveness is likely in SMP markets

Global SMP trade is predicted to reach 2.6 million tonnes, up 1.5 percent from 2022, due to anticipated sizeable increased purchases by **China, Mexico, Indonesia, the Philippines** and **Algeria**, more than offsetting foreseen downturns in the **Russian Federation, Viet Nam, Bangladesh** and **Nigeria**, among others. Following a 20 percent decline in 2022, an upturn is expected in **China's** SMP purchases, driven by more active demand from food services, confectionary and bakery product sectors owing to improved economic growth prospects and the removal of COVID-19-related restrictions. More SMP imports are also forecast for **Mexico** due to higher demand from the food processing sector, and in **Algeria**, due to growing demand from the infant formula product market. Likewise, **Indonesia** and the **Philippines** are likely to increase SMP imports on rising internal demand. By contrast, further declines in SMP imports are predicted for

Viet Nam, Bangladesh and Nigeria.

On the export side, notable expansions in SMP sales are forecast for the **European Union, New Zealand** and the **United States**. The anticipated increase in SMP shipments from the **European Union** reflects the bloc's competitive prices, particularly *vis-à-vis* the price-sensitive African markets for fat-filled milk powders. Meanwhile, benefiting from rising demand and the free-trade agreement, **New Zealand** is expected to export more SMP to China. The **United States** will profit from the country's price advantage and improved market access to its neighbour, Mexico. By contrast, tighter supplies and loss of competitiveness amid rising production costs may lower **Australia's** shipments in 2023 by as much as 20 percent, while **Ukraine** could register a contraction in sales due to limited exportable supplies and challenging shipping conditions.

Figure 6. Oceania SMP exports and prices



Butter

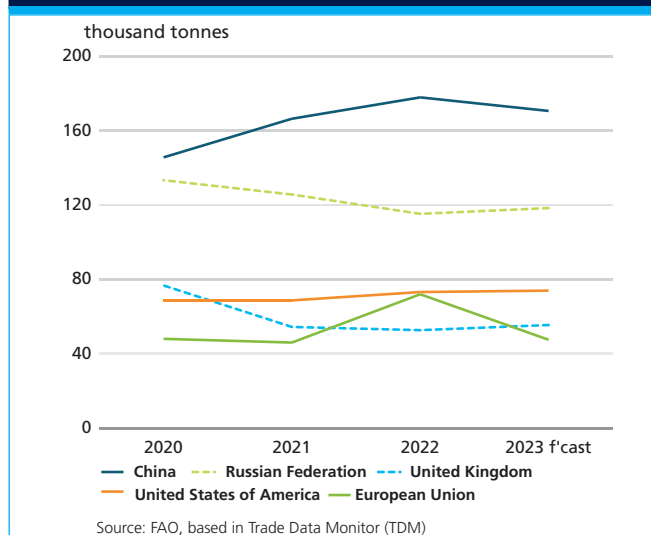
World butter trade will likely fall from the 2022 highs

Global trade in butter is forecast at around 1.1 million tonnes, a decline of nearly 2 percent from the above-the-trend increase registered in 2022, mostly due to expected declines in imports into the **European Union, China** and **Canada**, among others. Much of these anticipated declines rest on high domestic availabilities due to likely increases in milk supplies in the months ahead. Increased domestic availability and subdued internal demand could lower butter imports by other countries, including the **Philippines** and **Egypt**. At the same time, a decrease in domestic butter availability is expected to result in increased imports by **Australia**, while increasing

consumer purchases may cause imports to surge in the **United Kingdom**, the **Republic of Korea** and the **United Arab Emirates**.

Significant export contractions are anticipated for the **United States**, **Ukraine**, **Uruguay** and **Australia**. High global competition and economic downturns in major trading partners could lower butter shipments from the **United States**. Lower shipments of butter from **Ukraine**, **Uruguay** and **Australia** are primarily due to limited exportable availabilities. Despite a challenging global market situation, butter exports by **New Zealand**, the **European Union**, **Belarus** and the **United Kingdom** are anticipated to register upturns, facilitated mainly by the comfortable level of stocks and bolstered by the foreseen increase in production.

Figure 7. Major butter importers



Cheese

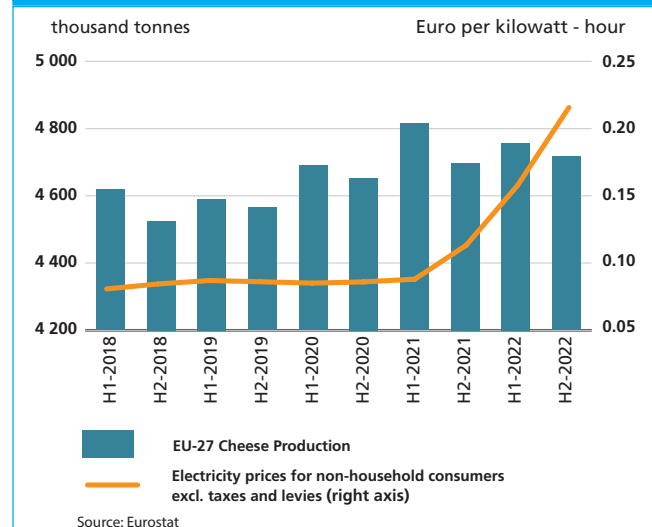
Global cheese trade could recover from last year's dip

The world trade in cheese is forecast to register a 1.4 percent increase in 2023, up to 3.6 million tonnes, following last year's slight dip. The growth is mostly driven by anticipated significant increases in imports by the **Russian Federation**, **Saudi Arabia**, the **United States**, **China**, the **United Kingdom** and **Japan**. After a slowdown in 2022, cheese purchases by the **Russian Federation** is likely to rise, with Belarus supplying most of it. In **China**, more vigorous food services sector activities and the westernization of diets continue to fuel high demand for cheese products. The **United Kingdom** is also expected to sustain cheese import growth in 2023, primarily sourced from the **European Union**, as demand outstrips internal supplies. In **Japan**, despite the downward

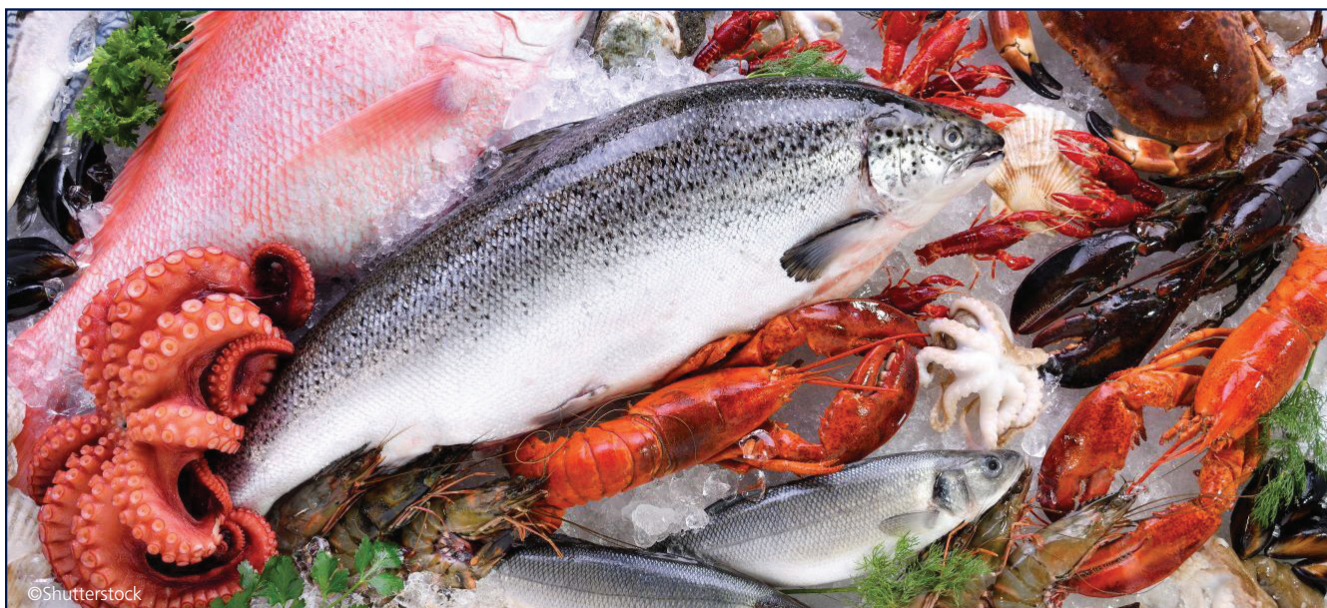
adjustment of the cheese tariff-rate quota for the fiscal year (1 April 2023 to 31 March 2024), imports may increase due to the rising popularity of cheese, especially Western brands, and a moderate increase expected in food services sales.

The **United States**, the **European Union**, **Belarus**, **New Zealand** and **Australia** are all predicted to increase their cheese exports in 2023, on expectations that food services sales will increase in most leading cheese importing countries. On the supply side, more milk is expected to be used for cheese production in leading exporters, such as the **European Union**, as cheese prices have been rising with less volatility despite high input costs. At the same time, cheese exports from the **United Kingdom** may also increase due to eased customs procedures in the European Union and the conclusion of the Comprehensive and Progressive Trans-Pacific Partnership, which provides tariff-free quotas to Canada, Chile and Mexico as of March 2023.

Figure 8. EU-27 cheese production and energy cost



FISH AND FISHERY PRODUCTS

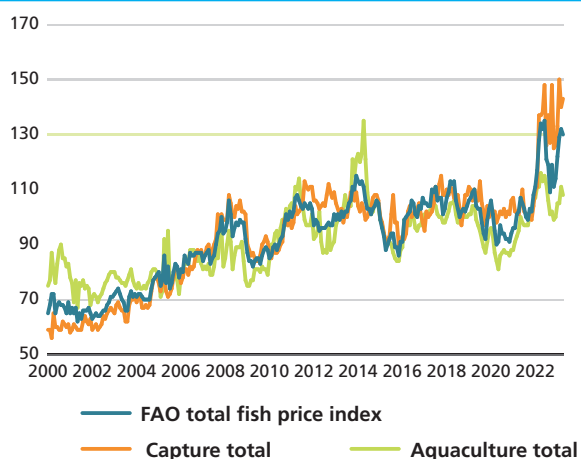


DETERIORATING ECONOMIC CONDITIONS AND MOUNTING UNCERTAINTIES DAMPEN POST-PANDEMIC RECOVERY

Global fisheries and aquaculture production¹ in 2023 is expected to see a marginal increase compared to 2022 (+0.6 percent), with growth in the aquaculture sector compensating for a slight decline in wild catches.

¹ Global fisheries and aquaculture production refers to aquatic animals, which include fish, crustaceans, molluscs and other aquatic animals, excluding aquatic mammals, reptiles, aquatic products (sponges, corals and pearls), seaweed and other algae.

Figure 1. FAO Fish Price Index (2014-2016=100)



Source of the raw data for the FAO Fish Price Index: EUMOFA, INFOFISH, INFOPESCA, INFOYU, Statistics Norway

Table 1. World fish market at a glance

	2021	2022 estim.	2023 f'cast	Change: 2023 over 2022
	million tonnes (live weight)			%
WORLD BALANCE				
Production	182.1	184.4	185.5	0.6
Capture fisheries	91.2	91.0	89.5	-1.6
Aquaculture	90.9	93.4	96.0	2.8
Trade value (exports USD billion)	176.6	190.2	192.4	1.2
Trade volume (live weight)	66.8	68.0	68.2	0.3
Total utilization	182.1	184.4	185.5	0.6
Food	161.2	164.2	166.1	1.2
Feed	16.9	16.1	15.3	-5.0
Other uses	4.0	4.0	4.0	0.0
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
Food fish (kg/yr)	20.4	20.6	20.6	0.3
From capture fisheries (kg/year)	9.4	9.4	9.2	-1.8
From aquaculture (kg/year)	11.5	11.7	11.9	1.9
FAO FISH PRICE INDEX (2014-2016=100)	2021	2022	2023 Jan-May	Change: Jan-May 2023 over Jan-May 2022 %
	101.7	120.8	128.1	4.5

Source of the raw data for the FAO Fish Price Index: EUMOFA, INFOFISH, INFOPESCA, INFOYU, Statistics Norway
* Jan-Apr2022 over Jan-Apr 2021, in percent

Production from capture fisheries is expected to decrease slightly by around 1.6 percent in 2023 as bad weather and lower quotas constrain catches of a number of key species. Having already fallen by some 1 million tonnes between 2021 and 2022, anchoveta catches are expected to decline further in 2023, with poor catches thus far, and an El Niño weather event anticipated for the second half of the year.

Aquaculture will continue expanding to reach 96 million tonnes in 2023, a 2.8 percent increase over 2022, but marginally lower than the sector's long-term growth rate of 3.7 percent between 2015 and 2021. Growth in species, such as salmon and tilapia, has slowed, while the production of others, including pangasius and shrimp, is progressively expanding. Production costs, especially for feed, are impacting the profitability of many farmers.

Prices are high overall, with the FAO Fish Price Index increasing from 122 points at the beginning of 2023 to 130 points in April, which is close to its previous historic high in June last year. The upward price trend is expected to keep the value of world trade in aquatic products higher than in previous years. The price difference between capture and aquaculture series has widened to 35 points, mostly caused by a strong price increase for wild species, while the price growth for aquaculture species has been more moderate. Certain groundfish and tuna species have seen record highs.

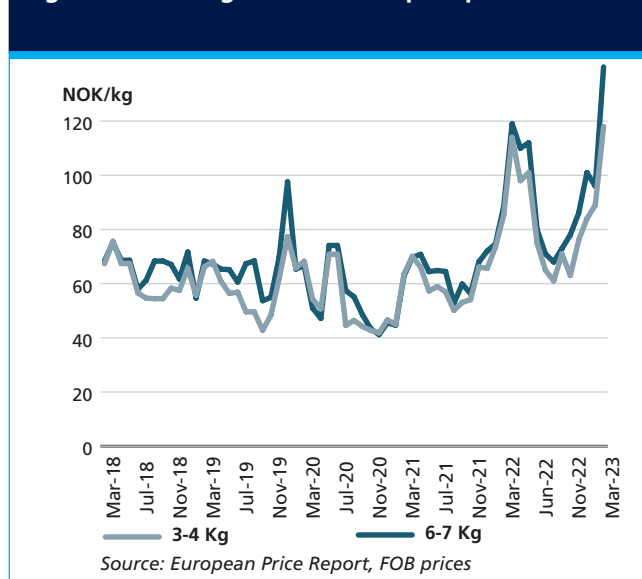
The global trade in fisheries and aquaculture products witnessed a period of high prices and significant growth in 2021 and 2022. However, the strong recovery in demand that followed the COVID-19 pandemic has slowed in 2023. Trade volumes will remain stable, rising by 0.3 percent from 2022. The value of this trade is set to grow by 1.2 percent to USD 192.4 billion, considerably less than the 7.7 percent increase seen last year.

While fears of a recession are easing, inflation and slow economic growth will limit the disposable incomes of consumers, with the impact of reduced growth in demand for aquatic products already evident. Along with slowing consumption growth, there has been an accelerated reshuffling of products, particularly favouring lower-cost farmed fish over increasingly expensive wild-caught whitefish.

SALMON

Having declined slightly in 2022, salmon production is expected to normalize in 2023 with a 4 percent growth in global farmed supply. The proposed Norwegian salmon tax led to severe disruption, and with the terms not yet

Figure 2. Norwegian salmon export prices



finalized, there is still considerable uncertainty in the industry. Although investments continue to be made in new regions, growth in supply is expected to level off in the coming years.

Prices for farmed Atlantic salmon have returned to near record levels in the second quarter of 2023, although forward prices indicate a potential softening in the second half of 2023. Demand has remained remarkably resilient, with the industry continuing to be supported by a robust and diversified set of markets, sales channels and product ranges. The Norwegian industry has benefited from a favourable exchange rate, boosting export values, which rose by 24 percent despite a 6 percent drop in volume. Concurrently, a strengthening of the dollar has supported concerted growth in the US market, with imports in the first quarter of 2023 up by 53 percent in value terms.

PANGASIOUS

Pangasius remains in high demand in key markets, such as the United States of America (United States) and China, where imports have consistently increased. Although prices softened after reaching record highs in 2022, they remain above the levels seen in previous years. That being said, pangasius is far more economical than most other whitefish species, placing it in a favourable position for consumers who are prioritizing cost. In 2022, China regained its position as the largest market for pangasius, importing 188 000 tonnes of fillets from Viet Nam, 75 percent more than in 2021. Pangasius has gained market share against wild-caught whitefish in the US market, with its competitive pricing, which is attractive to consumers. Viet Nam maintained its leading role in pangasius production, with

annual harvests rising by 14 percent in 2022. Stocking for harvest in 2023 is thought to be only slightly higher than in 2022, with narrow margins making farmers wary of overinvestment.

TILAPIA

Global tilapia production is projected to maintain a steady growth rate in 2023, although falling prices pose a significant challenge to farmers. Domestic demand for farmed tilapia in China is steadily growing due to the expansion of retail marketing networks and improved cold chain infrastructure. In Asia, Indonesia and Viet Nam are emerging as important regional producers, with harvests increasing by 7 and 14 percent, respectively, in 2022. In Latin America, both the Brazilian and Colombian tilapia industries are experiencing robust growth, with Brazil focusing on the domestic market and Colombia aiming to expand its export business to the United States. may be reduced.

GROUND FISH

In 2023, whitefish supplies will fall slightly below 2022 levels, with wild catches dropping to 7 million tonnes while farmed production is set to increase slightly to 14.6 million tonnes. Specifically, pollock supplies are expected to grow, while cod and hake will remain low. The total allowable catch for Alaska pollock has been set at 3.5 million tonnes, up by 15 percent from 2022. Norway, the leading producer of Atlantic cod, has seen catches decline by 40 percent over the last two years, restricting supply. Movements in the Norwegian Krone against the Euro have made many of the European Union's imports relatively cheap, yet tight supplies continue to push prices up. Fish from the Russian Federation can no longer be shipped to the United States due to trade restrictions arising from the war in Ukraine, including the large proportion of Russian groundfish typically processed in China for export. The domestic market and exports to Asia and Africa have absorbed much of these unallocated supplies.

SEABASS AND GILTHEAD SEABREAM

Following high prices in the first quarter of 2023, both European seabass and seabream prices have returned to levels consistent with the previous two years. The price adjustment came in response to weak demand, especially from the European Union, as consumers face reduced disposable incomes due to inflationary pressures and

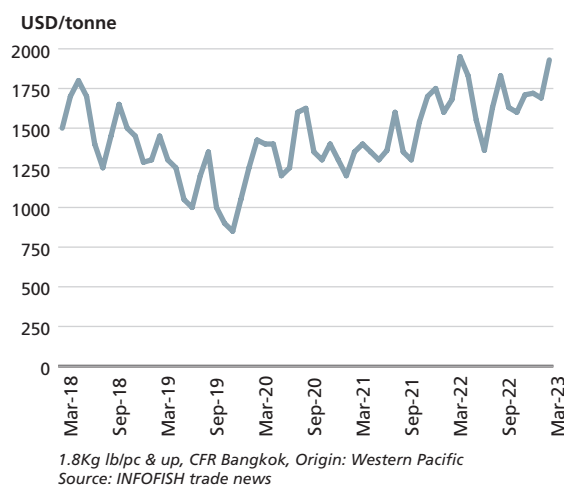
sluggish economic growth. Production costs have also risen rapidly, potentially leading to stagnant or slightly negative growth in seabream production. However, seabass production is expected to increase slightly due to marginally better market conditions. While a consistently weaker Turkish Lira is encouraging exports from Türkiye, the world's largest producer of European bass and bream, this has complicated matters for producers, who rely heavily on imported inputs, particularly feed.

TUNA

Catches remained low in the first quarter of 2023, with limited supplies expected until at least September, when the ban is lifted on fish aggregating devices in key areas under the responsibility of the Western and Central Pacific Fisheries Commission. Yellowfin prices are exceptionally high, remaining above USD 2 500 per tonnes, while skipjack prices have levelled off at around USD 1 700 per tonne.

Trade in semi-processed tuna that has been pre-cooked, cleaned, vacuum packed and then frozen for use in the canning industry makes up an increasingly significant proportion of trade. European countries were the first important markets for these products, but processors in Asia are beginning to import more. China, Indonesia and Viet Nam are the major suppliers, having established significant processing industries to supply this demand. Despite rising prices, premium formats, such as tuna for sashimi, remain in high demand. While continued COVID-19 restrictions in Japan, the main market, limited consumption through mid-2022, growing European and US demand have made up for the deficit.

Figure 3. Thai skipjack tuna prices



SMALL PELAGICS

Quotas for capelin, Atlantic mackerel and Atlantic herring have been cut for 2023, pushing prices up. Despite these reductions, quotas set on the catches of northeast Atlantic mackerel still exceed the levels recommended by the International Council for the Exploration of the Sea by 350 000 tonnes, or 30 percent.

The outlook for the 2023 anchovy fishery indicates continued low catches. An ongoing stock assessment will largely determine quotas and supply potential for the remainder of the year. Horse mackerel is expected to see a slight growth in catches due to the broader presence of cold water in the coastal zone of south-central Chile. Meanwhile, total capelin landings are projected to reach around 350 000 tonnes, with the majority being utilized for reduction into fishmeal and fish oil. Iceland has raised its quota considerably, which may affect capelin roe prices. However, higher blue whiting landings may compete with capelin and herring as raw materials for fishmeal and fish oil.

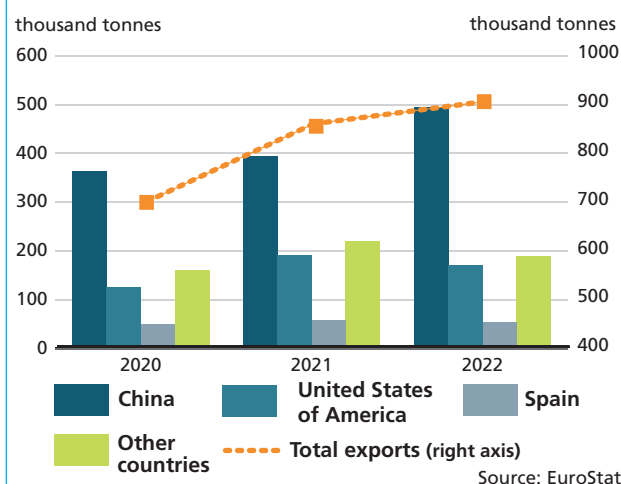
FISHMEAL AND FISH OIL

2022 was one of the poorest seasons in recent years for anchoveta landings. Peru, the primary global source of fishmeal and fish oil, saw catches decline by 20 percent. A larger than usual proportion of juvenile fish in those catches also limited oil yields, leading to an acutely tight supply situation for fish oil. An expected El Niño weather event later in 2023 is likely to further limit supplies from Latin American producers, particularly Peru and Chile. The shortfalls in Peruvian supply have been somewhat offset by increased catches in secondary producers, particularly Greenland, however the importance of the anchoveta for global supplies means that there is still a dearth in the market. In addition, rising demand in the summer months will lead to firm prices. Fish oil prices have climbed rapidly since late 2021 and are expected to continue in 2023. High prices and limited supplies have led to significant changes in feed formulation and have encouraged the further development and integration of novel ingredients, such as algal oil and biodiesel co-products.

SHRIMP

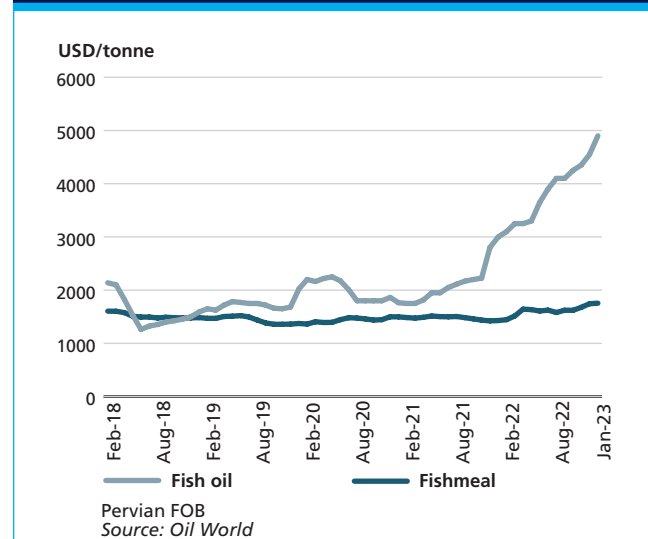
Low prices are expected to limit growth in farmed shrimp production in 2023. Ecuador and Viet Nam saw double-digit growth in harvest volumes in 2022, with Ecuador exceeding 1 million tonnes of vannamei production. While there is healthy demand in the major markets of the United

Figure 4. Ecuador shrimp exports



States, China and the European Union, the rapid increase in production seen in 2022 has led to oversupply in the world market. These ample supplies have caused prices to decline, which, in tandem with increased feed costs, poses a significant challenge for farmers and the long-term profitability of the sector. In the first quarter of 2023, shrimp imports in traditional large markets such as the United States, the European Union and Japan were lower than the previous year but increased in China. This trend in decreased imports is largely expected to continue, which, given the low level of Chinese export prices, makes a price recovery in the international market unlikely.

Figure 5. Peruvian fishmeal and fish oil prices



LOBSTER

The overall situation in 2023 indicates limited supplies, with rising demand from China and the United States causing prices to strengthen. The EU-US Agreement on Lobster Tariffs, which eliminated tariffs on American-caught lobsters exported to the European Union, has not increased export volumes. Instead, American exporters have continued to target the Chinese market, while Canadian exporters are now reaping the benefits of increased demand in Europe. The popularity of spiny warm water lobster is on the rise in North America, now accounting for 22 percent of US lobster consumption. At the same time, catches are expected to continue to decline, having already fallen by approximately 4 000 tonnes since 2021.

CRAB

The total global snow crab quota for 2023 has been set at 160 000 tonnes, the highest since 2012. Canada, the Russian Federation and Norway have all increased their quotas, while the Alaskan snow crab fishery closed early in response to a sudden drop in stocks. There are also large inventories left over from the 2022 harvest. Demand has been low over the past 12 months, reeling in prices considerably and leading to disputes between fishers and processors.

The market for Dungeness crab is tight, with the Oregon season delayed by excessive levels of domoic acid. The season started in February but may close again if excessive levels of the biotoxin are detected. The Californian season closed earlier than anticipated, following a number of entanglement cases of humpback whales. Interestingly,

prices have maintained a low level, reflecting weak consumer demand.

The Russian Federation, previously a major exporter of king crab and snow crab to the United States and Canada, has had to redirect its exports. Much of the excess supply has found its way to Asia, particularly China, the Republic of Korea and Japan

BIVALVES

Demand for bivalves was relatively subdued throughout 2022, with higher prices prevailing. Supply was also limited, experiencing a decline compared to previous years due to various challenges, including adverse weather in producer regions and increased production costs. These factors are expected to continue into 2023, keeping supplies limited.

The mussel trade experienced a significant reduction last year, primarily due to a sharp decrease in trade with the Russian Federation. Exports from Chile, in particular, were heavily affected by this trade disruption. Spain, the largest market and producer of mussels in the European Union, was impacted by the reduced trade but remained the main exporter. France and Italy, the second and third largest producers, also faced challenges.

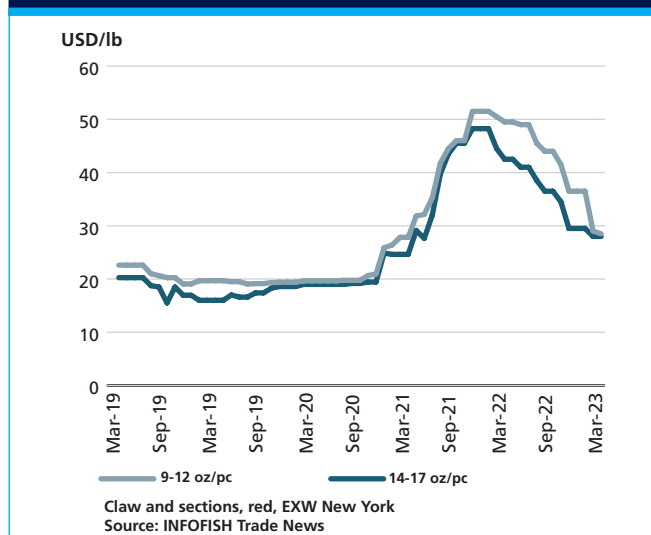
In contrast, the oyster trade expanded during the same period, driven by strong demand in the US market. France remained the leading exporter of oysters, and its trade volume increased compared to 2021. However, oyster production in the Thau region of France faced difficulties due to the high mortalities caused by exceptionally warm weather.

CEPHALOPODS

Sustained growth in the demand for octopus has depleted several stocks, resulting in continued limited supplies. Trade volumes have declined further in 2023, while prices have strengthened greatly. The availability of octopus is expected to remain limited, and further price increases are expected.

Squid catches were lower than usual in early 2023. The Argentine squid season is off to a disappointing start, with the 65 000 tonnes of illex squid (*Illex argentinus*) landed within the first three months of the year being considerably below the same period in previous years. The world market is expected to tighten due to limited supplies from other regions, and prices will rise as a consequence. Trade is expected to drop in 2023. China will maintain its position as the largest importer and exporter, despite a decline in its share of trade.

Figure 6. US king crab prices



SPECIAL
FEATURE

Food inflation in net food importing developing countries (NFIDCs):¹ characterizing the increase and the effect of currency movements

Contributed by:
ElMamoun Amrouk*

Introduction

Since the beginning of 2021, the consumer price index (CPI), the most widely used measure of inflation, has increased rapidly to levels not seen in several decades in all regions of the world, including advanced, emerging and low-income economies. Despite recent data indicating that inflation is abating, notably in the United States of America and the European Union, price pressures continue to occupy centre stage in many countries, where inflation rates remain stubbornly high. High and persistent inflation has a number of macroeconomic consequences since it distorts market price signals that reveal the changing scarcity of goods and services, leading to inefficiencies in the allocation of resources (Spencer, 1975; Hayek, 1960). Importantly, it could also contribute to widening income inequalities, with the most vulnerable people bearing the heaviest economic burden (Colciago et al., 2019; Easterly and Fischer, 2001; Romer and Romer, 1998; Bulir, 2001; Menyhert, 2022).

There is a general agreement that the recent surge in inflation was driven by three main factors – rising commodity prices, supply chain disruptions and strong aggregate demand spurred by expansionary monetary policy and fiscal support implemented to address the economic setbacks caused by the COVID-19 pandemic (IMF, 2021; Cline, 2023; Stiglitz, 2023). While there is a general consensus about the broad causes of the inflation, much of the recent debate tends to revolve around two important issues. First, questions remain about the appropriate public policy interventions and, in particular, whether and how high interest rates should be raised to rein in inflation without triggering a severe economic recession – a so-called “soft landing” scenario (Verbrugge and Zaman,

2023). The vast majority of central banks around the world have raised interest rates at least once since 2021. For example, as of May 2023, the Federal Reserve Bank of the United States had hiked its federal funds rate target ten times since March 2022 (United States Federal Reserve, 2023). So far, it seems the world has managed to avoid a recession despite an expected slowdown in economic activity for 2023. The latest economic projections released by the International Monetary Fund (IMF) indicate that growth in the world’s gross domestic product (GDP) is anticipated to reach 2.8 percent in 2023, which is down from the 3.4 percent recorded in 2022, before rising back to 3 percent in 2024 (IMF, 2023). Second, the significant increases in the food and beverage component of the consumer price index (CPI) have raised concerns around persistent inflation, and possibly a change in long-term inflation expectations, which would require stronger actions by central banks (Armantier et al., 2022). Importantly, rising food prices can lead to social unrest and increased financial risks, undermining efforts to fight poverty and food insecurity and wiping out any progress achieved so far. The IMF estimates that global inflation will decline from 8.7 percent in 2022 to 7 percent this year and 4.9 percent in 2024. These forecasts are based on a number of assumptions that can alter the basic working scenario.

This note describes recent changes in the food component of the CPI (FCPI) for countries from the group of NFIDCs, given their dependence on food imports to meet food security needs and the relatively high share of food in their household budgets. It examines the extent to which changes in international prices for wheat, maize and rice have impacted the NFIDCs, taking into account movements in exchange rates. The last section of the note offers some general recommendations as to how domestic food inflation might be tackled.

Data and Method

While international food commodity prices have generally declined since reaching their highest levels in March 2022, domestic food prices in many countries remain high or continue to increase. The FAO food price index (FFPI), which captures price movements of some

¹ Net food-importing developing countries (NFIDCs) are included in a list of countries maintained by the World Trade Organization (WTO)’s Committee on Agriculture. The selection criteria and the list of countries can be found at <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/AG/5R11.pdf&Open=True>

* Useful comments and suggestions provided by George Rapsomanikis.

of the most traded staple foods, reached 159.7 points in March 2022 and then declined for 12 consecutive months to 127.0 points in March 2023, corresponding to a 20.5 percent decline, before a slight increase in April, which was more than offset by a 2.6 percent decline in May 2023.

The analysis in this note uses international price data for the major cereals, which refer to standard benchmarks: No.2 yellow corn, United States FOB Gulf Ports, for maize; No.2 hard red winter wheat, ordinary protein, United States FOB Gulf Ports for wheat; and export prices, India, rice (25 percent), for rice. To capture changes in domestic prices in NFIDCs, the analysis uses data on consumer prices, food indices (2015 = 100) available from FAOSTAT (FAO, 2023), with the series for all countries running until September 2022. Changes in the food consumer price indices are assessed by computing the cumulative changes in food CPIs for each of the NFIDCs. An aggregate FCPI is also derived for the group by computing a population-weighted average FCPI. Population data are taken from FAOSTAT. The analysis focuses on the period between March 2022 (the highest level reached by the FFPI) and September 2022 (latest data available for the food CPI in FAOSTAT).

The extent of the transmission of changes in world food prices to domestic markets in the NFIDCs is assessed by considering movements in nominal exchange rates. The world prices for wheat, maize and rice in real local currency terms are computed as follows:

$$WP_{LC}^R = WP_{USD}^N * NER * \frac{FCPI_{USD}}{FCPI_{LC}} \quad (1)$$

where WP refers to the world price of the selected cereals (wheat, maize and rice), R stands for real (inflation adjusted), N stands for nominal, NER represents the nominal exchange rate, LC stands for local currency, FCPI is the food consumer price index and USD refers to the United States dollar.

Data for nominal exchange rates in the NFIDCs were collected from the International Financial Statistics (IFS) of the IMF.² By combining the nominal exchange rates with data on FCPIs, we derived the real exchange rate vis-à-vis the United States dollar. The use of the real exchange rate serves to account for changes in nominal exchange rates when converting international commodity prices to domestic terms. For example, the value of the United States dollar versus a broad basket of currencies appreciated by 8 percent between March 2022 and September 2022.³ The sustained appreciation of the United States dollar began

² <https://data.imf.org/>

³ See FRED, Federal Reserve Bank of St. Louis. <https://fred.stlouisfed.org/series/TWEXBGSMTIH>

much earlier, in May 2021. The strength of the United States dollar, and the resulting depreciation of the real exchange rate of other currencies against the dollar, means that the increase in international commodity prices tends to be exacerbated in domestic currency terms. It also means that declines in world commodity prices denominated in United States dollars are not proportionally transmitted in local currency terms when the dollar is appreciating. During the 2007–08 global food price crisis, the depreciation of the United States dollar helped many food-importing countries offset the increase in international food prices in domestic currency terms. The current context seems to have created the opposite scenario.

Evolution of the food consumer price index in NFIDCs

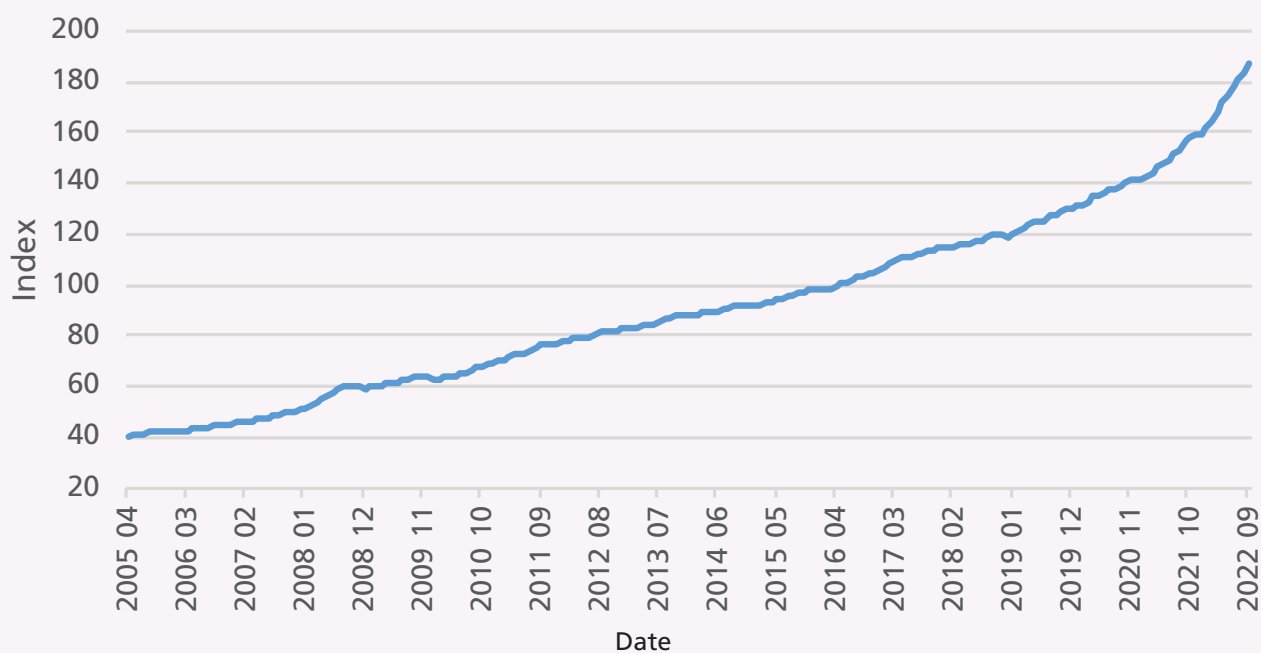
Figure 1 represents the population-weighted average of the FCPI for the NFIDCs.⁴ It illustrates the marked acceleration in food inflation, which started in the second half of 2020. Between June 2020 (when the FFPI started to increase) and September 2022, the FCPI increased by about 38 percent. The acceleration in food inflation is further illustrated in Figure 2, which shows the monthly percentage change in the FCPI, computed by taking the difference in logarithm of two consecutive monthly values of the FCPI. This shows that the FCPI increased by an average of about 1 percent per month between June 2020 and March 2022, before peaking at 2.43 percent in April 2022. Soon after, however, the rate of food inflation began a downward trend. This was somewhat similar to the situation during the 2007–08 global food price crisis, when the change in the FCPI in the NFIDCs reached its peak in February 2008, before trending downward towards its average value, reaching that level after seven to eight months. However, it is important to recognize that the current economic and geopolitical contexts are quite different.

An analysis of the FCPI monthly percentage change series over the sample period indicates that, on average, the FCPI increases by 0.5 percent per month in NFIDCs. Overall, the series is characterized by relative elevated volatility, with more peaks than troughs, but it is mean reverting, i.e. it tends to revert back to its long-term average after some periods.⁵

⁴ Based on available data, the analysis covers 71 NFIDCs from a total of 78 countries forming the group.

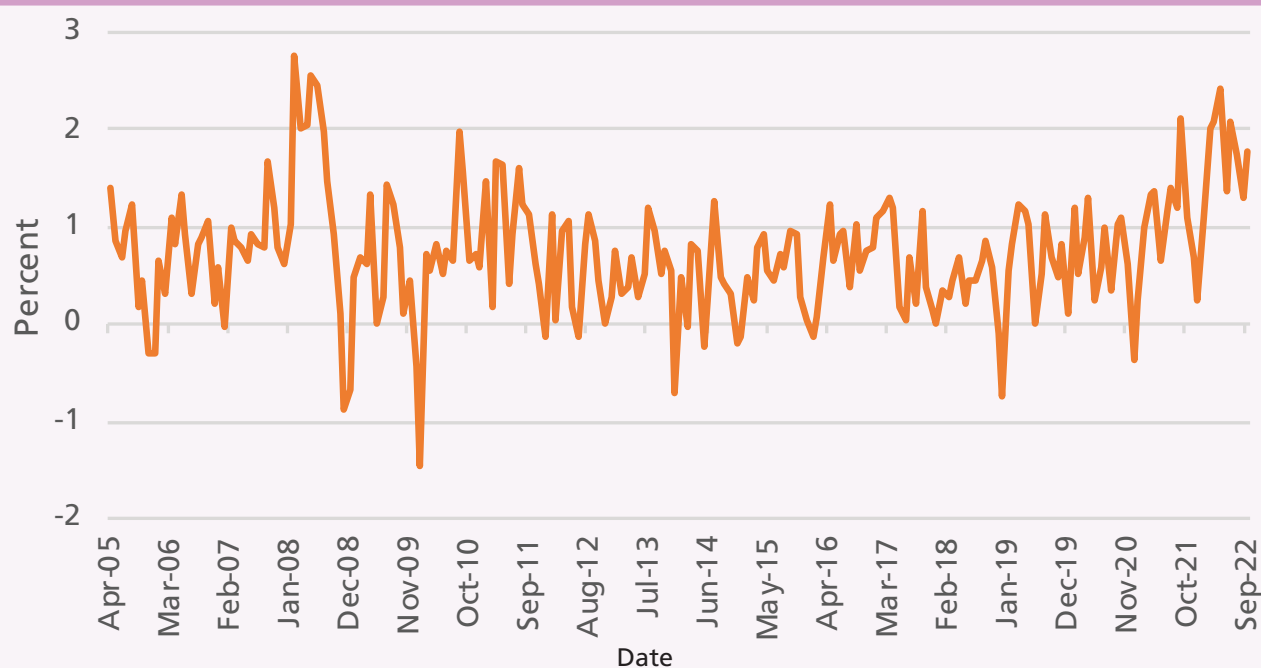
⁵ The stationarity property of the series is tested using the Augmented Dickey-Fuller (ADF) and the Phillips-Perron (PP) tests. Results show that the FCPI percentage change series is stationary (around its mean), with the null hypothesis of the presence of a unit root strongly rejected. Also, the kurtosis coefficient of the series is larger than the normal distribution, indicating that the probability of observing peak values is higher than that under

Figure 1. Evolution of the FCPI for the NFIDCs



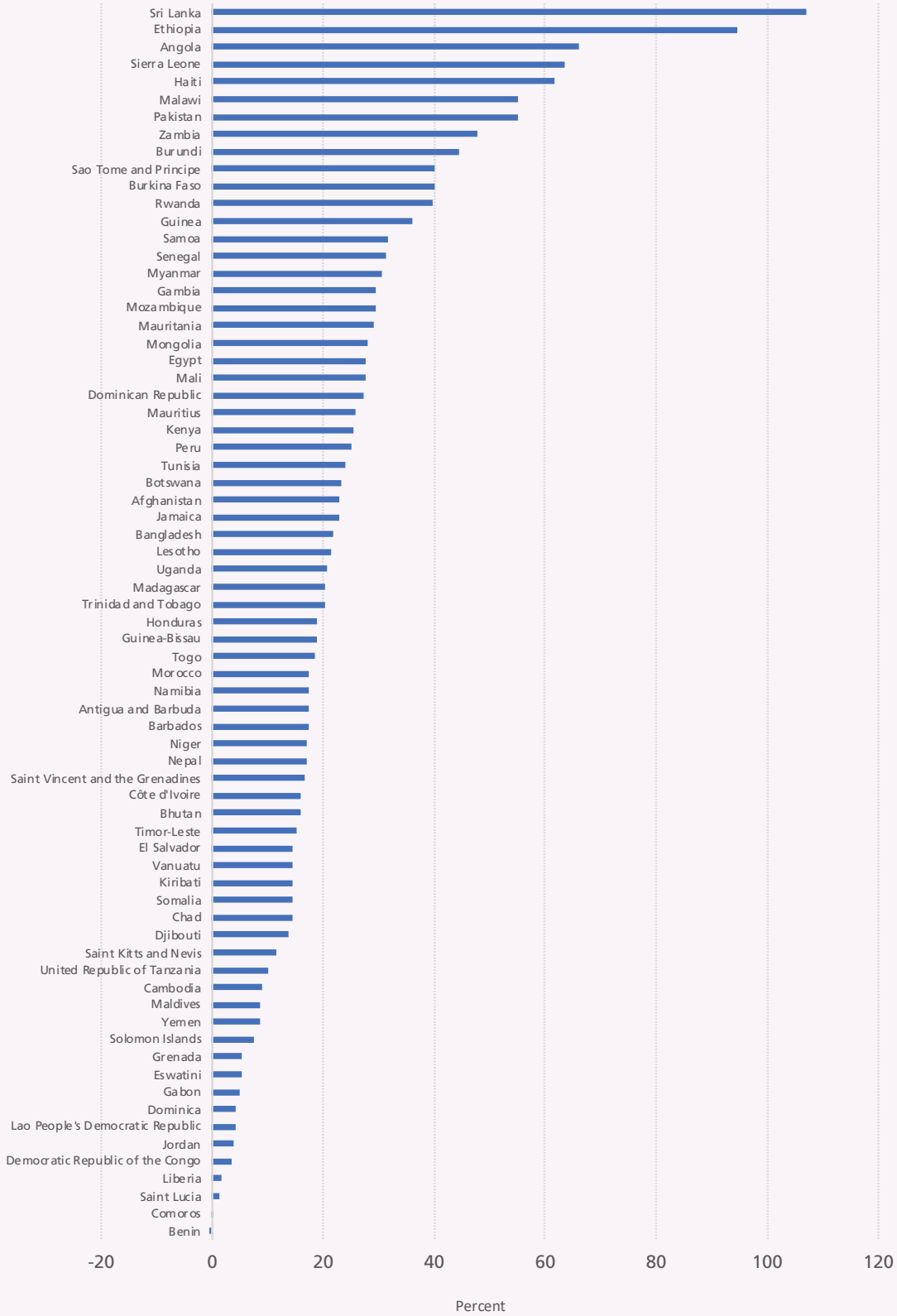
Source: FAO, 2023 and author's calculation

Figure 2. Monthly percentage change in the FCPI for NFIDCs



Source: FAO, 2023 and author's calculation

Figure 3. Percentage change in FCPI between June 2020 and September 2022 in NFIDCs



Note: Based on available data, the analysis covers 71 out of the 78 countries in the group of NFIDCs.

Source: FAO, 2023 and author's calculation

Figure 3 shows the percentage change in food inflation for a number of NFIDCs between June 2020 (when the FFPI started to increase) and September 2022.⁶ The vast majority of countries experienced double-digit inflation during this period. The cumulative distribution function indicates that half of the NFIDCs were likely to experience food inflation of more than 20 percent during this period, when FFPI grew by 41 percent. It is important to note, however, that a direct comparison of both indices can be misleading. The FCPI not only takes into consideration a broader range of commodities than the FFPI, but it also includes other products such as fruits and vegetables, processed foods and beverages. In addition, the FCPI considers both food consumed at home and away from home. The latter means that the index is influenced by a host of variables that range from labour cost to rent and overheads.

To summarize, while food inflation in NFIDCs has accelerated over the past 18 months, data up to September 2022 seems to indicate that the pace of acceleration has weakened since reaching a peak in April 2022. This trend may be confirmed once more recent official data becomes available in FAOSTAT. The observed disinflation is mainly a reflection of falling energy and non-energy commodity prices, the easing of supply chain bottlenecks and improvements in global food supplies, as well as the expected restraining impact of monetary tightening on commodity prices (Frankel, 1986) and on global economic activity. However, there are still sizeable risks associated with this somewhat positive pattern. Food inflation growth can pick up again and remain sticky for some time because of a number of local and international factors. These include stronger global demand than anticipated, a sudden surge in energy prices, an upturn in fertilizer prices, and adverse weather shocks that compromise crop harvests and reduce supplies. National policy measures can also play a major role when countries implement export restrictions or subsidize food imports to contain domestic price surges. Clearly, persistent or emerging geopolitical tensions can also fuel new rounds of inflation. At this point in the inflation cycle, it is critical that central banks stay the course with rate hikes until it is apparent that core inflation (excluding food and energy) stability is returning. Finally, a sustained real appreciation of the United States dollar against other currencies, including those of NFIDCs, renders

the assumption of a normal distribution. The result of the Jarque-Bera test confirms the rejection of normality for the series. In addition, the Ljung-Box test for autocorrelation, when applied to the series, points out evidence of autocorrelation, indicating a large degree of similarity between FCPI values over successive time intervals. Finally, the ARCH test for heteroscedasticity indicates the presence of ARCH effect, showing the dominance of time-varying volatility and volatility clustering.

⁶ Latest available data for FCPIs in FAOSTAT (FAO, 2023).

food imports more expensive in local currency terms and contributes to domestic inflation. This particular issue is addressed in the following section.

The effect of the United States dollar appreciation on food prices in NFIDCs

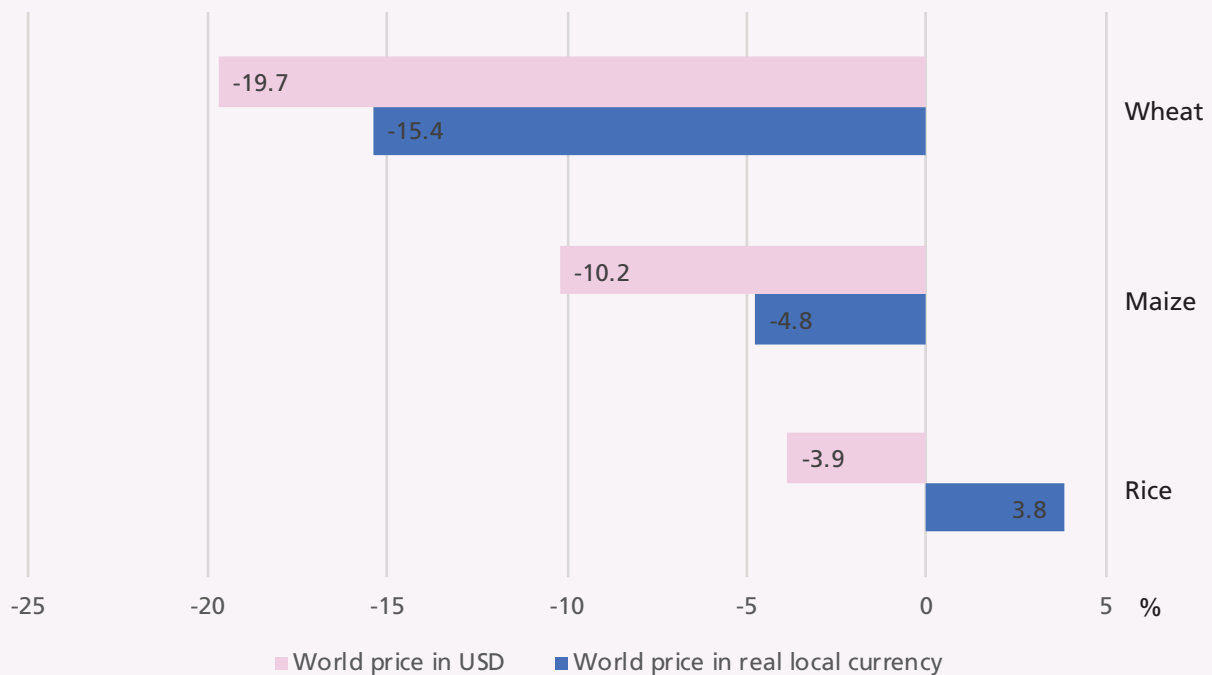
It is estimated that over the period of 1999 to 2019, the United States dollar accounted for 96 percent of trade invoicing in the Americas, 74 percent of trade invoicing in the Asia-Pacific region and 79 percent in the rest of the world, while the Euro was the dominant currency in Europe (Correa et al., 2022). The relative importance of the dollar means that dollar currency fluctuations directly affect the cost of imports in local currency terms. However, the variation in nominal exchange rates is only one key element to consider, the other being the purchasing power parity (PPP) of a currency. This is where the real exchange rate concept comes into play. PPP considers fluctuations in the nominal exchange rate and the ratio of the price level between two countries to measure the value of a country's goods against those of another trading partner or the rest of the world.

The concept of real exchange rate is applied in Equation (1), which we use to measure changes in world market prices expressed in real domestic currency (DC) terms for wheat, maize and rice in NFIDCs. The comparison was carried out between June 2020, when cereal prices initiated their upward trend, and the month in which the prices reached their highest level.⁷ The results show that world wheat prices went up by 163.2 percent between June 2020 and May 2022 and, when expressed in real local currency terms, prices rose by an average of about 169.2 percent in the NFIDCs. Hence, the real appreciation of the United States dollar resulted in an additional 6 percentage points increase in the price of wheat when expressed in real local currency terms. Likewise, international maize prices went up by 135.2 percent, and by 139.4 percent in real domestic currency equivalent. On the other hand, world rice prices decreased by 0.3 percent between June 2020 and February 2021, but when converted into real local currency terms, the decline was comparatively stronger at 0.6 percent, as the United States dollar depreciated during that period.

We applied the same analysis for the selected commodities to the period between the FFPI peak in 2022 and September 2022 (the latest available data for the FCPI in FAOSTAT). That period was characterized by a sustained decline in international food commodity

⁷ International maize prices reached a peak in April 2022, while wheat and rice recorded their highest level in May 2022 and February 2021, respectively.

Figure 4. Changes in world cereal prices in NFIDCs expressed in USD and in real domestic currency terms



Note: Changes represent percentage change in cereal prices from their high levels since June 2020 and September 2022.

Source: FAO, 2023 and author's calculation

prices, as illustrated by the FFPI, which fell by 14.8 percent between March 2022 (its highest value) and September 2022. The analysis indicates that the international prices of maize, wheat and rice – expressed in real local currency terms – fell less than the world price of these commodities expressed in United States dollars. For example, world maize prices declined by 10.2 percent between April 2022 and September 2022. However, when expressed in real local currency terms, maize prices only fell by an average of 4.8 percent in the NFIDCs. The rice case is interesting: while world rice prices declined, prices in real local currency terms actually increased. Hence, the relative strength of the United States dollar with respect to the currencies of the NFIDCs prevented these countries from benefiting fully from the fall in international cereal prices (See Figure 4).

Concluding comments

The analysis described in this note gives rise to several observations. First, the real appreciation of the United States dollar meant that the increase in international cereal prices was generally much higher when prices were expressed in local currency terms. For the group of NFIDCs, the analysis showed that, over the period from June 2020 to May 2022, world wheat prices in real local currency

terms rose, on average, by as much as 6 percentage points more than the increase in world wheat prices expressed in United States dollars. On the other hand, at the height of the COVID-19 pandemic (April 2020–January 2021), the depreciation of the United States dollar cushioned some of the increase in world prices (expressed in local currencies). Second, the sustained fall in world cereal prices, after reaching a peak in mid-2022, was not fully transmitted to NFIDCs in real domestic prices. Changes in real exchange rates are only one component of food import costs, which also include elements such as transportation, insurance, financing and other retailing fees. Increases in these costs constitute a burden, particularly on the poorest and most vulnerable people, with serious implications for their food security. Further analysis is warranted to assess the extent to which these elements have contributed to recent domestic food inflation.

Third, while food inflation in the NFIDCs rose in mid-2020 for several successive months, data up to September 2022 seems to indicate that the pace of inflation has abated since reaching a peak in April 2022. Updates are needed to confirm this trend. Yet there are heightened risks linked with this somewhat encouraging prospect. Energy prices could pick up again quickly, feeding into headline inflation. Nominal wage rates could accelerate

beyond current projected levels, fuelling concerns over a wage–price spiral. We also do not know to what extent the COVID-19 pandemic and the energy crisis have affected the productive capacity of agrifood systems. It is possible that decision-makers are overestimating the amount of resources in the economy that are not used, meaning that inflation may in fact be more sticky than current forecasts. Finally, changes in the rate of inflation in the NFIDCs tend to be mean-reverting after a shock, implying that the inflation rate returns to its long-term average level after some periods.

Defeating inflation requires coordinated actions at national and international levels. Central banks need to maintain tight monetary policies until core inflation is clearly on a downward trajectory. Likewise, authorities should prioritize fiscal consolidation, with well-targeted measures to support the poor, vulnerable and food-insecure segments of the population. A tight fiscal stance keeps debt service costs within acceptable limits, which ensures financial stability, resilience to future shocks and, in the case of NFIDCs, the capacity to finance food import bills. In addition to monetary and fiscal measures, governments should work towards introducing effective supply-side actions that can ease headline inflation and, in particular, food inflation. For example, incentives can be introduced to accelerate the adoption of farm productivity-enhancing innovations and technologies, and improve access to markets, credit and extension services. Digitalization, science, investments in climate change and renewable energy can also help win the battle against inflation. Finally, empowering women and youth and promoting their participation in agrifood systems will go a long way towards sustaining productivity growth and easing inflationary pressure.

References

- Armantier, O., Sbordone, A., Topa, G., van der Klaauw, W. & Williams, J.C.** 2022. A new approach to assess inflation expectations anchoring using strategic surveys. *Journal of Monetary Economics*, 129: S82–S101.
- Bulir, A.** 2001. Income inequality: does inflation matter? IMF Staff Papers, 48(1): 139–159.
- Cline, W.** 2023. Fighting the pandemic inflation surge of 2021–2022. Working Paper 23–1. Washington, DC, Economics International, Inc.
- Colciago, A., Samarina, A. & de Haan, J.** 2019. Central bank policies and income and wealth inequality: a survey. *Journal of Economic Surveys*, 33: 1199–1231.
- Correa, R., Goldberg, L.S., Lerman, R. & Sun, B.** 2022. The Fed's inaugural conference on the international roles of the US dollar. FEDS Notes. Washington: Board of Governors of the Federal Reserve System, July 5, 2022, <https://doi.org/10.17016/2380-7172.3169>.
- Easterly, W. & Fischer, S.** 2001. Inflation and the poor. *Journal of Money, Credit and Banking*, 33: 160–178.
- FAO (Food and Agriculture Organization of the United Nations).** 2023. Consumer price indices. In: FAO. Rome. Cited 4 May 2023. <https://www.fao.org/faostat/en/#data/CP>
- Frankel, J.A.** 1986. Expectations and commodity price dynamics: the overshooting model. *American Journal of Agricultural Economics*, 68: 344–348.
- Hayek, F.A.** 1960. The constitution of liberty. Chicago, USA, The University of Chicago Press.
- International Monetary Fund.** 2021. World Economic Outlook: recovery during a pandemic – health concerns, supply disruptions, price pressures. Washington, DC.
- International Monetary Fund.** 2023. World Economic Outlook: a rocky recovery. Washington, DC.
- Menyhert, B.** 2022. The effect of rising energy and consumer prices on household finances, poverty and social exclusion in the EU. Luxembourg, Publications Office of the European Union.
- Romer, C.D. & Romer, D.H.** 1998. Monetary policy and the well-being of the poor. Working Paper Series. National Bureau of Economic Research. Working paper No.6793.
- Spencer, R.W.** 1975. Inflation, unemployment and Hayek. Review 57: 6–10. St. Louis, USA, Federal Reserve Bank of St. Louis. <https://doi.org/10.20955/r.57.6-10.rbm>
- Stiglitz, J.E.** 2023. How not to fight inflation. In: Project Syndicate, 26 January 2023. Kings Park, USA. <https://www.project-syndicate.org/commentary/us-inflation-fed-interest-rates-high-costs-dubious-benefits-by-joseph-e-stiglitz-2023-01?barrier=accesspaylog>
- United States Federal Reserve.** 2023. Decisions Regarding Monetary Policy Implementation. Implementation Note issued May 3, 2023. Press release. <https://www.federalreserve.gov/newsevents/pressreleases/monetary20230503a1.htm>
- Verbrugge, R. & Zaman, S.** 2023. The hard road to a soft landing: evidence from a (modestly) nonlinear structural model. Working Paper No. 23-03. Federal Reserve Bank of Cleveland. <https://doi.org/10.26509/frbc-wp-202303>.



MARKET POLICY DEVELOPMENTS

GRAINS: MAJOR POLICY DEVELOPMENTS MID-OCTOBER 2022 TO MID-MAY 2023*

COUNTRY	PRODUCT	DATE	POLICY INSTRUMENT	DESCRIPTION	
Argentina	Grains	Oct-22	Government market intervention	Launched the ARS 500 billion (USD 3.2 billion) Argentine Credit Programme (CreAr in Spanish). The programme will provide loans to small and medium-sized enterprises (SME) and large industrial and agro-industrial companies for investments and import substitution projects.	
	Wheat	Nov-22	Export policy	Following a severe drought that curtailed production prospects, the government extended current wheat export licenses for up to 360 days. The extension applied to shipments originally scheduled to load between 1 December 2022 and 28 February 2023.	
	Maize	Nov-22	Biofuel	Increased the price of maize-based ethanol used in biofuel blends for automobiles from ARS 107.41 (USD 0.68) to ARS 112.84 (USD 0.72) per litre. The price applies retrospectively for purchases made from 1 October 2022 until further announcement.	
	Maize	Nov-22	Export quota	Increased the export quota for maize harvested during the 2022/2023 season from 10 million to 20 million tonnes.	
	Maize	Nov-22	Biofuel	Increased the price of maize-based ethanol used in biofuel blends for automobiles from ARS 112.84 (USD 0.86) to ARS 118.48 (USD 0.91) per litre. The price applies retrospectively for purchases made from 3 November 2022 until further announcement.	
	Grains	Jan-23	Production support	Announced a series of measures to help farmers affected by severe drought: financial assistance to producers through the creation of a fund of ARG 5 billion (USD 26 million), suspension of advance income tax payments, reduction of interest rates and an increase in subsidies.	
	Maize	Mar-23	Export policy	The Ministry of Agriculture allowed maize exporters to reschedule their exports for up to 180 days. This measure aims to alleviate pressure on the domestic market and to give local buyers an opportunity to purchase maize without exporters acquiring large quantities during times of limited supply following a fall in production due to severe drought.	
	Wheat	Apr-23	Export policy	Gave additional time to exporters to reschedule wheat shipments without penalties, allowing for a 360-day extension.	
	Australia	Barley	Apr-23	Import policy	Reached an agreement with China regarding a dispute over barley trade. China will conduct an expedited review of its tariffs on Australian barley imports (more than 80 percent, and in place since 2020), and Australia will temporarily suspend its challenge against the tariffs through the World Trade Organization dispute process.
	Bangladesh	Grains	Nov-22	Government market intervention	Announced a BDT 5 000 crore (USD 492 million) refinancing scheme for the agricultural sector, including cereals. The scheme will end on 30 June 2024 and commercial banks will extend loans to the farmers for a maximum period of 18 months, with a three-month grace period and a maximum interest rate of 4 percent.
Bulgaria	Grains	Apr-23	Import policy	Announced a temporary ban on grain imports from Ukraine, but with transit permitted, to protect domestic producers.	
Brazil	Maize and wheat	Nov-22	Production support	Approved a BRL 120 million (USD 23.3 million) loan to support Cooperativa Agroindustrial Copagril in producing several agricultural products, including wheat and maize.	
	Maize	Feb-23	Import duty	Reintroduced, with immediate effect, the customs duty on ethanol imports, which was abolished in March 2022. The duty is set at 16 percent until 31 December 2023; it will increase to 18 percent in 2024.	

COUNTRY	PRODUCT	DATE	POLICY INSTRUMENT	DESCRIPTION
Brazil	Maize	Mar-23	GMO policy	Approved the cultivation and commercialization of a variety of drought-tolerant, genetically modified (GM) wheat known as HB4, produced by the biotech firm Bioceres.
China (mainland)	Maize	Oct-22	Export policy	Restricted the export of maize starch due to concerns about local supplies. The government has asked companies to suspend shipments in order to stabilize prices and contain inflationary risks.
	Wheat	Nov-22	Trade agreement	Approved the import of wheat flour from Belarus, subject to cargoes meeting inspection and quarantine requirements, effective from 1 November 2022.
	Maize	Jan-23	Import duty	Imposed anti-dumping duties against US imports of distillers' dried grains (DDGS) for a further five years.
	Wheat	Mar-23	Production support	Implemented a series of measures to promote and stabilize the production of maize and soybeans, focusing on the four northeastern provinces. The measures include increased subsidies to farmers.
	Wheat	Apr-23	Production support	The Ministry of Agriculture and Rural Affairs announced an allocation of CNY 10 billion (USD 14.5 billion) to support grain farmers; this includes support for spring ploughing and production.
	Wheat	Oct-22	Government market intervention	Announced that mills producing wheat flour with an extraction rate of 72 percent will be allowed to buy wheat from the state grains buyer for EGP 8 700 (USD 442) per tonne. Pasta factories will be able to buy wheat for EGP 10 000 (USD 508) per tonne. This policy is set to run for one month, starting on 15 October.
Egypt	Wheat	Oct-22	Government market intervention	Announced that the Ministry of Supply and Internal Trade will provide high quality wheat flour to licensed private sector mills and bakers at EGP 10 000 (USD 508) per tonne to ensure domestic bread supplies at reasonable prices.
	Wheat	Nov-22	Stocks policy	Announced that strategic wheat reserves would be offered on the Egyptian Stock Exchange twice per week, starting from 27 November.
	Wheat	Jan-23	Government procurement	Set the wheat procurement price at EGP 1 250 per <i>ardeb</i> (USD 292 per tonne), a 40 percent increase over last year's procurement price and a 25 percent increase over the price announced in August 2022. Wheat subsidies for 2023 were set at EGP 95 billion (USD 3.2 billion), a 150 percent increase over last year.
	Wheat	Jan-23	Subsidy	Announced that subsidized bread will be sold to people that are not enrolled in the bread subsidy programme in order to hamper domestic inflation.
	Grains	Jan-23	Government market intervention	Approved an EGP 150 billion (USD 600 million) scheme for loans aimed to improve the industrial and agricultural sectors.
	Maize	Feb-23	Government procurement	Announced guaranteed prices for white maize at EGP 9 000 (USD 296) per tonne and yellow maize at EGP 9 500 (USD 312) per tonne.
European Union	Wheat	Apr-23	Government procurement	Increased the domestic wheat procurement price for the upcoming season by 20 percent, from EGP 1 250 per 150 kg (USD 270 per tonne) to EGP 1 500 per 150 kg (USD 323 per tonne) from January. The policy aims to support local farmers and to encourage increased production in order to reduce the import bill.
	Grains	Apr-23	Import policy/government intervention	The European Commission (EC) agreed to extend the suspension of duties and quotas on imports from Ukraine by one year, despite unilateral import bans implemented by four European Union (EU) countries to protect domestic farmers who suffered economic losses due to the influx of grains from Ukraine. The transit of grains through the four countries with import bans in place will still be permitted. Furthermore, the EC will provide EUR 100 million (USD 110 million) to compensate farmers in five affected countries bordering Ukraine (including Poland, Slovakia, Hungary, Romania and Bulgaria).
	Wheat	Apr-23	Export policy	Lifted a temporary restriction on the export of wheat, which was in place to ensure national food security and to serve domestic demand.

COUNTRY	PRODUCT	DATE	POLICY INSTRUMENT	DESCRIPTION
Hungary	Grains	Apr-23	Import policy	Announced a temporary ban on grain imports from Ukraine, but with transit permitted, to protect domestic producers.
	Wheat	Oct-22	Export policy	Authorized export-oriented units and firms set up in special economic zones to export flour made from imported wheat, in a bid to facilitate exports of value-added products (Notification No. 39/2015-2020). As a result, food processors are allowed to import duty-free wheat against a commitment to export flour.
	Wheat	Oct-22	Government procurement	Increased the minimum support price (MSP) of wheat by 5.45 percent to INR 21 250 (USD 1 079) per tonne.
	Wheat	Dec-22	Trade policy	Extended the suspension of trading in derivative contracts of commodities, including wheat, until 20 December 2023. The year-long suspension of futures trading in key farm commodities was established last year to tame food inflation.
	Grains	Jan-23	Food security	Introduced a new integrated food security scheme, which subsumes two current schemes of the Department of Food and Public Distribution, under which free food grains will be provided to more than 800 million beneficiaries under the National Food Security Act (NFSA) during 2023.
India	Wheat	Jan-23	Stocks release	Announced the release of 3 million tonnes of wheat from inventories through a special open market sale scheme. The measure aims to alleviate high domestic prices.
	Wheat	Mar-23	Government procurement	Announced a wheat procurement target of 34.15 million tonnes for the 2023-24 marketing year starting in April; this is significantly higher than the 18.79 million tonnes purchased in the previous year.
	Wheat	Mar-23	Export policy	The Department of Commerce authorized the export of wheat flour, provided it contains at least 80 percent whole wheat flour, and that any other ingredients, such as soya flour or oatmeal are domestically sourced. For every kilogram of exported whole wheat flour, the import of 1.07 kilograms of wheat will be allowed.
	Wheat	Apr-23	Government procurement	Proposed to establish 5 900 wheat procurement centres to buy wheat directly from farmers. Approved an MSP of INR 2 125 per quintal and set a target to buy 60 lakh (1 lakh = 100 000) metric tonnes of wheat this fiscal year.
	Wheat	Apr-23	Government procurement	Eased quality norms for wheat procurement in some states where crops had been exposed to heavy rains and winds, to ensure that farmers were able to receive the MSP.
	Millet	Apr-23	Production support	The Ministry of Agriculture, in collaboration with the cooperative NAFED, established the Millets Experience Centre (MEC) to increase awareness about the benefits of millet and to encourage its adoption.
	Grains	Jan-23	Fertilizer subsidy	Reduced fertilizer subsidies for farmers from IDR 25.3 trillion (USD 1.67 billion) to 24 trillion (USD 1.59 billion) in 2023 in order to tame inflation.
	Wheat	Mar-23	GMO policy	Approved genetically modified HB4 wheat for human consumption. The GM grain is drought-tolerant and had already been approved in the country for animal feed.
	Sorghum	Apr-23	Production support	Formulated a road map for the development of sorghum in NTT (East Nusa Tenggara) province as part of food diversification programme and to improve nutrition.
	Wheat	Apr-23	Government market intervention	Increased the price at which the government sells imported wheat to domestic flour mills to reflect higher import prices over the past six months. Starting 1 April, the Ministry of Agriculture and Farmers' Welfare's wheat selling price will increase by an average of 5.8 percent, from JPY 72 530 (USD 542) the previous year to an average JPY 76 750 (USD 574) per tonne.
Kazakhstan	Wheat	Apr-23	Import policy	Announced a six-month ban on the import of wheat by road into the national territory from third countries, including the countries of the Eurasian Economic Union. The ban aims to support domestic farmers and to stabilize the price of locally produced wheat.
	Maize	Dec-22	Import tariff	Approved duty-free import permits for 900 000 tonnes of white maize between February and August 2023.
Kenya	Wheat	Mar-23	Food security	Received 30 000 metric tonnes of wheat from Ukraine to help families affected by drought and famine through the "Grain from Ukraine" humanitarian programme.

COUNTRY	PRODUCT	DATE	POLICY INSTRUMENT	DESCRIPTION
Kenya	Wheat	Apr-23	Production support	Announced that the Ministry of Agriculture will finance key state corporations to put 500 000 acres of their idle land under maize production to ease annual shortages.
Mexico	Grains	Oct-22	Import duty	Issued a decree that temporarily eliminates import duties on basic food products (including bread, pasta and cereals). The suspension will be in place from 20 October 2022 until the end of February 2023 and may be extended until the end of 2023. It follows the suspension of import duties in May 2022, which was scheduled to last six months.
	Grains	Dec-22	Production support	Increased the National Programme of Fertilizers for the fiscal year 2023 to MXN 20.7 billion (USD 1.1 billion) from MXN 7 billion (USD 357.1 million) in the 2022 fiscal year. In addition, the programme's beneficiary pool was expanded.
	Maize	Jan-23	Export duty	Announced a temporary 50 percent tax on white maize exports, arguing that the grain must remain in the country to guarantee supply and price stability.
	Maize	Feb-23	GMO policy	Removed the deadline (previously January 2024) to ban the use of GM maize for feed and industrial purposes. In addition, the government reiterated its plans to prohibit GM maize for human consumption and to revoke authorizations and permits to import, produce, distribute and use the herbicide glyphosate.
	Maize	Apr-23	GMO policy	Announced that it would ban GM corn for human consumption.
Moldova	Grains	May-23	Import policy	Announced a temporary ban on grain imports from Ukraine, but with transit permitted, to protect domestic producers.
Morocco	Grains	Jan-23	Government market intervention	Announced a total investment of MAD 4.2 billion (USD 410 million) to strengthen the agricultural sector, develop food industries, engage young people, regulate market supply and support national markets.
	Wheat	Mar-23	Import tariff	Announced new import subsidy schemes and domestic consumption restrictions to ensure domestic supply amid low production. The wheat import tax will be imposed on May 31 rather than the previously-set April 30, allowing importers more time to secure more wheat. The government has also introduced subsidies of around USD 80 per tonne for cargo from the Black Sea and USD 90 per tonne from other origins, including France and Germany, which will now be paid based on the bill of lading (BL) date instead of when the cargo reaches Moroccan waters. This aims to facilitate purchases from the Black Sea, where transit takes more time.
	Grains	Nov-22	Import tariff	Approved a reduction in the value-added tax (VAT) rate from 17 percent to 16 percent, to come into force on 1 January 2023. The measure is part of a broad economic acceleration package that aims to support growth, to curb upward pressure on prices and improve household purchasing power.
Pakistan	Wheat	Oct-22	Import policy	Prohibited private sector wheat imports. If required, international purchases would be conducted by the government.
	Wheat	Jan-23	Production support	Approved a PKR 8.3 billion (USD 36 million) cash subsidy for farmers in flood-affected areas. The subsidy takes the place of providing wheat seeds, which was earlier recommended as a support measure for the farmers.
	Wheat	Feb-23	Government procurement	Fixed the minimum support price for wheat at PKR 3 900 per 40 kg bag (USD 346 per tonne).
	Wheat	Mar-23	Government procurement	The Economic Coordination Committee (ECC) approved a wheat procurement target of 1.80 MMT at the price of PKR 3 900 (USD 14.91) per 40 kg for 2022/2023. The previous support price was PKR 2 200 (USD 8.41) per 40 kg for 2021/2022.
Peru	Wheat	May-23	Government market intervention	Provided free wheat flour during the month of Ramadhan to ease the impact of record-breaking inflation.
	Maize	Oct-22	Import tariff	Increased the import tariff discounts applicable to maize products from USD 106 to USD 120 per tonne.
	Maize	Nov-22	Import tariff	Decreased the import tariff discounts applicable to maize products from USD 120 to USD 99 per tonne.

COUNTRY	PRODUCT	DATE	POLICY INSTRUMENT	DESCRIPTION
Peru	Maize	Dec-22	Import tariff	Increased the import tariff discounts applicable to maize products from USD 99 to USD 123 USD per tonne.
Poland Poland	Grains	Apr-23	Production support/ government procurement	Voted a financial envelope of PLN 10 billion (USD 2.4 billion) to support farmers. Also set a minimum price for wheat at PLN 1 400 (USD 342) per tonne and took measures to subsidize fuel and fertilizer prices.
	Grains	Apr-23	Import policy	Announced a temporary ban on grain imports from Ukraine, but with transit permitted, to protect domestic producers.
Romania	Grains	Apr-23	Government market intervention	Voted a financial envelope of EUR 20.1 million (USD 22.3 million) for farmers due to additional costs – particularly for storage – generated by imports from Ukraine. The envelope includes part (EUR 10.05 million, or USD 11.2 million) of the exceptional emergency aid from the European Union granted to farmers in countries bordering Ukraine.
Russian Federation	Barley, maize and wheat	Oct-22	Export duty	Decreased export duties on wheat from RUB 3 028 to RUB 2 923.2 (from USD 49.3 to USD 47.6) per tonne, on barley from RUB 2 524.2 to RUB 2 414.3 (from USD 41 to USD 39.3) per tonne and on maize from RUB 1 909.1 to RUB 1 637.3 (from USD 31 to USD 26.6) per tonne. These export duties came into effect on 2 November.
	Barley, maize and wheat	Nov-22	Export duty	Increased export duties on wheat from RUB 2 923.2 to RUB 3 012 (from USD 46.9 to USD 48.4) per tonne and on barley from RUB 2 414.3 to RUB 2 495.6 (from USD 38.8 to USD 40.1) per tonne. Decreased export duty on maize from RUB 1 637.3 to RUB 1 114.3 (from USD 26.3 to USD 17.9) per tonne. These export duties came into effect on 9 November.
	Barley, maize and wheat	Nov-22	Export duty	Decreased export duties on wheat from RUB 3 012 to RUB 2 922.1 (from USD 49.8 to USD 48.3) per tonne and on maize from RUB 1 114.3 to RUB 447.5 (from USD 18.4 to USD 7.4) per tonne. Increased export duty on barley from RUB 2 495.6 to RUB 2 686.7 (from USD 41.2 to USD 44.4) per tonne. These export duties came into effect on 16 November.
	Wheat	Nov-22	Export quota	Approved a proposal to set an export quota of 25.5 million tonnes on wheat, meslin, rye, barley and maize for countries outside the Eurasian Economic Union between 15 February and 30 June 2023. For the same period in 2022, the quota on cereals exports was set at 11 million tonnes, including an 8 million tonne limit on wheat and meslin exports.
	Barley, maize and wheat	Nov-22	Export duty	Decreased export duties on wheat from RUB 2 922.1 to RUB 2 735.2 (from USD 48.3 to USD 45.2) per tonne, on maize from RUB 447.5 to RUB 193.8 (from USD 7.4 to USD 3.2) per tonne and on barley from RUB 2 686.7 to RUB 2 430 (from USD 44.4 to USD 40.2) per tonne. These export duties came into effect on 23 November.
	Barley, maize and wheat	Nov-22	Export duty	Increased export duty on wheat from RUB 2 735.2 to RUB 2 788 (from USD 45 to USD 45.9) per tonne. Decreased export duties on maize from RUB 193.8 (from USD 3.2) to RUB 0 per tonne and on barley from RUB 2 430 to RUB 2 308.6 (from USD 40 to USD 38) per tonne. These export duties came into effect on 30 November.
	Grains	Nov-22	Production support	Allocated RUB 899 million (USD 14.8 million) in financial grants to 22 Russian regions to support agricultural producers, including grain farmers. The funding was available until the end of 2022.
	Barley, maize and wheat	Dec-22	Export duty	Increased export duties on wheat from RUB 2 788 to RUB 2 806.8 (from USD 44.6 to USD 44.9) per tonne and on barley from RUB 2 308.6 to RUB 2 315 (from USD 36.9 to USD 37) per tonne. Announced that the export duty on maize will stay at RUB 0. These export duties came into effect on 7 December.
	Barley, maize and wheat	Dec-22	Export duty	Increased export duties on wheat from RUB 2 806.8 to RUB 3 143.4 (from USD 44.9 to USD 50.3) per tonne, on barley from RUB 2 315 to RUB 2 603.1 (from USD 37 to USD 46.6) per tonne and on maize from RUB 0 to RUB 76.2 (from USD 0 to USD 1.2) per tonne. These export duties came into effect on 14 December.
	Grains	Dec-22	Government market intervention	Allocated RUB 5 billion (USD 75 million) to support preferential lending to the agricultural sector to support the sector's technological progress, promote production and improve food security in the country.

COUNTRY	PRODUCT	DATE	POLICY INSTRUMENT	DESCRIPTION
Russian Federation	Barley, maize and wheat	Dec-22	Export duty	Increased export duties on wheat from RUB 3 143.4 to RUB 3 333.8 (from USD 48.5 to USD 51.4) per tonne and on barley from RUB 2 603.1 to RUB 2 686.9 (from USD 40.16 to USD 41.45) per tonne. Decreased export duty on maize from RUB 76.2 to RUB 0 (from USD 1.17 to USD 0) per tonne. These export duties came into effect on 21 December.
	Barley, maize and wheat	Dec-22	Export duty	Increased export duties on wheat from RUB 3 333.8 to RUB 4 160.9 (from USD 48.16 to USD 60.72) per tonne, on barley from RUB 2 686.9 to RUB 3 420.4 (from USD 39.06 to USD 49.72) per tonne and on maize from RUB 0 to RUB 692.6 (from USD 0 to USD 10) per tonne. These export duties came into effect on 28 December.
	Barley, maize and wheat	Dec-22	Export duty	Increased export duties on wheat from RUB 4 160.9 to RUB 4 766.3 (from USD 57.39 to USD 65.74) per tonne, on barley from RUB 3 420.4 to RUB 3 870.6 (from USD 47.18 to USD 53.39) per tonne and on maize from RUB 692.6 to RUB 1 289.4 (from USD 9.55 to USD 17.78) per tonne. These export duties came into effect on 11 January.
	Barley, maize and wheat	Jan-23	Export duty	Decreased export duties on wheat from RUB 4 766.3 to RUB 4 719.4 (from USD 73.33 to USD 72.61) per tonne and on maize from RUB 1 174.6 to RUB 1 147.6 (from USD 18.01 to USD 17.65) per tonne. Increased export duty on barley from RUB 3 870.6 to RUB 3 977.6 (from USD 59.55 to USD 61.19) per tonne. These export duties came into effect on 18 January.
	Barley, maize and wheat	Jan-23	Export duty	Decreased export duties on wheat from RUB 4 719.4 to RUB 4 283.2 (from USD 69.15 to USD 62.76) per tonne, on maize from RUB 1 147.6 to RUB 886.5 (from USD 16.82 to USD 13) per tonne and on barley from RUB 3 977.6 to RUB 3 083.7 (from USD 58.28 to USD 45.18) per tonne. These export duties came into effect on 25 January.
	Barley, maize and wheat	Jan-23	Export duty	Increased export duties on wheat from RUB 4 283.2 to RUB 4 365.3 (from USD 61.58 to USD 62.76) per tonne, on maize from RUB 886.5 to RUB 1 186.2 (from USD 12.75 to USD 17.06) per tonne and on barley from RUB 3 083.7 to RUB 3 174.3 (from USD 44.33 to USD 45.64) per tonne. These export duties came into effect on 1 February.
	Barley, maize and wheat	Feb-23	Export duty	Increased export duties on wheat from RUB 4 365.3 to RUB 4 496.6 (from USD 61.79 to USD 63.65) per tonne, on maize from RUB 1 186.2 to RUB 1 505.7 (from USD 16.79 to USD 21.31) per tonne and on barley from RUB 3 174.3 to RUB 3 175.2 (from USD 44.93 to USD 44.95) per tonne. These export duties came into effect on 8 February.
	Barley, maize and wheat	Feb-23	Export duty	Increased export duties on wheat from RUB 4 496.6 to RUB 4 653.5 (from USD 61.51 to USD 63.65) per tonne, on maize from RUB 1 505.7 to RUB 1 670 (from USD 20.6 to USD 22.84) per tonne and on barley from RUB 3 175.2 to RUB 3 209.1 (from USD 43.43 to USD 43.9) per tonne. These export duties came into effect on 15 February.
	Grains	Feb-23	Export quota	Increased its grain export quota (wheat and meslin, barley, rye and maize) to 25.5 million tonnes. The new quota is 2.5 times larger than the quota of the previous season and will be in force until 30 June 2023.
	Barley, maize and wheat	Feb-23	Export duty	Increased export duties on wheat from RUB 4 653.5 to RUB 5 177.2 (from USD 62.89 to USD 69.97) per tonne, on maize from RUB 1 670 to RUB 2 199.7 (from USD 22.57 to USD 29.73) per tonne and on barley from RUB 3 209.1 to RUB 3 717 (from USD 43.37 to USD 50.23) per tonne. These export duties came into effect on 22 February.
	Barley, maize and wheat	Feb-23	Export duty	Increased export duties on wheat from RUB 5 177.2 to RUB 5 275.2 (from USD 68.63 to USD 69.93) per tonne, on maize from RUB 2 199.7 to RUB 2 264.6 (from USD 29.16 to USD 30.02) per tonne and on barley from RUB 3 717 to RUB 3 872.3 (from USD 49.27 to USD 51.33) per tonne. These export duties came into effect on 1 March.
	Barley, maize and wheat	Mar-23	Export duty	Increased export duties on wheat from RUB 5 275.2 to RUB 5 371.6 (from USD 65.85 to USD 67.05) per tonne and on maize from RUB 2 264.6 to RUB 2 740 (from USD 28.7 to USD 34.20) per tonne. Decreased export duty on barley from RUB 3 872.3 to RUB 3 548.8 (from USD 48.34 to USD 44.30) per tonne. These export duties came into effect on 9 March.
	Barley, maize and wheat	Mar-23	Export duty	Decreased export duties on wheat from RUB 5 371.6 to RUB 5 344 (from USD 67.05 to USD 66.71) per tonne, on maize from RUB 2 740 to RUB 2 615.3 (from USD 34.20 to USD 32.65) per tonne and on barley from RUB 3 548.8 to RUB 3 016.6 (from USD 44.30 to USD 37.66) per tonne. These export duties came into effect on 15 March.

COUNTRY	PRODUCT	DATE	POLICY INSTRUMENT	DESCRIPTION
Russian Federation	Barley, maize and wheat	Mar-23	Export duty	Decreased export duty on wheat from RUB 5 344 to RUB 5 327.9 (from USD 69.24 to USD 69.03) per tonne. Increased export duties on maize from RUB 2 615.3 to 2 646.9 (from USD 33.89 to USD 34.3) per tonne and on barley from RUB 3 016.6 to RUB 3 298.2 (from USD 39.09 to USD 42.73) per tonne. These export duties came into effect on 22 March.
	Barley, maize and wheat	Mar-23	Export duty	Increased export duties on wheat from RUB 5 327.9 to RUB 5 409.6 (from USD 66.39 to USD 67.41) per tonne and on maize from RUB 2 646.9 to RUB 2 885 (from USD 32.98 to 35.95) per tonne. Decreased export duties on barley from RUB 3 298.2 to RUB 3 245.3 (from USD 41.10 to USD 40.44) per tonne. These export duties came into effect on 29 March.
	Barley, maize and wheat	Apr-23	Export duty	Decreased export duties on wheat from RUB 5 409.6 to RUB 5 179.4 (from USD 67.41 to USD 64.54) per tonne and on barley from RUB 3 245.3 to RUB 2 943.6 (from USD 40.44 to USD 36.68) per tonne. Increased export duties on maize from RUB 2 885 to RUB 2 943.6 (from USD 35.95 to USD 36.68) per tonne. These export duties came into effect on 5 April.
	Barley, maize and wheat	Apr-23	Export duty	Increased export duties on wheat from RUB 5 179.4 to RUB 5 339.4 (from USD 64.54 to USD 66.53) per tonne, on barley from RUB 2 943.6 to RUB 3 185.7 (from USD 36.68 to USD 39.69) per tonne. These export duties came into effect on 12 April.
	Barley, maize and wheat	Apr-23	Export duty	Increased export duties on wheat from RUB 5 339.4 to RUB 5 759.5 (from USD 66.53 to USD 71.76) per tonne, on barley from RUB 3 185.7 to RUB 3 729.3 (from USD 46.47 to USD 50.52) per tonne. These export duties came into effect on 19 April.
	Grains	Apr-23	Export policy	Published a regulation that would allow grain exporters that have reached their quota to benefit from those of unfilled competitors, up to 45 percent of their own quota.
	Barley, maize and wheat	Apr-23	Export duty	Decreased export duties on wheat from RUB 5 759.5 to RUB 5 678.9 (from USD 71.76 to USD 70.76) per tonne and on maize from RUB 3 729.3 to RUB 3 215.8 (from USD 46.47 to USD 40.07) per tonne. Increased export duties on barley from RUB 3 729.3 to RUB 2 480.7 (from USD 30.91 to USD 31.10) per tonne. These export duties came into effect on 26 April.
	Barley, maize and wheat	Apr-23	Export duty	Decreased export duties on wheat from RUB 5 678.9 to RUB 5 573.2 (from USD 70.76 to USD 69.44) per tonne, on maize from RUB 3 215.8 to RUB 3 000 (from USD 40.07 to USD 37.38) per tonne and on barley from RUB 2 480.7 to RUB 2 195.4 (from USD 31.10 to USD 27.35) per tonne. These export duties came into effect on 4 May.
	Barley, maize and wheat	May-23	Export duty	Decreased export duties on wheat from RUB 5 573.2 to RUB 5 279.2 (from USD 69.44 to USD 65.78) per tonne and on maize from RUB 3 000 to RUB 2 523.9 (from USD 37.38 to USD 31.45) per tonne. Increased export duty on barley from RUB 2 195.4 to RUB 2 676.2 (from USD 27.35 to USD 33.35) per tonne. These export duties came into effect on 12 May.
	Barley, maize and wheat	May-23	Export duty	Decreased export duties on wheat from RUB 5 279.2 to RUB 4 727.6 (from USD 65.78 to USD 58.91) per tonne, on barley from RUB 2 676.2 to RUB 2 117.8 (from USD 33.35 to USD 26.39) per tonne and on maize from RUB 2 523.9 to RUB 2 264.3 (from USD 31.45 to USD 28.21) per tonne. These export duties came into effect on 17 May.
	Barley, maize and wheat	May-23	Export duty	Decreased export duties on wheat from RUB 4 727.6 to RUB 4 644.4 (from USD 58.91 to USD 57.87) per tonne and on barley from RUB 2 117.8 to RUB 1 559.1 (from USD 26.39 to USD 19.43) per tonne. Increased export duties on maize from RUB 2 264.3 to RUB 2 565.8 (from USD 29.46 to USD 31.97) per tonne. These export duties came into effect on 24 May.
	Grains	Nov-22	Government market intervention	Announced the signing of contracts worth SAR 1 540 million (USD 410.7 million) with several national firms for importing various agricultural products, including cereals. The measure aims at strengthening food security.
	Wheat and barley	May-23	Food security	Completed a new facility that increases total grain storage capacity by 40 percent to ensure food security. The new facility expands storage capacity to 3.5 million tonnes (from 2.6 million tonnes in 2016) and has helped reduce barley imports by more than 50 percent since 2016.

COUNTRY	PRODUCT	DATE	POLICY INSTRUMENT	DESCRIPTION
Slovakia	Grains	Apr-23	Import policy	Announced a temporary ban on grain imports from Ukraine, but with transit permitted, to protect domestic producers.
Tunisia	Wheat	May-23	Government procurement	Increased the purchase price of durum wheat from local farmers, due to a severe drought, from 130 dinars (USD 42.67) to 140 dinars (USD 45.95) per 100 kg.
Türkiye	Maize and wheat	Apr-23	Import tariff	Reinstated tariffs on cereal imports, which had been abolished during the COVID-19 pandemic. Starting from 1 May, a 130 percent import tariff will be placed on grain imports, including wheat and maize. However, duty-free treatment will be applied on grain imports from Ukraine.
Ukraine	Grains	Nov-22	Trade policy	The Black Sea Grain Initiative, facilitating the shipment of agricultural products from three Ukrainian Black Sea ports, was extended for a further 120 days.
	Grains	Mar-23	Trade policy	The Black Sea Grain Initiative, facilitating the shipment of agricultural products from three Ukrainian Black Sea ports, was extended for 60 days.
	Grains	May-23	Export policy	The Black Sea Grain Initiative, facilitating the shipment of agricultural products from three Ukrainian Black Sea ports, was extended for 60 days.
United States of America	Maize	Mar-23	Production support	The US Department of Agriculture's Risk Management Agency announced it would expand margin protection plans for soybean and maize farmers in 1 255 and 1 729 counties respectively. Farmers will be able insure their 2024 crops under this programme, as long as they purchase coverage by the end of September 2023.
Zambia	Maize	Jan-23	Stocks release	Announced the release of 200 000 tonnes of maize from the Food Reserve Agency to millers across the country.
	Maize	Jan-23	Production support	Announced the allocation of ZMW 55 billion (USD 2.7 million) for the procurement of pesticides to fight army worms, which have affected about 124 000 hectares of maize (almost 11 percent of the total crop).
	Maize	Apr-23	Production support	Implemented the rollout of the International Maize and Wheat Improvement Center (CIMMYT)'s new innovations, which target smallholder farmers and agriculture-based value chain actors in the country
	Maize	Apr-23	Government market intervention	Started a programme to deliver maize closer to millers in Lusaka and the Copperbelt provinces. A total of 375 000 metric tons has been allocated to millers across the country since January 2023.
Zimbabwe	Maize	May-23	Government market intervention	Announced amendments to the regulations for maize sales control with some flexibility in line with the agricultural transformation agenda.

* A collection of major grain policy developments starting in July 2010 is available at: <https://www.fao.org/markets-and-trade/commodity-policy-archive/en/?groupANDcommodity=grains>

RICE: MAJOR POLICY DEVELOPMENTS MID-OCTOBER 2022 TO MID-MAY 2023*

COUNTRY	DATE	POLICY INSTRUMENT	DESCRIPTION
Algeria	Feb-23	Import restrictions	Announced that imports of rice and pulses would henceforth be exclusively undertaken by the Office Algérien Interprofessionnel des Céréales (OAI). All other entities would be barred from importing rice.
Argentina	Apr-23	Export promotion	Included husked, semi/wholly milled and broken rice among the list of commodities covered by the 2023 round of the Export Increase Programme (Programa de Incremento Exportador). As a result, exporters of these classes of rice would be eligible to receive the preferential exchange rate of ARS 300 to 1 USD from 10 April to 31 August 2023.
Azerbaijan	Nov-22	Import tariff	Exempted rice originating in Pakistan from import tariffs until 31 December 2027.
	Nov-22	Government procurement, purchasing prices	Decided to purchase 300 000 tonnes of paddy and 500 000 tonnes of parboiled rice from the 2022/23 Aman harvest. Purchase prices under the procurement drive would be set at BDT 28 and 42 (USD 258 and 386 per tonne) per kg of paddy and parboiled rice, respectively.
	Dec-22	Production support	Announced that to assist production during the 2023/24 Boro cycle, it would destine BDT 1.7 billion (USD 15.6 million) to support 2.7 million producers across the country. Under the initiative, 1.5 million farmers would be provided with two kgs of hybrid seeds. Cultivation of high yielding varieties would also be supported through the provision of five kgs of seeds, ten kgs of di-ammonium phosphate and ten kgs of muriate of potash to producers, with additional steps taken to promote mechanization during planting and harvest.
Bangladesh	Feb-23	Production support	Announced that it would destine BDT 572.5 million (USD 5.3 million) to support 1 million smallholders cultivating Aus paddy. The funds would furnish farmers with five kgs of seeds, ten kgs of di-ammonium phosphate and ten kgs of muriate of potash.
	Apr-23	Government procurement, purchasing prices	Announced that it would purchase 400 000 tonnes of paddy and 1.25 million tonnes of parboiled rice from the 2023/24 Boro harvest between 7 May and 31 August 2023. Prices under the purchase drive would be set to BDT 44 per kg of parboiled rice (USD 405 per tonne) and BDT 30 per kg of paddy bought (USD 276 per tonne).
	Dec-22	Import tariff	Decided that import duties and charges on non-fragrant parboiled and white rice would remain at the reduced rate of 15.25 percent for another three months or until 31 March 2023.
	Dec-22	Finance and credit facilities	Requested that commercial banks issue letters of credit to importers of rice and wheat at a minimum margin to help contain prices of the staples.
Benin	Jan-23	Production support	Announced the creation of the Société de Développement et d'Aggrégation des Productions Agricoles, a public-private partnership, whose main activities would include collecting agricultural produce (principally paddy), extending farm advice, facilitating producer access to inputs and equipment, and access to raw materials by millers, as well as the export of non-locally processed products, among others. The creation of the entity would come against the backdrop of local paddy production gains that have stimulated interest in milling. It aims to strengthen the supply chain and promote transparency in the collection and distribution of paddy.
China (mainland)	Feb-23	Government procurement, support prices	Announced that the government procurement price for early Indica paddy harvested during the 2023/24 season would be raised by 1.6 percent to CNY 126 per 50 kg (USD 361 per tonne). Government procurement prices for late/intermediate Indica and Japonica paddy would instead remain at 2022/23 levels of CNY 129 and 131 per 50 kg (USD 370 and 376 per tonne), respectively.

COUNTRY	DATE	POLICY INSTRUMENT	DESCRIPTION
China (mainland)	Mar-23	Government procurement	Announced that it would leave the ceiling on publicly-procured volumes at 50 million tonnes of paddy during the 2023/24 season, unchanged from 2022/23 and comprising 20 million tonnes of Indica paddy and 30 million tonnes of Japonica paddy.
	Mar-23 to mid-May-23	Stock release	Sold 570 555 tonnes of paddy from state reserves, through seven auctions held between 28 March and 9 May 2023, which offered a total of 6.33 million tonnes for sale.
Cote d'Ivoire	Nov-22	Price controls	Reintroduced caps on consumer prices of various foodstuffs. For Abidjan and locales within a 30-kilometre radius, the retail price ceiling for rice was set between XOF 330 and 635 (USD 0.54–1.05) per kg, depending on the products' quality and origin. The price caps were to be implemented for three months.
	Mar-23	Production support, support prices	Reached an agreement with sector representatives regarding the 2023/24 round of the warehouse receipts programme (Programme Pignoration de Arroaz). According to the agreement, the scheme would be launched on 1 April 2023 and would have producers receive a price of DOP 2 925–3 025 per 120 kg fanega (USD 445–460 per tonne) from participating millers, which would be complemented with a direct outlay of DOP 100 per fanega (USD 15.2 per tonne) extended by the Government. Additional decisions concerned limiting rice production to two cropping cycles during the season to aid planning and prevent pests and diseases, as well as destining DOP 41 million (USD 747 840) to encourage the use of certified seeds.
Dominican Republic	Apr-23	Export ban	Prohibited exports of rice to prevent increases in local rice quotations and to ensure sufficient local availabilities. The ban was to be reviewed 20 days after its inception, but mid-May reports suggest that it was maintained in light of concerns regarding water availability to irrigate the local crop.
	Nov-22	Price controls	Set a maximum selling price of EGP 18 (USD 0.6) per kg for 3% broken rice, effective 18 November 2022.
	Dec-22	Price controls	Decided that the maximum selling prices of EGP 15 (USD 0.5) per kg for packaged rice, EGP 12 (USD 0.4) per kg for rice sold loose and of EGP 18 (USD 0.6) per kg of 3% broken rice, would remain in effect for an additional three months.
	Feb-23	Price controls	Lifted the price ceilings imposed on packaged, loose and 3% broken rice a month ahead of their slated expiry.
	Mar-23	Finance and credit facilities	Renewed the suspension of upfront cash payment requirements for imports of rice, lentils and fava beans until 15 March 2024.
European Union	Nov-22	Safeguard measures	The Court of Justice of the European Union issued a ruling annulling a 2019 regulation that had imposed safeguard measures on selected classes of semi/wholly milled rice originating in Cambodia and Myanmar (CN codes 10063027, 10063048, 10063067 and 10063098) and through which import tariffs on these classes of rice had been reinstated for three years, starting from 19 January 2019. Subsequent to this ruling, in January 2023, the European Commission re-opened the safeguard investigation that led to the original imposition of the safeguard measures to address issues identified by the Court and to determine whether in doing so the re-imposition of the safeguard measures would be warranted. If this was warranted to be the case, the reintroduction of the safeguard tariffs would be retroactive, being levied on imports of the selected classes of rice from Cambodia and Myanmar that took place between 18 January 2019 and 18 January 2022.
	Mar-23	Import policy	Lowered the import duty on non-basmati husked rice imported outside of existing trade agreements from EUR 65 (USD 70.5) to EUR 30.00 (USD 32.5) per tonne, effective from 7 March 2023.
Ghana	Nov-22	Import restrictions	The Bank of Ghana withdrew foreign exchange support for imports of several commodities classified as non-essential, including rice, in line with presidential instructions issued in October 2022 calling for a review of the management of the country's foreign exchange reserves and a reduction in dependence on imports. The measure was to remain in effect until May 2023, when it would be subject to review.

COUNTRY	DATE	POLICY INSTRUMENT	DESCRIPTION
Ghana	Nov-22	Customs valuation, import tariffs	Announced that it would remove the 30 percent discount rate applied on the benchmark import values of 43 commodities, including rice, as of 1 January 2023.
Guinea	Jan-23	Price controls	Set caps on prices of various foodstuff until 30 June 2023 in the Grand-Conakry region. For 25% broken white rice, the retail price ceiling was set at GNF 5 300 (USD 0.58) per kg, at GNF 6 000 (USD 0.66) per kg for 25% broken aromatic rice and at GNF 6 000 (USD 0.66) per kg for 5% broken parboiled rice.
Guinea-Bissau	Nov-22	Import plan	According to official statements to the press, it planned to import 60 000 tonnes of rice to tame increases in domestic rice prices.
Guyana	Jan-23	Production support	As part of its 2023 budgetary allocations, announced that it would destine GYD 300 (USD 1.4) million to promote productivity improvements through research and development and to contain paddy bug infestations. In addition, it would construct new drying facilities, introduce biofortified varieties and seek new markets for produce.
	Mar-23	Production support, export promotion, tax policy	Mediated at an agreement between sector representatives that would have millers pay rice farmers a minimum of GYD 4 000 per bag (USD 279 per tonne) of paddy harvested during the first cropping cycle of 2023/24. To facilitate the implementation of this agreement, millers and exporters would have their payment of the sales commission for rice, paddy and their by-products waived for the first crop of 2023/24.
India	Dec-22	Food subsidies	Announced that it would provide 813.5 million people covered by the National Food Security Act (NFSA) with rice, wheat and coarse grains free of cost for one year. The supplies would be provided in the form of 5 kg per person rations to beneficiaries that fall under the Priority Households category and in the form of 35 kg per household rations for Antyodaya Anna Yojana (AAY) beneficiaries. The scheme would be implemented from 1 January to 31 December 2023 at an estimated cost of INR 2 trillion (USD 24 billion).
	Dec-22	Futures trade	Renewed the suspension of trading in derivative contracts for paddy (non-basmati) and other agricultural commodities until 20 December 2023.
	Jan-23	Stock release, biofuels	Decided that, under the Open Market Sales Scheme (OMSS) to be implemented during calendar 2023, the reserve price for rice would remain set at INR 20 000 (USD 243) per tonne for private entities sourcing supplies for ethanol production. For all other private entities, the reserve price under e-auction would be INR 24 000 (USD 292) per tonne. A surcharge of INR 730 (USD 9) per tonne would be applicable on top of the reserve price if supplies sourced consisted of fortified rice. Moreover, states would be permitted to source supplies (including fortified rice) from the Food Corporation of India for their schemes without participating in e-auctions, at a price of INR 34 000 (USD 413) per tonne.
	Oct-22	Export quota, export taxes	Exempted up to 600 000 tonnes of paddy exported to Nepal through customs stations located at Raxaul, Jogbani or Sonauli from the 20 percent export duty. In addition, it decided that it would not levy the 20 percent export duty on shipments of husked and semi/wholly milled rice (other than parboiled and basmati rice) that, prior to the 9 September 2022 effecting of the export duty, had entered customs stations and had received official clearance or were backed by irrevocable letters of credit (with message exchange between Indian and foreign banks dated prior to 9 September and with authentication from recipient banks). It also stipulated that exports of organic non-basmati rice (whether in paddy, husked or semi/wholly milled form) would be exempt from the export duty, provided that they were accompanied by a Provisional Transaction Certificate/Transaction Certificate issued by a Certification Body accredited by National Accreditation Body (NAB) for Organic Products under the National Programme for Organic Production of the Department of Commerce. The measures took effect on 1 November 2022.
	Nov-22	Export ban	Amended the 8 September 2022 order that imposed an export ban on broken rice, allowing broken rice that had been handed over to container freight stations (CFSs) before 8 September to be exported until 30 November 2022.

COUNTRY	DATE	POLICY INSTRUMENT	DESCRIPTION
India	Nov-22	Export ban	Exempted organic non-basmati broken rice from the export ban on broken rice implemented on 9 September 2022.
	Mar-23	Export ban	According to press reports, exempted close to 360 000 tonnes from the export ban on broken rice. Of this volume, 250 000 tonnes would be destined to Senegal, 100 000 tonnes to Gambia and 9 990 tonnes to Ethiopia.
	Apr-23	Export taxes	Exempted shipments of paddy seed from the 20 percent export duty, effective 11 April 2023.
Indonesia	Jan-23	Market operations, Stock release, consumption prices	Instructed the state-owned enterprise, Bulog, to implement the Rice Supply and Price Stabilization at the Consumer-Level Programme (Stabilisasi Pasokan dan Harga Pangan - SPHP - Beras di Tingkat Konsumen) throughout the country, from 4 January to 31 December 2023. With the aim of stabilizing domestic supplies and prices of rice through the use of government stockpiles, the scheme would see at least 1.2 million tonnes of rice distributed at warehouse sales prices ranging from IDR 8 300 to 8 900 (USD 0.58-0.62) per kg depending on the various regions.
	Mar-23	Food subsidies	Announced that it would provide 21.353 million households with monthly rations consisting of 10 kgs of rice for three months, starting from March 2023, to help them cope with inflationary pressure.
	Mar-23	Price controls	Set maximum retail prices (MRPs) for medium quality rice at IDR 10 900-11 800 (USD 0.76-0.83) per kg, depending on the various regions. Price ceilings ranging from IDR 13 900 to 14 800 (USD 0.97-1.04) per kg were also set for premium rice qualities, while MRPs were not applied to specialty rice. The MRPs became effective on 31 March 2023.
	Oct-22	Government procurement, purchasing prices	Indicated that it was allowing the state-owned enterprise, Bulog, some flexibility as far as government purchase prices for rice until the end of November 2022, in order to allow it to step-up domestic procurement and refurbish public stockpiles to a desired level of 1.2-1.5 million tonnes by the close of 2022. For example, Bulog was said to pay IDR 8 800 per kg (USD 616 per tonne) for milled rice purchased at its warehouses, instead of the official price of IDR 8 300 per kg (USD 581 per tonne) set in March 2020.
	Mar-23	Government procurement, purchasing prices	Raised government purchase prices for wet paddy to IDR 5 000-5 100 per kg (USD 350-357 per tonne), up 19.0-20.0 percent from levels set in March 2020. For dry paddy, the government purchase prices were raised by 18.1-18.9 percent to IDR 6 200-6 300 (USD 434-441 per tonne) and for milled rice by 19.9 percent to IDR 9 950 per kg (USD 696.5 per tonne).
Iran (Islamic Republic of)	Dec-22	Import quota	Authorized the state-owned enterprise Bulog to import 500 000 tonnes of rice in order to replenish public reserves.
	Mar-23	Import quota	Gave Bulog permission to import up to 2.0 million tonnes of rice in 2023 to meet public distribution and market intervention needs. Of this, 500 000 tonnes would be brought into the country as soon as possible.
	Mar-23	Import policy, value added taxes	Restored the 9 percent value-added tax (VAT) rate imposed on various imported foodstuffs, including rice, up from the lower, 1 percent rate, applied since January 2022.
Japan	Dec-22	Crop diversification, production support	Announced that it would promote the conversion of paddies into upland fields and increased the use of rice flour as a substitute for imported wheat flour. The moves would be part of its Food Security Reinforcement Policy Framework, a strategy geared at boosting local production and reducing reliance on imports of various agricultural products and basic inputs. To this end, it would increase payments for converting paddies into upland fields. With the aim of expanding the area planted to rice for rice flour production by 188 percent by 2030, compared to 2021 levels, it would also provide outlays to rice flour producers and farmers producing rice for flour production to help cover costs related to the developments of appropriate seeds, products, machinery and facilities.
Kenya	Dec-22	Import quota	Authorized the importation of 600 000 tonnes of rice free of import duties. Volumes imported under the quota were to consist of Grade 1 milled rice and were to be brought into the country between 1 February and 6 August 2023.

COUNTRY	DATE	POLICY INSTRUMENT	DESCRIPTION
Kenya	Mar-23	Import quota	Granted traders an import duty waiver for 500 000 tonnes of Grade 1 milled rice, to be brought into the country by 6 August 2023. The aim of the waiver would be to provide an alternate source of starch in the country, in view of impending maize supply constraints.
	Dec-22	Consumer prices, value added taxes	Increased the price of a 25 kg bag of rice from USD 14 to USD 17.5 (or the Liberian dollar equivalent) at the retail level and from USD 13.5 to USD 17 (or the Liberian dollar equivalent) at the wholesale level, effective 3 December 2022.
Liberia	Jan-23	Import tariff	Renewed the import tariff suspension on semi/wholly milled and broken rice, with immediate effect.
	Jan-23	Import tariff	Renewed the import tariff suspension on various agricultural inputs, including paddy for sowing, with immediate effect.
Mexico	Nov-22	Production support, support prices	Raised prices offered under the Guaranteed Prices for Basic Foodstuffs Programme (Programa precios de garantía a productos alimentarios básicos) by 8.4 percent. Accordingly, for the 2021/22 autumn-winter cycle, guaranteed prices were set at MXN 7 913 (USD 449) per tonne for smallholders cultivating up to eight hectares, while for other rice producers they were set at MXN 7 328 (USD 416 per tonne).
	Jan-23	Import tariff, import requirements	Extended the validity of administrative import facilities and import tariff exemptions approved in October 2022 for a host of products, including paddy, in an effort to reduce their prices. It also included semi/wholly milled long-grain rice among the commodities enjoying duty-free treatment. The extension is to be valid until 31 December 2023. However, for entities in possession of a Single Universal License and having proof of having entered into a purchase contract, the import facilities could be valid until 30 April 2024, provided that their contracts are submitted to the Tax Administration Service no later than 10 January 2024.
	Nov-22	Support prices	Announced that the floor price for monsoon and summer paddy, with 14 percent moisture content, harvested during the 2022/23 season would be raised 17 percent above the level set for 2021/22 to MMK 630 000 per 100 baskets (USD 142 per tonne).
Nigeria	Dec-22	Production support, self-sufficiency strategy	Presented the second phase of the National Rice Development Strategy (NRDS II), aiming to have the country reach full self-sufficiency in rice and produce an exportable surplus by 2030. The strategy sets out a paddy production target of 34 million tonnes by 2030, envisaging to increase rainfed lowland areas with supplementary irrigation from 450 000 hectares in 2020 to 1.2 million hectares by 2030, doubling irrigated areas with full water control to 1.5 million hectares, while gradually reducing rainfed upland areas. It also targets to raise average yields to 4 tonnes per hectare in rainfed upland areas, to 6 tonnes per hectare in rainfed lowlands, and to 7.5 tonnes per hectare in irrigated areas. Actions envisaged to this end would include the introduction of eight high-yielding climate-smart rice varieties, the development of two hybrid varieties, improvements in the quality of inputs used by farmers, increased use of certified seeds, training, the establishment of demonstration farms for good agricultural practices and increasing the number of extension agents. Among other measures, mechanization and improved milling efficiency would also be promoted and clustering of farmers and millers encouraged to improve their access to markets and financial services.
	Feb-23	Import quota	Approved an import quota of 90 720 tonnes of paddy, liable to a 3 percent import tariff and to be brought into the country by 15 June 2023.
Philippines	Dec-22	Food subsidies	Authorized a one-time assistance package consisting of 25 kgs of rice to be distributed to government employees and workers. The aim of the initiative would be to help mitigate socioeconomic challenges that government employees and workers may be facing, to increase domestic production and to assist farmers.

COUNTRY	DATE	POLICY INSTRUMENT	DESCRIPTION
Philippines	Dec-22	Import quota, import tariff	Decided that the uniform Most Favoured Nation (MFN) tariff rate of 35 percent for paddy, husked, semi/wholly milled or broken rice imported from non-ASEAN members, under Minimum Access Volumes quotas or outside of them, would continue to be applied for an additional year, or until 31 December 2023. From 1 January 2024, the in-quota MFN rate for these imports would revert to the previous level of 40 percent, while the out-of-quota MFN rate would revert to 50 percent.
Republic of Korea	Apr-23	Crop diversification, production support	Announced that it targeted to convert 16 000 hectares of paddies to cultivation of soybeans, flourey rice and forages during the 2023/24 season through the Strategic Crop Direct Payment Plan. To that end, it would offer KRW 1–4.3 million (USD 740–3 182) per hectare to farmers cultivating these crops on paddies, among other incentives. The initiative aims to stabilize the supply and demand of rice to keep producer prices above KRW 200 000 per 80 kg (USD 1 850 per tonne) and would come in addition to 21 000 other hectares of paddies targeted for conversion under other schemes during 2023/24. By 2027/28, its aim would be to reduce the country's total area under paddy to 618 000 hectares, down 109 000 hectares from the extension of 2022/23. Additional steps to this end would include supporting the development of high-quality rice and the creation of new demand for rice and rice-based products, including of flourey rice and for exports.
Russian Federation	Dec-22	Export ban	Extended the ban on exports of paddy, husked, semi/wholly milled rice, broken rice, groats and rice meal, except for those destined to member states of the Eurasian Economic Union, until 30 June 2023.
	Nov-22	Price controls	In line with announced efforts to aid consumers cope with increases in the price of basic goods and services, set the ceiling on retail prices of non-aromatic broken rice originating in India and Pakistan for the Dakar region at XOF 325 (USD 0.54) per kg. Price caps for other Senegalese regions would be determined based on differentials defined by the Conseil Régional de la Consommation.
Senegal	Apr-23	Production support	Decided to set aside XOF 100 billion (USD 165 million) to support agricultural activities during the 2023/24 agricultural campaign, up 43 percent from funds allocated for 2022/23. The support package would comprise XOF 60.0 billion (USD 99 million) for the provision of seeds of various crops and XOF 40 billion (USD 66 million) for fertilizers. Subsequently announced plans in preparation for the agricultural campaign also indicated that, among other measures, steps would be taken to protect rice crops from grain-eating birds in the Senegal River valley and to intensify rice production in the Senegal and Anambé river valleys through the Société d'Aménagement et d'Exploitation des Terres du Delta du Fleuve Sénégal (SAED) and the Société de Développement Agricole et Industrielle (SODAGRI).
	Jan-23	Food subsidies	Approved a plan that would provide low-income households with a 10 kg monthly ration of rice for two months, free of charge. The scheme, which would draw on supplies purchased under the 2023/24 Maha procurement drive, was launched in late March 2023. Although it originally aimed to distribute the rations to two million low-income households, its coverage was subsequently expanded to 2.9 million households.
Sri Lanka	Feb-23	Production support, government procurement	Issued instructions detailing its domestic procurement plan for the 2023/24 Maha harvest. The purchase drive would be conducted through District Secretaries, with purchased volumes consisting solely of Nadu paddy. Prices under the scheme would be set at LKR 100 per kg (USD 317 per tonne) for supplies with a maximum moisture content of 14 percent and a maximum spoil paddy content of 9 percent, or at LKR 88 per kg (USD 279 per tonne) should their moisture content exceed 14 percent, with a maximum spoil paddy content of 22 percent. Volumes bought from individual farmers would range from 2–5 tonnes depending on the extension of land they cultivate.
	Feb-23	Production support, tax policy	Decided to revise the Social Security Contribution Levy Act No 25 of 2022 in order to exempt paddy purchases and the production and sale of rice from the social security levy imposed by that Act. The measure seeks to have paddy producers receive a higher price for their product by lowering costs incurred further along the supply chain.

COUNTRY	DATE	POLICY INSTRUMENT	DESCRIPTION
Sri Lanka	Apr-23	Production support, input subsidies	Approved a plan under which farmers cultivating paddy during the 2023/24 Yala cycle would receive an outlay of LKR 20 000 per hectare (USD 63), on up to two hectares, to cover fertilizer costs.
	Dec-22	Import restrictions	Included non-basmati rice, whether parboiled or white, on the list of goods requiring an Import Control License (ICL), stipulating that imports of these rice qualities would be liable to an import control license fee equivalent to 0.1 percent of their cost, insurance and freight (CIF) value. Moreover, the issuance of ICLs for imports of these rice qualities would be temporarily suspended until further notice. It would only permit customs clearance for shipments of these rice qualities if their import had been on the basis of Letter of Credits or Advance Payments issued on or before 9 December 2022, or if they had been shipped with the date of bill of lading/airway bill on or before 09 December 2022 and were set to arrive on or before 23 December 2022.
Türkiye	Oct-22	Production support	As part of a broader agricultural support package for farmers cultivating crops during the 2023/24 season, approved the extension of a TRY 2710 (USD 138) per hectare assistance to rice producers to help them cover fuel and fertilizer costs, up 257 percent from the assistance provided in 2022/23. As in previous years, additional assistance would come in the form of a variable outlay of TRY 250-350 (USD 12.7-17.8) per tonne for the use of certified seeds and a production premium payment of TRY 100 (USD 5.1) per tonne, to be extended on the condition that good agricultural practices are followed.
	Dec-22	Import tariff	Suspended import tariffs on all classes of rice until 31 August 2023.
United Republic of Tanzania	Feb-23	Import quota	Announced that in order to contain domestic rice prices, it would issue import permits for 90 000 tonnes of rice.
United States of America	Dec-22	Production support	Approved a budget of USD 250 million to implement the Rice Production Program (RPP), a scheme providing a one-time payment to rice farmers that faced high production costs during the 2022/23 season. Eligible farmers under the scheme were defined as those to have short, medium, and long grain rice (including temperate japonica and sweet rice) reported as planted or prevented from being planted during the 2022/23 season. For these producers, a payment would be calculated by the Farm Service Agency by multiplying a payment rate of USD 0.01–0.02 per pound (USD 0.02–0.04 per kg) by their individual Actual Production History (APH) yield (or area/country level yield) and the amount of certified rice acres, determined by the number of planted acres and acres that were prevented from being planted. Maximum payments under the scheme would be set at USD 125 000–250 000, depending on whether the share of average gross income the producer accrues from farming activities is above, equal to or below 75 percent.

* The full collection starting in January 2011 is available at: <https://www.fao.org/markets-and-trade/commodity-policy-archive/en/?groupANDcommodity=rice>

MEAT: MAJOR POLICY DEVELOPMENTS MID-OCTOBER 2022 TO MID-MAY 2023*

COUNTRY	PRODUCT	DATE	POLICY INSTRUMENT	DESCRIPTION
Argentina	Bovine meat	Jan-23	Export ban lifted	Announced the resumption of bovine meat exports to Mexico after a more than 20-year ban, which allowed 22 Argentine meat plants to export. The ban was imposed in 2001 following an outbreak of foot-and-mouth disease (FMD) in Argentina.
	Bovine meat	Feb-23	Price control	Announced an agreement with suppliers and supermarkets to stabilize beef prices. The initial phase included price reductions on seven popular beef cuts, effective from 17 February to 31 March. A smaller price cut of 3.2 percent is in place from 1 April to 30 June.
	Poultry meat	Mar-23	Export ban lifted	Resumed poultry meat exports after a suspension was imposed in late February due to the detection of a case of bird flu in a poultry industry in southern Rio Negro province.
Australia	All	May-23	Trade agreement	Announced the entry into force of the Australia-United Kingdom of Great Britain and Northern Ireland (the United Kingdom) trade agreement, which was signed on 17 December 2021. Under the agreement, Australian bovine and ovine meat exports will enter the United Kingdom under a new tariff-rate quota (TRQ) regime, which will gradually be increased over a ten-year transition period. Exports within the TRQ will enter free of tariffs. There will be no TRQ after Year 10, but a volume safeguard provision will be applicable until the end of Year 15.
Brazil	All	Jan-23	Market access	Announced the removal of an import ban on two poultry plants and one bovine meat plant imposed by China. In addition, Indonesia cleared 11 Brazilian bovine meat plants to export into the country.
	Bovine meat	Mar-23	Export ban lifted	Announced the resumption of bovine meat exports to China and the approval of an additional four bovine meat plants cleared to export to China on 23 March 2023. Sales of Brazilian bovine meat to China were voluntarily halted by Brazilian authorities on 23 February 2023, following the discovery of an atypical case of mad cow disease. In addition, Brazil announced the end of a similar ban on bovine meat exports from the Brazilian state of Para, which was imposed in late February by the Russian Federation and the Philippines.
	Live animals	Apr-23	Export ban	Banned live cattle exports from all of the country's ports over animal welfare concerns.
Chile	Poultry meat	Mar-23	Export ban	Suspended exports of poultry products after confirming a case of highly pathogenic avian influenza (HPAI) on a commercial poultry farm.
China (mainland)	Bovine meat	Nov-22	Import ban	Suspended bovine meat imports from three US establishments after detecting ractopamine, a chemical substance that is banned in China, in some consignments.
	All	Dec-22	Import policy	Published announcement No. 131 of 2022, changing COVID-19 controls and management and ending the requirement for testing and disinfection measures; this is expected to reduce clearance time and costs of exports.
	Bovine meat	Jan-23	Import ban lifted	Lifted a ban on bovine meat imports from Ireland, which was imposed after detecting an atypical BSE case in May 2020.
Colombia	Poultry meat	Oct-22	Import tariff	Increased import duties, from 125 to 156 percent, applicable to poultry meat to stabilize poultry meat prices.
European Union	All	Dec-22	Trade agreement	Reached a deal with Chile aiming to deepen their existing trade agreement. Under the deal, the European Union will provide additional market access in the form of duty-free quotas to Chile, including an additional import quota for 9 000 tonnes of poultry meat with provisions to increase the quota by another 9 000 tonnes after three years. It will also add duty-free quotas for 2 000 tonnes of bovine meat, 4 000 tonnes of sheep meat and 9 000 tonnes of pig meat for import into the European Union.
	All	Jan-23	Government support	Implemented the new Common Agricultural Policy (CAP) 2023-27, which includes, among many others, provisions to support smallholder farms in the livestock sector.
	Poultry meat	Mar-23	Market access	Authorized the Republic of Moldova to export processed poultry meat to EU Member States.

COUNTRY	PRODUCT	DATE	POLICY INSTRUMENT	DESCRIPTION
European Union	All	Apr-23	Import tariff	Extended the suspension of duties and quotas on imports from Ukraine by one year, while Hungary and Poland banned importing certain meat products from Ukraine until 30 June 2023.
	All	May-23	Government support	Approved an allocation of EUR 1.47 billion (USD 1.61 billion), under EU state aid rules, to Dutch schemes to compensate livestock farmers in a bid to reduce nitrogen pollution in the overburdened Natura 2000 areas, as defined in the national legislation. The measure, which will be effective until 27 February 2028, aims to improve environmental conditions and promote sustainable and environmentally-friendly production in the livestock sector.
Ghana	Pig meat	Jan-23	Market access	Granted access to its market for pig meat imports from the United States of America.
Guatemala	All	Apr-23	Import ban lifted	Resumed meat imports from Canada, with the ending of a ban imposed in December 2013 on Canadian meat, which was imposed due to new requirements to inspect Canadian facilities.
India	All	Dec-22	Animal welfare regulations	Implemented the Livestock Health and Disease Control Programme across the country, aiming to reduce risks to animal health with prophylactic vaccinations against animal diseases; capacity building of veterinary services; disease surveillance and strengthening veterinary infrastructure.
	All	Jan-23	Export requirements	Issued a notification proposing draft guidelines to streamline the halal certification process for exporting meat and meat products.
Indonesia	Bovine meat	Feb-23	Import quota	Increased its year-long import quota for Brazilian bovine meat from 20 000 to 100 000 tonnes for 2023.
Iran (Islamic Republic of)	Poultry meat	Nov-22	Market access	Allowed imports of poultry meat from the Russian Federation.
Japan	Bovine meat	Mar-23	Import ban lifted	Granted full market access to Canadian bovine meat by removing the ban imposed in 2003 after the detection of a case of BSE disease in Canada.
Lao People's Democratic Republic	Pig meat	Mar-23	Import ban	Announced the suspension of pig meat imports from Thailand and Vietnam due to outbreaks of African Swine Fever (ASF) in the two countries.
Malaysia	Pig meat	Nov-22	Market access	Granted market access to pig meat imports from Ireland.
	Poultry meat	Feb-23	Price control	Announced the lifting of price controls on poultry meat starting in June 2023.
Mexico	Pig meat	Nov-22	Market access	Agreed to open its market to Brazilian pig meat imports originating from swine that were born, raised and slaughtered in the region of Santa Catarina.
	Bovine meat	Mar-23	Market access	Granted approval to import bovine meat from Brazil. In January 2023, the same measure was adopted to allow bovine meat imports from Argentina.
Morocco	All	Apr-23	Government support	Adopted a decree cancelling the value-added tax (VAT) on agricultural inputs to help lower prices of fresh produce and other agrifoods, including meat.
Namibia	Poultry meat	Mar-23	Import ban	Banned poultry meat imports from Chile. On 24 February 2023, the same measure was adopted to ban poultry meat imports from Argentina.
New Zealand	Live animals	Apr-23	Export ban	Implemented a ban on live animal exports, which was first announced in 2021, with a transition period of two years for farmers.

COUNTRY	PRODUCT	DATE	POLICY INSTRUMENT	DESCRIPTION
Philippines	Pig meat	Dec-22	Import tariffs extended	Extended the reduced tariff rates on pig meat through 2023, with a dual tariff structure whereby a tariff rate of 15 percent is applicable for the quota amount and 25 percent for out-of-quota.
	Poultry meat	Jan-23	Import ban	Imposed a ban on poultry meat imports from eight countries (Czech Republic, Denmark, Ecuador, Ireland, Peru, Poland, Republic of Moldova and Taiwan Province of China) due to HPAI outbreaks.
	Pig meat	Jan-23	Import ban lifted	Lifted the ban on cured pig meat imports from Italy, which was imposed in August 2022 due to an ASF outbreak.
	All	Feb-23	Import ban	Issued a temporary ban on the import of poultry products from Türkiye following reported HPAI outbreaks. A similar ban was imposed on poultry meat imports from Belgium on 8 February 2023, while cattle-related products from the Kingdom of the Netherlands have been suspended due to the detection of mad cow disease.
Portugal	Poultry meat	Apr-23	Import ban	Banned poultry meat from Chile after detecting an HPAI outbreak there.
	All	Apr-23	Government support	Announced temporary suspension of VAT on 46 food products, effective until 31 October 2023, to offset inflationary pressures. The measure includes the removal of VAT on meat products.
Republic of Korea	Pig meat	Dec-22	Import ban lifted	Lifted a ban on processed pig meat (bacon, ham and sausages) imports from the United Kingdom.
	All	Nov-22	Government support	Allocated RUB 900 million (USD 14.9 million) as partial compensation to farmers in 22 regions for production costs, the sale of agricultural products and insurance.
Russian Federation	All	Mar-23	Government support	Allocated RUB 1.3 billion (USD 16.7 million) for the Rostov Region, aiming to increase meat production and modernize dairy farms.
	All	Feb-23	Government Support	Allocated TRY 13.8 billion (USD 731.2 million) to support farmers affected by earthquakes, including those in the livestock sector.
Türkiye	All	Mar-23	Export ban lifted	Announced the lifting of restrictions on certain agricultural products, including red meat, which were imposed in January 2022 to help reduce rising food prices.
	All	Mar-23	Trade agreement	Announced the conclusion of accession to the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), which includes, among many other provisions, TRQs for bovine meat exports from six partner countries.
Uruguay	All	Jan-23	Government support	Announced the extension of the agricultural and livestock emergency until April, granting producers access to subsidies from the Agricultural Emergency Fund.
	Poultry meat	Jan-23	Import ban	Imposed an import ban on Brazilian poultry meat to protect domestic production.

* A collection of major meat policy developments starting in January 2011 is available at:
<https://www.fao.org/markets-and-trade/commodity-policy-archive/en/?groupANDCommodity=Meat>

DAIRY: MAJOR POLICY DEVELOPMENTS MID-OCTOBER 2022 TO MID-MAY 2023*

COUNTRY	PRODUCT	DATE	POLICY INSTRUMENT	DESCRIPTION
Canada	Dairy products	Nov-22	Government support	Agreed to provide CAD 1.7 billion (USD 1.3 billion) for dairy farmers, egg farmers and processors to compensate for the impacts of the market access commitments under the United States of America–Canada–Mexico Agreement (USMCA) covering the supply-managed sectors. The dairy sector was allocated the highest compensation of CAD 1.2 billion (USD 903 million), spread over six years under the Dairy Direct Payment Program.
	Butter	Feb-23	Government support	Announced an increase in the support price for butter production as of 1 February 2023, from CAD 10.0206 per kg to CAD 10.2180 per kg (from USD 7.52 per kg to USD 7.67 per kg) in a bid to offset increasing production costs.
China (mainland)	Dairy products	Apr-23	Import policy	Approved the import of French dairy products for animal feed use.
	Dairy products	Dec-22	Trade agreement	Concluded negotiations on the EU–Chile Advanced Framework Agreement, which aims to deepen cooperation and foster trade and investment opportunities. The agreement will add 162 tariff lines, mainly for agricultural products (including cheese and other dairy products), for liberalization after a maximum staging period of seven years.
	Dairy products	Jan-23	Government support	Implemented the new Common Agricultural Policy (CAP) 2023-27, which includes, among many others, provisions to support smallholder farms in the livestock sector.
European Union	Dairy products	May-23	Government intervention	Approved an allocation of EUR 1.47 billion (USD 1.61 billion), under European Union (EU) state aid rules, to Dutch schemes that compensate livestock farmers in a bid to reduce nitrogen pollution in the overburdened Natura 2000 areas, as defined in national legislation. The measure will be effective until 27 February 2028. They aim to improve environmental conditions and to promote sustainable and environmentally-friendly production in the livestock sector.
	Dairy products	May-23	Trade agreement	Amended the implementing regulation EU 2020/761 on the rules governing the tariff-rate quota (TRQ) for export of milk powder to the Dominican Republic. This will allow the Dominican Republic to import an unlimited quantity of milk powder from the European Union at zero tariff rate.
	Dairy products	Jan-23	Tariff quota	Announced TRQ for butter and non-fat dried milk of 8 000 tonnes and 750 tonnes, respectively, for Japanese fiscal year 2023 (1 April 2023 to 31 March 2024).
Japan	Dairy products	Apr-23	Tariff quota	Announced TRQ volumes for dairy products during the Japanese Fiscal Year (1 April 2023 to 31 March 2024). For cheese, the new TRQ volumes were decreased to 52 000 tonnes, declining by 3 500 tonnes. For the rest of the dairy products, TRQ volumes remained unchanged.
	Dairy products	Apr-23	Government support	Launched an emergency programme to enhance farm management and decrease milk production surplus by fostering early slaughtering for less-productive dairy cows and providing farmers with an incentive of a maximum YEN 200 000 (USD 1 518) per cow culled.

COUNTRY	PRODUCT	DATE	POLICY INSTRUMENT	DESCRIPTION
Kyrgyzstan	Dairy products	May-23	Government support	Announced plans to increase milk and milk products exports by 1.5 times by 2026. The plan envisages developing a balanced feed programme, increasing investments, enhancing farm quality, limiting the use of antibiotics and raising the productivity of dairy farms.
Lebanon	Dairy products	Jan-23	Import policy	Lifted subsidies on infant formulas.
Morocco	Dairy products	Nov-22	Import policy	Announced a temporary suspension of import duties on milk powder and butter, effective until 31 October 2023, in a bid to contain price increases.
	Dairy products	Apr-23	Government support	Adopted a decree cancelling the value-added tax (VAT) on agricultural inputs to help lower prices of fresh produce and other agrifoods.
New Zealand	Dairy products	Apr-23	Export ban	Decided to end live animal exports by sea in a bid to strengthen laws governing animal protection and welfare and assure future economic security.
Peru	Whole milk powder	May-23	Import tariff	Approved the reference prices and additional variable duties for the import of selected agricultural products, including whole milk powder. The reference price for whole milk powder is set at USD 3 482 per tonne and additional variable duty at USD 350.
Poland	Dairy products	Apr-23	Import ban	Introduced an import ban for agrifood products coming from Ukraine, including milk and milk products, to offset economic hurdles faced by local farmers. The measure will be effective until 30 June 2023.
Portugal	Dairy products	Apr-23	Government support	Announced the temporary suspension of VAT on 46 food products to offset inflationary pressures, effective until 31 October 2023. The measure includes the removal of 6 percent VAT on milk and milk products.
	Dairy products	Nov-22	Government support	Allocated RUB 900 million (USD 14.9 million) to support farmers in 22 regions as partial compensation for production costs, the sale of agricultural products and insurance
	Dairy products	Mar-23	Government support	Agreed to provide subsidies in Moscow Region to reimburse part of production costs for supporting milk production. The compensation varies from RUB 6 (USD 0.08) to RUB 24 (USD 0.31) per kg of milk, depending on the milk productivity reported in the financial year.
Russian Federation	Dairy products	Mar-23	Government support	Allocated RUB 1.3 billion (USD 16.7 million) for Rostov Region, aiming to increase meat production and modernize dairy farms.
	Dairy products	Apr-23	Import ban	Announced the suspension of all dairy product deliveries from Armenia until further notice due to unsatisfactory results of the inspection of Armenian firms in respect to the use of third country supplies as raw materials.
	Dairy products	Apr-23	Import ban	Suspended dairy product imports from Kyrgyzstan on the basis of "inefficiency" in dairy product quality.
Serbia	Dairy products	Feb-23	Import tariff	Announced the introduction of an import tax of RSD 15 (USD 0.14) per litre of milk and RSD 30 (USD 0.27) per kg of cheese, aiming to stabilize the market and stop the decline in milk purchase prices.
Sri Lanka	Dairy products	Dec-22	Foreign assistance	Agreed with the Indian Government to receive technical support to develop milk production.
	Dairy products	Apr-23	Import tariff	Announced import duty exemptions for food products, including sweetened condensed milk, butter, dairy spreads and other dairy products.
Tunisia	Dairy products	Dec-22	Import tariff	Announced the suspension of import duty on milk powders and butter in 2023 to secure necessary supplies for local consumption.

COUNTRY	PRODUCT	DATE	POLICY INSTRUMENT	DESCRIPTION
Türkiye	Dairy products	Jan-23	Government support	Entered into force the Raw Milk Support and Regulation of the Milk Market, which includes, among others, support payments for milk production over 2023-2024.
	Dairy products	Feb-23	Government support	Allocated TRY 13.8 billion (USD 731.2 million) to support farmers affected by earthquakes. TRY 33.4 million (USD 1.77 million) of this is allocated to support milk production.
United Kingdom of Great Britain and Northern Ireland	Dairy products	Mar-23	Trade agreement	Concluded negotiations on joining the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), a free trade agreement (FTA) including 11 members: Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, and Vietnam. The agreement will secure improved access to Canada, Chile and Mexico for UK dairy exporters through TRQs. An additional quota of 16 500 tonnes of shared tariff-free access to cheese will be secured for Canada. The tariff for dairy products, including cheese, butter and cream, will be liberated for Chile. For Mexico, an additional 16 500 tonnes of shared tariff-free access to cheese will be secured.
	Dairy products	Nov-23	Government support	Announced plans to purchase diverse food products, including dairy meat and poultry, to support activities to feed children and families. The funds allocated will support nearly USD 1 billion to purchase food items for emergency food providers such as food banks.
United States of America	Dairy products	Jan-23	Government support	Announced additional assistance of nearly USD 100 million for dairy producers as part of the Pandemic Market Volatility Assistance Program (PMVAP) and Organic Dairy Marketing Assistance Program (ODMAP) to compensate for the impacts of disruptions to supply chains, COVID-19 and drought hurdles.
	Dairy products	Jan-23	Government support	Announced the extension of the agricultural and livestock emergency until April, granting producers access to subsidies from the Agricultural Emergency Fund.
Uruguay	Dairy products	Nov-22	Government support	Announced the launching of several support programmes to increase milk productivity and milk output by investing in silages, mechanization, irrigation development and modern technologies. The programmes also aim to support small-scale dairy farmers by providing access to credit to invest in the milk production value chain.

* A collection of major dairy policy developments, starting in January 2012, is available at: <https://www.fao.org/markets-and-trade/commodity-policy-archive/en/?group=ANDcommodity=Milk%20and%20dairy%20products>

Statistical appendix tables

Appendix Table 1 (A & B): Cereal statistics	98–99
Appendix Table 2 (A & B): Wheat statistics	100–101
Appendix Table 3 (A & B): Coarse grains statistics	102–103
Appendix Table 4 (A & B): Maize statistics	104–105
Appendix Table 5 (A & B): Barley statistics	106–107
Appendix Table 6 (A & B): Sorghum statistics	108–109
Appendix Table 7 (A & B): Other Coarse grains statistics	108–109
Appendix Table 8 (A & B): Rice statistics	110–111
Appendix Table 9: Cereal supply and utilization in main exporting countries	112
Appendix Table 10: Total oilcrops statistics	113
Appendix Table 11: Total oils and fats statistics	114
Appendix Table 12: Total meals and cakes statistics	115
Appendix Table 13: Sugar statistics	116
Appendix Table 14: Total meat statistics	117
Appendix Table 15: Bovine meat statistics	118
Appendix Table 16: Ovine meat statistics	119
Appendix Table 17: Pigmeat statistics	120
Appendix Table 18: Poultry meat statistics	121
Appendix Table 19: Milk and milk products statistics	122
Appendix Table 20: Fish and fishery products statistics	123
Appendix Table 21: Selected international prices for wheat and coarse grains	124
Appendix Table 22: Wheat and maize futures prices	124
Appendix Table 23: Selected international prices for rice and price indices	125
Appendix Table 24: Selected international prices for oilcrop products and price indices	126
Appendix Table 25: Selected international prices for sugar and sugar price index	127
Appendix Table 26: Selected international prices for milk products and dairy price indices	128
Appendix Table 27: Selected international meat prices	129
Appendix Table 28: Selected international meat prices and FAO meat price index	130
Appendix Table 29: Fish price indices	131
Appendix Table 30: Selected international commodity prices	132

GENERAL

- FAO estimates and forecasts are based on official and unofficial sources.
- Unless otherwise stated - all charts and tables refer to FAO data as source.
- Estimates of world imports and exports may not always match - mainly because shipments and deliveries do not necessarily occur in the same marketing year.
- Tonnes refer to metric tonnes.
- All totals are computed from unrounded data.
- Regional totals may include estimates for countries not listed. The countries shown in the tables were chosen based on their importance of either production or trade in each region. The totals shown for Central America include countries in the Caribbean.
- Estimates for China also include those for the Taiwan Province of China - Hong Kong SAR and Macao SAR - unless otherwise stated.
- Up to 2019/20 the European Union includes 28 member states. From 2020/21 the European Union includes 27 member states.
- Information provided by the Russian Federation includes statistical data for the Autonomous Republic of Crimea and the city of Sevastopol, Ukraine, temporarily occupied by the Russian Federation and is presented without prejudice to relevant UN General Assembly and UN Security Council resolutions, including UN General Assembly resolution 68/262 of 27 March 2014 and UN Security Council resolution 2202 (2015) of 17 February 2015, which reaffirm the territorial integrity of Ukraine.
- Information provided by Ukraine excludes statistical data concerning

the Autonomous Republic of Crimea, the city of Sevastopol and certain areas of the Donetsk and Luhansk regions. The information is presented without prejudice to relevant UN General Assembly and UN Security Council resolutions, including UN General Assembly resolution 68/262 of 27 March 2014 and UN Security Council resolution 2202 (2015) of 17 February 2015, which reaffirm the territorial integrity of Ukraine.

- '-' means nil or negligible.
- Cereals include wheat - rice and coarse grains. Coarse grains include maize - barley - sorghum - millet - rye - oats and NES (not elsewhere specified).

Production

- **Cereals:** Data refer to the calendar year in which the whole harvest or bulk of harvest takes place.

Utilization

- **Cereals:** Data are on individual country's marketing year basis.

Trade

- Trade between **European Union** member states is excluded - unless otherwise stated.
- **Wheat:** Trade data include wheat flour in wheat grain equivalent. The time reference period is July/June - unless otherwise stated.
- **Coarse grains:** The time reference period is July/June - unless otherwise stated.
- **Rice, dairy meat and fish products:** The time reference period is January/December.
- **Oilseeds, oils/fats and meals:** The time reference period is October/September - unless otherwise stated.

Stocks

- **Cereals:** Data refer to carry-overs at the close of national crop seasons ending in the year shown.

Price indices

- The FAO price indices are calculated using the Laspeyres formula; the weights used are based on the average export value of each commodity for the 2014-2016 period.

COUNTRY CLASSIFICATION

In the presentation of statistical material, references are made to special country groupings: Low-Income Food-Deficit Countries (LIFDCs) - Least Developed Countries (LDCs). The LIFDCs include 51 countries that are net importers of basic foodstuffs with per caput income below the level used by the World Bank to determine eligibility for International Development Aid (IDA) assistance (i.e. USD 1 945 in 2011). The LDCs group currently includes 47 countries with low income as well as weak human resources and low level of economic diversification. The list is reviewed every three years by the Economic and Social Council of the United Nations.

DISCLAIMER

The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations concerning the legal status of any country - territory - city or area or of its authorities - or concerning the delimitation of its frontiers or boundaries.

APPENDIX TABLE 1(A): CEREAL STATISTICS

	Production			Imports			Exports		
	2019-2021 average	2022 <i>estim.</i>	2023 <i>f'cast</i>	19/20-21/22 average	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>	19/20-21/22 average	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>
	<i>million tonnes</i>								
ASIA	1 225.0	1 250.6	1 259.6	253.0	249.3	252.7	70.4	74.5	75.8
Bangladesh	42.4	44.2	45.0	10.0	7.8	8.2	0.2	0.3	0.3
China	556.5	569.4	574.8	56.2	53.9	54.0	2.8	2.9	2.8
India	281.4	290.5	292.5	0.3	0.2	0.2	27.0	25.9	27.0
Indonesia	57.5	58.1	58.6	12.2	12.8	12.8	0.1	0.2	0.2
Iran (Islamic Republic of)	19.3	19.3	18.8	17.5	17.6	17.7	0.1	0.1	0.1
Iraq	6.8	3.2	4.2	4.3	5.7	6.2	-	-	-
Japan	8.7	8.5	8.5	23.1	22.6	23.1	0.3	0.3	0.3
Kazakhstan	17.5	21.3	19.1	1.3	1.0	1.0	8.7	10.2	10.3
Myanmar	18.7	18.0	18.8	0.5	0.4	0.4	3.6	4.4	4.3
Pakistan	43.5	43.7	46.0	2.1	2.7	2.5	4.6	4.0	4.8
Philippines	20.9	21.2	21.3	10.0	10.4	10.9	0.1	0.1	0.1
Republic of Korea	3.9	4.0	3.9	16.3	16.6	17.0	0.1	0.1	0.1
Saudi Arabia	0.7	1.0	0.8	14.6	14.2	13.2	-	-	-
Thailand	25.4	28.1	28.4	5.6	4.2	5.2	6.6	8.4	9.1
Türkiye	34.1	38.1	34.1	14.6	15.8	15.5	4.9	5.8	5.0
Viet Nam	32.8	31.9	31.8	16.7	15.8	16.0	7.2	7.7	7.1
AFRICA	197.0	197.7	197.5	97.1	92.9	98.5	6.9	6.6	6.1
Algeria	4.3	4.1	3.6	12.8	12.8	13.5	-	-	-
Egypt	20.7	21.9	21.7	22.7	19.6	21.3	0.3	0.1	0.1
Ethiopia	28.7	27.5	27.4	2.0	2.0	2.4	1.3	1.2	1.1
Morocco	6.3	3.3	5.0	8.5	8.8	8.8	0.1	0.1	0.1
Nigeria	26.3	26.8	26.9	8.3	8.1	8.9	-	-	-
South Africa	17.6	18.8	19.1	2.8	2.5	2.7	2.7	3.4	3.1
Sudan	6.7	7.5	6.0	2.4	2.4	2.7	0.1	0.2	0.1
CENTRAL AMERICA & THE CARIBBEAN	42.6	42.3	42.2	37.2	36.6	37.9	1.7	1.5	1.4
Mexico	36.3	36.0	36.1	24.0	23.4	24.4	1.5	1.3	1.3
SOUTH AMERICA	229.6	246.0	246.0	33.9	32.8	33.0	96.3	100.7	105.4
Argentina	86.9	80.7	68.6	0.1	0.1	0.1	56.3	39.1	45.6
Brazil	114.2	135.7	148.3	10.2	9.2	9.2	34.3	53.0	53.9
Chile	2.9	2.6	2.7	4.1	4.0	4.0	0.0	-	0.1
Colombia	3.4	3.3	3.5	8.6	8.9	9.0	-	-	-
Peru	4.3	4.4	4.3	6.2	5.9	6.1	0.1	0.1	0.1
Venezuela (Bolivarian Republic of)	1.2	1.6	1.6	2.5	2.3	2.4	-	-	-
NORTHERN AMERICA	490.6	473.3	516.1	10.2	10.2	10.6	121.2	103.6	111.4
Canada	58.1	64.5	62.4	4.2	3.1	2.9	27.9	30.4	30.8
United States of America	432.5	408.8	453.7	6.0	7.1	7.7	93.2	73.2	80.6
EUROPE	538.6	517.2	507.6	32.5	47.7	36.7	145.2	145.1	141.4
European Union	301.9	269.2	288.4	24.7	39.5	27.9	45.1	42.2	47.3
Russian Federation	121.4	146.4	125.1	0.6	0.6	0.6	43.9	54.3	53.4
Ukraine	75.0	54.6	45.7	0.2	0.1	0.1	49.9	43.2	35.8
OCEANIA	45.0	59.4	44.1	2.4	2.1	2.3	26.1	39.7	30.0
Australia	43.9	58.4	43.0	0.6	0.2	0.3	26.1	39.7	30.0
WORLD	2 768.3	2 786.5	2 813.1	466.3	471.6	471.6	467.7	471.6	471.6
LIFDC	189.1	188.6	189.4	61.6	59.3	62.0	4.2	3.4	3.3
LDC	189.7	190.3	191.4	44.6	42.0	44.5	9.5	10.0	9.9

APPENDIX TABLE 1(B): CEREAL STATISTICS

	Total Utilization			Stocks ending in			Per caput food use		
	19/20-21/22 average	2022/23 estim.	2023/24 f'cast	2020-2022 average	2023 estim.	2024 f'cast	19/20-21/22 average	2022/23 estim.	2023/24 f'cast
	million tonnes						(..... Kg/year.....)		
ASIA	1 396.0	1 423.6	1 431.8	576.0	582.8	587.0	156.6	157.3	157.2
Bangladesh	52.1	53.1	53.3	8.6	8.1	7.7	218.4	219.8	219.9
China	607.2	616.5	623.3	391.5	400.7	402.6	155.6	156.2	156.4
India	252.3	264.0	262.4	66.7	64.0	67.7	146.0	147.2	146.3
Indonesia	71.0	70.1	70.7	8.5	6.7	7.3	173.7	171.5	172.0
Iran (Islamic Republic of)	35.5	36.1	36.0	11.4	12.3	12.6	202.6	204.2	204.1
Iraq	10.2	10.6	11.0	2.7	1.9	1.6	185.9	191.9	191.7
Japan	31.5	30.7	31.6	7.0	7.1	6.9	91.9	90.5	89.8
Kazakhstan	10.0	10.1	10.1	4.3	6.0	5.7	156.6	156.7	156.6
Myanmar	15.3	15.1	15.0	4.1	3.3	3.1	201.7	202.3	203.9
Pakistan	40.2	43.4	44.2	4.2	5.1	4.9	136.5	137.1	137.3
Philippines	30.8	32.4	32.5	4.6	4.3	4.0	165.4	168.9	169.0
Republic of Korea	20.0	20.8	20.8	4.6	5.0	5.0	121.0	119.1	118.1
Saudi Arabia	15.3	14.0	13.7	4.7	5.8	6.1	131.0	131.6	131.4
Thailand	23.3	23.3	24.5	10.5	11.8	12.0	118.6	122.1	123.1
Türkiye	42.9	45.6	44.8	9.9	11.5	11.3	242.0	243.2	243.8
Viet Nam	41.7	40.9	39.9	5.5	6.0	6.2	172.1	168.1	166.1
AFRICA	287.2	288.5	290.7	59.5	55.1	54.9	149.7	149.1	148.0
Algeria	17.6	16.6	16.8	6.0	5.3	5.6	228.9	229.2	229.1
Egypt	43.3	42.2	42.5	4.8	3.4	3.8	258.7	255.4	254.7
Ethiopia	29.1	29.2	29.6	7.2	5.9	5.1	187.1	188.7	187.6
Morocco	15.3	13.1	13.3	5.0	4.6	5.0	240.9	241.0	241.4
Nigeria	34.4	35.1	35.0	2.1	1.2	1.3	128.7	128.5	125.1
South Africa	17.3	17.7	18.7	3.8	4.9	4.7	163.5	162.4	161.9
Sudan	9.4	10.0	9.3	3.5	3.3	3.1	174.6	172.8	173.2
CENTRAL AMERICA & THE CARIBBEAN	78.2	78.9	79.2	9.8	8.3	7.7	161.7	161.4	161.0
Mexico	58.7	59.6	59.4	7.4	6.3	6.1	198.9	200.0	199.0
SOUTH AMERICA	169.7	177.3	181.7	35.6	25.8	23.4	113.5	113.3	112.8
Argentina	32.2	33.3	30.9	10.6	9.8	6.7	121.7	121.4	119.2
Brazil	90.9	97.0	103.1	16.0	9.3	10.7	110.2	108.9	108.2
Chile	7.0	6.6	6.7	0.6	0.5	0.5	144.4	142.2	142.1
Colombia	11.8	12.4	12.6	1.3	1.4	1.1	100.4	100.7	100.8
Peru	10.5	10.4	10.4	1.0	0.9	0.8	148.3	147.6	146.5
Venezuela (Bolivarian Republic of)	3.6	4.0	3.9	0.6	0.7	0.7	96.7	105.8	108.6
NORTHERN AMERICA	390.7	381.8	393.3	74.6	64.9	85.0	109.1	110.1	110.0
Canada	34.5	33.5	33.7	8.9	9.2	9.4	96.0	96.7	96.5
United States of America	356.2	348.3	359.6	65.7	55.7	75.6	110.6	111.6	111.5
EUROPE	416.3	407.8	407.5	82.0	113.0	108.2	131.9	132.2	132.5
European Union	279.2	264.9	266.3	40.2	44.6	47.2	135.6	137.8	138.0
Russian Federation	77.2	77.5	75.9	16.4	33.3	29.8	125.8	126.8	126.6
Ukraine	20.1	18.0	17.6	11.6	16.7	9.2	143.5	145.7	147.8
OCEANIA	19.8	19.6	19.6	5.5	8.2	6.9	94.3	94.1	94.0
Australia	17.0	16.6	16.6	4.8	7.5	6.3	103.8	104.2	104.2
WORLD	2 757.8	2 777.6	2 803.8	843.0	858.2	873.0	148.2	148.6	148.3
LIFDC	245.1	250.4	251.6	57.8	52.5	50.6	151.8	151.5	150.8
LDC	223.9	228.1	229.4	49.2	44.9	42.7	155.1	154.9	154.4

APPENDIX TABLE 2(A): WHEAT STATISTICS

	Production			Imports			Exports		
	2019-2021 average	2022 <i>estim.</i>	2023 <i>f'cast</i>	19/20-21/22 average	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>	19/20-21/22 average	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>
	<i>million tonnes</i>								
ASIA	340.1	345.4	346.7	101.8	107.2	101.0	19.3	18.7	18.2
Bangladesh	1.0	1.2	1.2	6.7	5.0	5.7	-	-	-
China	135.0	137.7	138.5	10.9	13.4	8.9	0.3	0.2	0.5
China (mainland)	134.9	137.7	138.5	9.1	11.5	7.0	0.2	0.2	0.5
Taiwan Province of China	-	-	-	1.3	1.4	1.4	-	-	-
India	107.0	107.7	110.0	-	-	-	4.9	1.7	1.5
Indonesia	-	-	-	10.7	10.0	10.5	0.1	0.1	0.1
Iran (Islamic Republic of)	12.9	13.0	13.0	4.2	5.0	4.0	-	-	-
Iraq	4.9	2.8	3.0	2.2	3.2	3.4	-	-	-
Japan	1.0	1.0	1.0	5.3	5.5	5.3	0.2	0.2	0.2
Kazakhstan	12.5	16.4	14.1	1.2	0.9	0.9	7.6	9.5	9.5
Pakistan	25.7	26.4	26.8	1.9	2.5	2.3	0.1	0.3	0.3
Philippines	-	-	-	6.3	6.0	6.0	0.0	0.1	0.1
Republic of Korea	-	-	-	4.1	5.2	5.0	0.0	-	-
Saudi Arabia	0.4	0.6	0.5	3.3	4.4	3.7	-	-	-
Thailand	-	-	-	3.1	3.0	3.0	-	-	-
Türkiye	19.0	19.8	18.8	9.9	11.0	10.0	4.4	5.0	4.4
AFRICA	27.0	25.7	25.8	51.9	52.0	54.8	0.9	0.6	0.5
Algeria	3.1	3.0	2.5	7.6	8.3	9.0	-	-	-
Egypt	8.9	9.7	9.7	12.1	11.2	12.0	0.3	0.1	0.1
Ethiopia	5.4	5.2	5.2	1.3	1.5	1.7	-	-	-
Morocco	4.7	2.5	3.7	5.0	6.5	6.5	0.0	-	-
Nigeria	0.1	0.1	0.1	6.0	5.5	6.1	-	-	-
South Africa	2.0	2.2	2.0	1.7	1.5	1.6	0.1	0.1	0.1
Tunisia	1.2	1.3	1.0	2.0	2.1	2.1	-	-	-
CENTRAL AMERICA & THE CARIBBEAN	3.2	3.6	3.1	9.3	8.9	8.9	1.0	0.9	0.9
Cuba	-	-	-	0.7	0.6	0.5	-	-	-
Mexico	3.2	3.6	3.1	5.2	5.0	5.0	0.8	0.8	0.8
SOUTH AMERICA	29.8	27.3	31.9	14.7	13.7	13.9	15.9	10.0	15.6
Argentina	19.8	12.6	18.5	-	-	-	13.6	5.5	11.5
Brazil	6.4	10.6	9.6	6.6	5.6	5.8	1.5	3.5	3.0
Chile	1.2	1.1	1.2	1.3	1.3	1.3	-	-	-
Colombia	-	-	-	2.0	2.1	2.0	-	-	-
Peru	0.2	0.2	0.2	2.1	2.0	2.1	-	-	-
Venezuela (Bolivarian Republic of)	-	-	-	0.8	1.0	1.0	-	-	-
NORTHERN AMERICA	79.2	78.7	79.5	2.3	2.7	3.6	46.6	44.6	44.5
Canada	30.2	33.8	34.3	0.3	0.1	0.1	21.8	23.5	24.5
United States of America	49.1	44.9	45.2	2.0	2.6	3.5	24.8	21.1	20.0
EUROPE	263.4	280.6	261.1	8.0	14.0	10.2	87.4	95.8	92.9
European Union	140.1	134.1	138.8	4.4	10.5	6.3	31.7	32.5	35.5
Russian Federation	78.8	102.7	82.8	0.3	0.3	0.3	35.1	46.0	45.0
Ukraine	28.5	20.2	17.0	0.0	-	-	18.9	14.8	10.0
United Kingdom of Great Britain and Northern Ireland	11.9	15.5	14.4	1.5	1.2	1.5	0.2	1.2	1.1
OCEANIA	28.0	39.6	28.6	1.3	1.1	1.1	18.6	29.0	21.0
Australia	27.5	39.2	28.2	0.3	-	0.1	18.6	29.0	21.0
WORLD	770.8	800.9	776.7	189.2	199.6	193.7	189.7	199.6	193.7
LIFDC	24.2	22.3	23.2	35.6	33.6	35.1	0.8	0.6	0.5
LDC	14.5	13.4	13.7	25.0	23.3	24.7	0.2	0.2	0.1

APPENDIX TABLE 2(B): WHEAT STATISTICS

	Total Utilization			Stocks ending in			Per caput food use		
	19/20-21/22 average	2022/23 estim.	2023/24 f'cast	2020-2022 average	2023 estim.	2024 f'cast	19/20-21/22 average	2022/23 estim.	2023/24 f'cast
	million tonnes						(..... Kg/year.....)		
ASIA	412.5	426.4	425.2	206.1	210.8	214.5	66.3	67.0	67.1
Bangladesh	7.9	7.0	7.1	2.0	0.6	0.4	33.3	33.0	33.0
China	138.9	144.1	143.4	130.8	141.3	144.8	65.5	66.4	66.6
China (mainland)	137.1	142.2	141.5	130.3	140.8	144.3	65.9	66.8	67.0
Taiwan Province of China	1.3	1.4	1.4	0.4	0.4	0.4	45.6	45.6	45.6
India	101.8	107.9	105.9	25.7	18.5	21.0	59.8	60.3	60.2
Indonesia	10.6	10.0	10.0	1.5	1.0	1.0	28.1	28.5	28.6
Iran (Islamic Republic of)	15.9	16.5	16.6	7.1	9.0	9.4	162.7	164.9	164.8
Iraq	6.6	6.7	6.8	1.5	1.0	0.6	144.5	143.8	142.8
Japan	6.2	6.1	6.1	1.2	0.9	1.0	40.4	41.1	41.0
Kazakhstan	6.2	6.3	6.4	3.5	4.7	3.8	141.1	141.3	141.3
Pakistan	27.0	28.6	29.4	2.4	3.8	3.1	111.6	111.4	111.6
Philippines	6.2	6.4	6.3	1.6	1.5	1.1	27.5	28.3	28.3
Republic of Korea	4.1	4.8	4.7	1.1	1.0	1.2	47.2	47.3	47.4
Saudi Arabia	3.7	3.9	3.9	2.3	3.5	3.8	95.1	96.1	95.8
Thailand	3.2	3.0	3.0	1.5	1.2	1.2	15.9	16.7	16.9
Türkiye	24.0	24.4	24.5	6.6	7.2	7.1	213.7	215.0	215.6
AFRICA	78.9	79.7	80.5	16.8	13.3	13.5	50.9	50.3	49.9
Algeria	11.0	11.2	11.3	4.0	3.6	3.8	210.8	211.6	211.6
Egypt	21.1	21.2	21.6	2.3	1.6	1.6	179.7	179.8	179.7
Ethiopia	6.7	6.8	7.0	0.8	0.4	0.4	47.5	47.4	47.4
Morocco	10.2	9.8	10.0	3.4	3.1	3.3	208.5	209.0	209.3
Nigeria	5.6	5.7	5.8	0.8	0.4	0.3	25.3	25.4	25.5
South Africa	3.5	3.6	3.5	0.5	0.6	0.6	56.5	56.1	55.6
Tunisia	3.1	3.2	3.0	0.5	0.6	0.6	205.3	206.4	206.3
CENTRAL AMERICA & THE CARIBBEAN	11.3	11.4	11.4	1.7	2.0	1.7	44.8	44.5	44.5
Cuba	0.7	0.6	0.5	-	-	-	54.0	49.1	48.7
Mexico	7.5	7.6	7.5	1.2	1.5	1.3	52.0	52.2	52.2
SOUTH AMERICA	28.9	29.3	29.6	6.3	5.5	6.0	56.4	56.4	56.3
Argentina	6.4	6.3	6.5	2.3	1.0	1.5	103.5	103.9	104.0
Brazil	12.0	12.2	12.0	1.5	1.6	2.0	53.5	52.7	52.7
Chile	2.5	2.4	2.4	0.4	0.3	0.3	107.5	106.4	106.3
Colombia	1.9	2.1	2.1	0.4	0.4	0.3	32.6	32.9	32.9
Peru	2.3	2.3	2.3	0.2	0.2	0.2	59.3	58.3	57.8
Venezuela (Bolivarian Republic of)	0.8	0.9	1.0	0.1	0.1	0.1	27.7	32.2	32.3
NORTHERN AMERICA	39.4	38.9	39.3	28.4	20.6	20.3	81.4	82.3	82.2
Canada	9.2	8.9	9.1	5.1	4.3	5.2	80.6	80.6	80.5
United States of America	30.1	29.9	30.2	23.3	16.3	15.1	81.6	82.5	82.4
EUROPE	180.0	184.0	184.2	30.3	54.1	48.2	105.2	105.2	105.3
European Union	110.7	109.9	110.2	13.8	19.0	18.4	109.1	110.6	110.7
Russian Federation	43.5	43.7	43.6	9.1	23.5	18.0	99.6	100.1	99.9
Ukraine	8.3	7.4	7.1	3.1	4.4	4.3	111.9	111.6	111.6
United Kingdom of Great Britain and Northern Ireland	14.1	14.9	15.1	1.6	2.5	2.1	74.9	74.5	75.0
OCEANIA	9.9	10.1	10.1	2.3	4.5	4.3	67.0	66.0	65.7
Australia	8.5	8.6	8.6	1.8	4.1	4.0	82.8	82.1	82.1
WORLD	760.8	779.7	780.3	291.9	310.7	308.5	66.9	67.1	67.0
LIFDC	58.7	59.0	59.8	16.4	12.2	11.1	39.2	38.8	38.7
LDC	39.5	39.4	39.8	9.8	6.6	5.8	31.4	31.2	31.0

APPENDIX TABLE 3(A): COARSE GRAIN STATISTICS

	Production			Imports			Exports		
	2019-2021 average	2022 <i>estim.</i>	2023 <i>f'cast</i>	19/20-21/22 average	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>	19/20-21/22 average	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>
	<i>million tonnes</i>								
ASIA	421.4	438.5	441.5	127.6	116.5	125.4	7.6	8.9	8.4
China	275.5	287.7	291.7	40.1	35.0	40.3	0.1	0.1	0.1
China (mainland)	275.3	287.5	291.5	35.4	30.5	35.7	0.1	0.1	0.1
Taiwan Province of China	0.2	0.2	0.2	4.6	4.4	4.6	-	-	-
India	50.1	51.9	51.5	0.3	0.2	0.2	2.8	3.8	3.6
Indonesia	22.6	23.0	23.2	1.0	1.0	1.0	-	0.1	0.1
Iran (Islamic Republic of)	3.8	4.1	3.9	11.9	11.0	11.8	-	-	-
Japan	0.3	0.2	0.2	17.2	16.4	17.1	-	-	-
Malaysia	0.1	0.1	0.1	3.7	3.7	3.7	-	-	-
Pakistan	9.5	10.4	10.5	0.2	0.2	0.2	0.3	0.4	0.3
Philippines	8.1	8.3	8.4	0.6	0.9	0.8	-	-	-
Republic of Korea	0.2	0.2	0.2	11.7	11.0	11.6	-	-	-
Saudi Arabia	0.3	0.3	0.3	9.9	8.5	8.2	-	-	-
Thailand	4.8	5.4	5.4	2.3	1.0	2.0	0.0	-	-
Türkiye	14.4	17.7	14.8	4.6	4.5	5.3	0.5	0.8	0.6
Viet Nam	4.6	4.2	4.0	11.4	10.3	10.5	0.4	0.2	0.2
AFRICA	145.1	147.4	145.8	27.6	23.2	24.5	5.3	5.8	5.1
Algeria	1.2	1.1	1.1	5.1	4.3	4.4	-	-	-
Egypt	7.7	8.5	8.1	10.1	8.0	9.0	-	-	-
Ethiopia	23.2	22.1	22.1	-	-	-	1.3	1.2	1.1
Morocco	1.6	0.8	1.3	3.4	2.2	2.2	-	-	-
Nigeria	21.3	21.6	21.4	0.1	-	-	-	-	-
South Africa	15.6	16.6	17.1	0.2	0.1	0.1	2.6	3.3	3.0
Sudan	6.0	7.0	5.5	0.3	0.3	0.4	0.1	0.2	0.1
United Republic of Tanzania	7.4	7.0	7.0	-	-	-	0.3	0.2	-
CENTRAL AMERICA & THE CARIBBEAN	37.6	37.0	37.5	25.5	25.2	26.1	0.6	0.5	0.5
Mexico	32.9	32.2	32.9	18.1	17.6	18.6	0.6	0.5	0.5
SOUTH AMERICA	183.0	202.3	198.0	17.4	17.2	17.1	76.7	87.1	86.0
Argentina	66.3	67.2	49.4	0.1	0.1	0.1	42.3	33.3	33.7
Brazil	100.3	117.8	132.0	2.7	2.7	2.5	31.8	48.5	50.0
Chile	1.6	1.4	1.5	2.7	2.5	2.5	0.0	-	0.1
Colombia	1.4	1.5	1.6	6.5	6.6	6.8	-	-	-
Peru	1.8	1.9	1.8	3.8	3.7	3.8	-	-	-
Venezuela (Bolivarian Republic of)	0.8	1.0	0.9	1.1	1.0	1.0	-	-	-
NORTHERN AMERICA	405.0	389.5	430.5	6.2	5.8	5.3	71.9	57.0	64.6
Canada	27.9	30.6	28.1	3.5	2.6	2.3	6.1	6.9	6.3
United States of America	377.1	358.8	402.4	2.8	3.2	3.0	65.8	50.1	58.3
EUROPE	272.7	234.7	244.5	21.2	30.3	22.6	57.2	48.7	48.0
European Union	160.1	133.9	148.4	18.2	26.8	19.1	12.9	9.3	11.4
Russian Federation	41.9	43.1	41.6	0.1	0.1	0.1	8.7	8.3	8.3
Serbia	7.8	5.1	7.3	0.1	0.1	0.1	2.9	1.1	1.1
Ukraine	46.5	34.4	28.7	0.1	0.1	0.1	31.0	28.4	25.8
United Kingdom of Great Britain and Northern Ireland	8.9	8.5	7.9	1.8	2.1	2.2	0.8	1.5	1.2
OCEANIA	16.9	19.3	15.1	0.3	0.2	0.3	7.4	10.4	8.8
Australia	16.3	18.7	14.5	-	-	-	7.4	10.4	8.8
WORLD	1 481.7	1 468.8	1 513.0	225.7	218.4	221.4	226.7	218.4	221.4
LIFDC	105.6	106.1	104.7	9.2	9.8	9.8	2.7	2.5	2.2
LDC	95.0	96.8	95.4	6.1	6.4	6.4	4.8	5.0	4.6

APPENDIX TABLE 3(B): COARSE GRAIN STATISTICS

	Total Utilization			Stocks ending in			Per caput food use		
	19/20-21/22 average	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>	2020-2022 average	2023 <i>estim.</i>	2024 <i>f'cast</i>	19/20-21/22 average	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>
	<i>million tonnes</i>						<i>(..... Kg/year.....)</i>		
ASIA	543.8	550.6	560.9	188.1	187.6	184.6	14.5	14.3	14.4
China	318.2	324.0	333.0	157.5	159.4	157.1	13.4	13.5	13.5
China (mainland)	313.4	319.1	328.1	157.0	158.9	156.5	13.6	13.6	13.7
Taiwan Province of China	4.8	4.8	4.8	0.5	0.5	0.5	6.9	6.9	6.9
India	48.1	48.5	49.0	3.3	2.7	2.2	17.9	17.2	17.2
Indonesia	23.9	24.2	24.1	1.6	1.2	1.3	27.3	27.5	27.6
Iran (Islamic Republic of)	15.7	15.9	15.6	3.5	2.5	2.5	1.2	1.2	1.1
Japan	17.3	16.7	17.6	2.5	2.9	2.6	3.5	3.5	3.6
Malaysia	3.8	3.8	3.8	0.2	0.2	0.2	5.5	6.2	6.1
Pakistan	9.3	10.6	10.6	1.1	1.2	1.0	11.3	11.8	11.7
Philippines	8.8	9.2	9.3	0.9	0.7	0.6	18.9	19.8	19.8
Republic of Korea	11.8	12.2	12.2	2.5	2.6	2.2	3.5	3.5	3.5
Saudi Arabia	10.4	8.9	8.5	2.0	1.8	1.8	2.7	2.6	2.6
Thailand	7.1	6.3	7.4	0.8	0.7	0.7	2.6	2.6	2.6
Türkiye	18.1	20.5	19.5	3.3	4.2	4.2	19.4	19.2	19.1
Viet Nam	15.7	14.3	14.2	0.8	0.6	0.6	8.7	9.3	9.5
AFRICA	167.3	166.2	166.3	36.5	36.1	35.4	72.6	72.8	71.7
Algeria	6.5	5.3	5.4	2.0	1.7	1.8	14.7	14.3	14.0
Egypt	17.8	16.9	16.8	1.7	1.3	1.6	42.3	41.4	40.8
Ethiopia	21.6	21.6	21.8	6.2	5.4	4.6	134.3	135.5	134.3
Morocco	5.0	3.2	3.3	1.6	1.4	1.6	30.1	29.6	29.6
Nigeria	21.5	21.8	21.4	0.7	0.4	0.4	73.6	73.2	69.6
South Africa	12.9	13.2	14.2	3.1	4.2	4.1	91.7	91.1	91.1
Sudan	6.4	6.9	6.2	2.6	2.7	2.5	108.5	108.3	108.7
United Republic of Tanzania	7.4	7.2	7.2	0.8	0.3	0.1	90.7	91.4	91.2
CENTRAL AMERICA & THE CARIBBEAN	62.7	63.3	63.5	7.4	5.8	5.4	98.6	99.1	98.4
Mexico	50.3	51.0	51.0	6.1	4.7	4.7	139.7	140.8	139.7
SOUTH AMERICA	125.8	132.9	137.3	26.8	18.2	15.6	25.8	26.0	26.0
Argentina	25.2	26.5	24.1	8.2	8.8	5.2	7.3	7.2	7.2
Brazil	71.7	77.7	84.2	14.1	7.1	8.4	25.7	25.5	25.4
Chile	4.2	3.9	4.0	0.2	0.1	0.1	24.7	24.4	24.4
Colombia	7.8	8.2	8.4	0.3	0.5	0.3	30.7	30.7	30.7
Peru	5.8	5.6	5.6	0.3	0.3	0.3	21.8	22.0	21.4
Venezuela (Bolivarian Republic of)	1.9	2.1	2.0	0.3	0.3	0.3	42.6	46.5	49.1
NORTHERN AMERICA	346.1	337.7	348.7	44.9	43.3	63.6	17.7	17.6	17.5
Canada	24.8	24.1	24.2	3.8	4.8	4.1	4.5	4.4	4.4
United States of America	321.3	313.6	324.5	41.1	38.6	59.5	19.2	19.1	19.0
EUROPE	231.2	218.9	218.2	51.0	58.3	59.3	20.9	21.3	21.4
European Union	164.9	151.9	152.9	26.0	25.2	28.4	20.3	21.2	21.2
Russian Federation	32.9	33.0	31.4	7.2	9.7	11.6	21.1	21.1	21.2
Serbia	4.8	4.8	4.8	1.2	0.9	2.4	21.8	22.1	22.2
Ukraine	11.7	10.5	10.4	8.5	12.2	4.8	28.9	32.0	34.0
United Kingdom of Great Britain and Northern Ireland	10.6	9.1	9.1	1.4	1.5	1.3	13.6	13.6	13.7
OCEANIA	9.0	8.5	8.5	3.0	3.4	2.4	7.8	7.6	7.5
Australia	8.1	7.7	7.6	2.8	3.2	2.2	9.7	9.6	9.5
WORLD	1 485.8	1 478.2	1 503.3	357.8	352.6	366.2	28.3	28.6	28.5
LIFDC	112.0	114.6	113.5	29.4	27.9	27.1	61.3	61.5	61.0
LDC	96.6	98.9	98.6	22.6	21.6	20.5	59.3	59.7	59.5

APPENDIX TABLE 4(A): MAIZE STATISTICS

	2019-2021 average	2022 <i>estim.</i>	2023 <i>f'cast</i>	19/20-21/22 average	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>	19/20-21/22 average	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>
<i>million tonnes</i>									
ASIA	369.7	389.8	392.0	95.0	88.5	94.8	6.3	7.8	7.4
China	264.9	277.4	281.2	23.3	22.4	24.6	-	-	-
China (mainland)	264.7	277.2	281.0	18.7	18.0	20.0	-	-	-
Taiwan Province of China	0.2	0.2	0.2	4.6	4.4	4.5	-	-	-
India	31.4	34.6	34.0	0.1	-	-	2.6	3.7	3.5
Indonesia	22.6	23.0	23.2	0.9	1.0	1.0	-	0.1	0.1
Iran (Islamic Republic of)	0.7	1.1	0.9	9.6	8.0	9.0	-	-	-
Japan	-	-	-	15.5	14.8	15.5	-	-	-
Malaysia	0.1	0.1	0.1	3.7	3.7	3.7	-	-	-
Pakistan	9.0	9.9	10.0	-	-	-	0.3	0.4	0.3
Philippines	8.1	8.3	8.4	0.5	0.8	0.8	-	-	-
Republic of Korea	0.1	0.1	0.1	11.6	10.9	11.5	-	-	-
Thailand	4.6	5.2	5.2	1.7	0.8	1.5	0.0	-	-
Türkiye	6.4	8.3	6.5	3.0	2.5	3.5	0.4	0.5	0.4
Viet Nam	4.6	4.2	4.0	11.3	10.2	10.4	0.4	0.2	0.2
AFRICA	90.5	92.1	92.9	23.0	18.8	19.8	4.4	5.0	4.4
Algeria	-	-	-	4.3	3.5	3.5	-	-	-
Egypt	6.8	7.5	7.1	10.0	8.0	9.0	-	-	-
Ethiopia	10.2	10.2	10.2	-	-	-	0.9	0.9	0.9
Kenya	3.5	3.2	3.3	1.4	1.8	1.8	-	-	-
Morocco	-	-	-	2.6	1.7	1.7	-	-	-
Nigeria	12.6	12.7	12.7	0.1	-	-	-	-	-
South Africa	14.9	16.1	16.5	0.2	-	-	2.6	3.3	3.0
United Republic of Tanzania	6.3	5.9	5.9	-	-	-	0.3	0.2	-
CENTRAL AMERICA & THE CARIBBEAN	31.9	31.0	31.6	24.5	24.6	25.5	0.6	0.5	0.5
Mexico	27.4	26.4	27.2	17.1	17.0	18.0	0.6	0.5	0.5
SOUTH AMERICA	168.2	186.5	180.9	16.0	15.9	15.9	72.4	83.0	80.5
Argentina	58.7	59.0	41.0	-	-	-	38.3	29.5	28.5
Brazil	96.5	113.1	126.5	2.1	2.0	1.9	31.7	48.5	50.0
Chile	0.8	0.6	0.7	2.5	2.5	2.4	-	-	-
Colombia	1.4	1.5	1.6	6.1	6.3	6.5	-	-	-
Peru	1.5	1.6	1.6	3.7	3.6	3.7	-	-	-
Venezuela (Bolivarian Republic of)	0.7	1.0	0.9	1.1	1.0	1.0	-	-	-
NORTHERN AMERICA	376.3	363.3	401.6	4.0	3.3	3.0	60.4	48.7	54.6
Canada	13.9	14.5	13.8	3.2	2.5	2.2	1.4	1.7	1.6
United States of America	362.4	348.8	387.7	0.8	0.8	0.8	58.9	47.0	53.0
EUROPE	133.1	99.8	112.4	19.2	26.8	19.8	37.8	32.9	31.3
European Union	70.4	52.3	64.6	16.8	24.0	17.0	4.9	3.0	4.0
Russian Federation	14.5	11.7	14.0	-	-	-	3.7	3.0	3.0
Serbia	7.1	4.5	6.7	-	-	-	2.7	1.0	1.0
Ukraine	36.1	27.0	22.0	-	-	-	25.7	25.6	23.0
OCEANIA	0.5	0.6	0.6	0.1	0.1	0.1	0.1	0.1	0.1
WORLD	1 170.2	1 163.0	1 212.0	181.9	178.0	178.9	182.0	178.0	178.9
LIFDC	61.7	61.7	62.2	8.0	8.5	8.4	1.8	1.7	1.6
LDC	55.9	56.1	57.1	5.2	5.4	5.3	4.0	4.3	4.0

APPENDIX TABLE 4(B): MAIZE STATISTICS

	Total Utilization			Stocks ending in			Per caput food use		
	19/20-21/22 average	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>	2020-2022 average	2023 <i>estim.</i>	2024 <i>f'cast</i>	19/20-21/22 average	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>
	million tonnes						Kg/year		
ASIA	461.5	475.0	482.0	172.8	173.8	170.7	9.2	9.3	9.4
China	290.6	302.2	307.2	153.6	155.0	152.6	9.9	10.0	10.0
China (mainland)	285.8	297.4	302.4	153.1	154.5	152.1	10.1	10.1	10.1
Taiwan Province of China	4.7	4.7	4.7	0.5	0.5	0.5	5.5	5.4	5.4
India	29.6	30.8	31.1	2.1	2.1	1.8	6.1	6.1	6.0
Indonesia	23.8	24.1	24.1	1.6	1.2	1.3	27.0	27.2	27.4
Iran (Islamic Republic of)	10.3	9.7	9.9	2.1	1.5	1.5	0.9	0.8	0.8
Japan	15.4	14.8	15.7	2.2	2.5	2.3	1.0	1.0	1.0
Malaysia	3.8	3.8	3.8	0.2	0.2	0.2	5.5	6.2	6.1
Pakistan	8.6	10.0	9.9	1.1	1.2	1.0	9.5	10.2	10.1
Philippines	8.8	9.1	9.3	0.9	0.7	0.6	18.9	19.7	19.8
Republic of Korea	11.6	12.0	12.0	2.5	2.5	2.1	2.0	2.0	2.0
Thailand	6.3	6.0	6.7	0.8	0.7	0.7	1.2	1.2	1.2
Türkiye	8.9	10.0	9.6	1.3	1.7	1.7	15.9	15.8	15.7
Viet Nam	15.6	14.2	14.1	0.8	0.6	0.6	8.7	9.3	9.5
AFRICA	108.4	107.8	108.5	20.7	20.8	20.5	41.6	41.8	41.2
Algeria	4.4	3.4	3.4	1.2	1.1	1.2	3.2	3.1	3.1
Egypt	16.8	15.8	15.8	1.5	1.2	1.5	39.6	38.7	38.1
Ethiopia	8.9	9.4	9.5	2.0	2.3	2.1	48.5	49.3	48.9
Kenya	5.0	5.0	5.1	0.4	0.3	0.3	85.0	84.6	84.8
Morocco	2.6	1.5	1.6	1.2	1.2	1.4	10.4	10.3	10.2
Nigeria	12.7	13.0	12.7	0.4	-	-	34.9	35.6	33.2
South Africa	12.2	12.6	13.5	2.8	3.9	3.8	89.0	88.5	88.6
United Republic of Tanzania	6.3	6.1	6.0	0.7	0.2	-	74.9	75.7	75.8
CENTRAL AMERICA & THE CARIBBEAN	56.0	56.8	57.0	6.8	5.1	4.7	98.0	98.5	97.9
Mexico	43.9	44.7	44.7	5.5	4.0	4.0	139.3	140.4	139.3
SOUTH AMERICA	113.7	120.3	124.2	25.5	16.8	14.3	24.2	24.3	24.4
Argentina	21.5	22.4	20.5	7.5	8.0	4.5	7.1	7.0	7.0
Brazil	67.3	72.5	78.1	13.7	6.7	8.0	24.3	24.1	24.0
Chile	3.3	3.2	3.2	0.1	0.1	0.1	20.9	20.7	20.6
Colombia	7.5	7.9	8.0	0.3	0.5	0.3	30.2	30.3	30.3
Peru	5.3	5.2	5.2	0.3	0.3	0.3	15.0	15.1	14.9
Venezuela (Bolivarian Republic of)	1.8	2.0	1.9	0.3	0.3	0.3	42.0	45.9	48.5
NORTHERN AMERICA	326.6	318.6	329.2	40.8	38.5	58.7	14.6	14.5	14.4
Canada	15.5	14.9	14.6	2.5	2.5	2.3	3.1	3.0	3.0
United States of America	311.1	303.7	314.6	38.4	36.0	56.4	15.9	15.8	15.7
EUROPE	110.4	101.5	101.6	30.8	33.8	33.1	8.2	8.3	8.4
European Union	83.6	74.9	76.5	15.2	13.7	14.8	10.2	10.6	10.6
Russian Federation	10.2	10.5	9.0	2.5	2.0	4.0	1.4	1.4	1.4
Serbia	4.3	4.3	4.3	1.0	0.4	1.8	20.3	20.5	20.7
Ukraine	6.6	5.9	5.9	6.6	10.4	3.5	11.2	12.4	13.5
OCEANIA	0.6	0.6	0.6	0.1	0.1	0.1	2.1	2.1	2.1
WORLD	1 177.2	1 180.5	1 203.1	297.5	288.8	302.1	18.3	18.5	18.5
LIFDC	67.5	69.8	69.4	13.6	13.1	12.9	33.6	33.8	33.5
LDC	56.9	58.8	59.1	9.5	9.0	8.4	30.4	30.8	30.8

APPENDIX TABLE 5(A): BARLEY STATISTICS

	Production			Imports			Exports		
	2019-2021 average	2022 <i>estim.</i>	2023 <i>f'cast</i>	19/20-21/22 average	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>	19/20-21/22 average	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>
	<i>million tonnes</i>								
ASIA	22.7	21.1	21.6	24.1	21.5	22.0	1.1	0.9	0.8
China	2.0	2.0	2.0	9.1	6.9	8.0	-	-	-
India	1.7	1.4	1.5	0.1	0.2	0.2	-	-	-
Iran (Islamic Republic of)	3.1	3.0	3.0	2.4	3.0	2.8	-	-	-
Iraq	1.2	0.1	0.9	-	-	-	-	-	-
Japan	0.2	0.2	0.2	1.2	1.2	1.2	-	-	-
Kazakhstan	3.3	3.3	3.2	0.1	-	-	1.0	0.6	0.6
Saudi Arabia	0.1	0.1	0.1	6.1	5.0	4.7	-	-	-
Syrian Arab Republic	1.5	0.3	0.9	-	-	-	-	-	-
Türkiye	7.2	8.5	7.5	1.5	2.0	1.8	0.1	0.3	0.2
AFRICA	6.2	5.1	5.2	3.4	3.1	3.5	-	-	-
Algeria	1.1	1.0	1.0	0.7	0.8	0.8	-	-	-
Ethiopia	2.2	2.0	2.0	-	-	-	-	-	-
Libya	0.1	0.1	0.1	1.0	1.0	1.0	-	-	-
Morocco	1.5	0.7	1.2	0.8	0.5	0.5	-	-	-
Tunisia	0.6	0.5	0.2	0.8	0.7	1.0	-	-	-
CENTRAL AMERICA & THE CARIBBEAN	1.0	1.0	0.9	0.3	0.2	0.2	-	-	-
Mexico	1.0	1.0	0.9	0.3	0.2	0.2	-	-	-
SOUTH AMERICA	6.1	6.4	6.7	1.1	1.1	1.0	3.0	2.8	3.4
Argentina	4.5	4.5	5.0	-	-	-	2.8	2.6	3.2
NORTHERN AMERICA	12.7	13.8	14.0	0.4	0.6	0.4	2.8	3.1	2.9
Canada	9.4	10.0	10.0	0.2	0.1	0.1	2.6	3.0	2.8
United States of America	3.4	3.8	4.0	0.2	0.5	0.4	0.2	0.1	0.1
EUROPE	93.0	90.7	87.2	1.3	2.6	2.0	18.2	14.8	15.6
Belarus	1.2	1.1	1.2	0.1	0.1	0.2	-	-	-
European Union	56.6	51.9	52.6	0.9	2.2	1.5	7.6	6.0	7.0
Russian Federation	19.8	22.9	19.9	-	-	-	4.8	5.0	5.0
Ukraine	8.6	5.8	5.0	-	-	-	5.0	2.5	2.5
United Kingdom of Great Britain and Northern Ireland	7.6	7.4	6.8	0.1	0.1	0.1	0.7	1.2	1.0
OCEANIA	13.4	14.5	10.3	-	-	-	6.0	7.5	6.4
Australia	13.0	14.1	9.9	-	-	-	6.0	7.5	6.4
WORLD	155.2	152.5	145.9	30.7	29.1	29.1	31.0	29.1	29.1
LIFDC	4.8	3.5	4.0	0.2	0.2	0.2	-	-	-
LDC	2.4	2.3	2.3	-	-	-	-	-	-

APPENDIX TABLE 5(B): BARLEY STATISTICS

	Total Utilization			Stocks ending in			Per caput food use		
	19/20-21/22 average	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>	2020-2022 average	2023 <i>estim.</i>	2024 <i>f'cast</i>	19/20-21/22 average	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>
	million tonnes						(..... Kg/year.....)		
ASIA	44.6	41.6	42.7	12.1	11.2	11.6	0.7	0.7	0.7
China	11.0	8.1	9.9	2.5	2.9	3.0	0.4	0.4	0.4
India	1.8	1.6	1.7	-	-	-	1.0	1.0	1.0
Iran (Islamic Republic of)	5.4	6.2	5.8	1.4	1.0	1.0	0.3	0.3	0.3
Iraq	1.1	0.9	1.2	0.9	0.3	0.3	3.3	3.1	3.1
Japan	1.4	1.5	1.4	0.2	0.2	0.2	2.4	2.4	2.4
Kazakhstan	2.3	2.3	2.3	0.4	0.7	1.2	1.1	1.0	1.0
Saudi Arabia	6.4	5.2	4.8	1.6	1.4	1.4	0.8	0.8	0.8
Syrian Arab Republic	1.5	1.2	1.2	1.1	-	-	13.5	12.7	12.1
Türkiye	8.3	9.6	9.0	1.9	2.4	2.4	1.0	1.0	1.0
AFRICA	9.8	8.6	8.6	1.9	1.4	1.4	2.5	2.4	2.4
Algeria	1.9	1.8	1.8	0.8	0.5	0.5	11.5	11.1	11.0
Ethiopia	2.2	2.0	2.0	-	-	-	16.8	15.8	15.5
Libya	1.1	1.1	1.1	-	-	-	12.9	12.6	12.5
Morocco	2.3	1.6	1.6	0.4	0.2	0.3	19.6	19.2	19.3
Tunisia	1.4	1.2	1.2	0.4	0.4	0.4	7.4	7.3	7.2
CENTRAL AMERICA & THE CARIBBEAN	1.3	1.3	1.1	0.1	0.1	0.1	-	0.0	0.0
Mexico	1.3	1.3	1.1	0.1	0.1	0.1	-	0.0	0.0
SOUTH AMERICA	4.2	4.5	4.3	0.7	0.7	0.7	0.5	0.5	0.5
Argentina	1.6	1.9	1.8	0.5	0.6	0.6	-	0.0	0.0
NORTHERN AMERICA	10.3	9.7	10.3	2.2	2.3	2.9	0.5	0.5	0.5
Canada	6.6	6.0	6.5	0.7	0.9	1.0	0.3	0.3	0.3
United States of America	3.7	3.7	3.8	1.4	1.4	1.9	0.6	0.6	0.6
EUROPE	75.2	72.7	72.3	10.0	15.1	16.3	1.2	1.2	1.2
Belarus	1.4	1.4	1.4	0.4	0.1	0.1	-	0.0	0.0
European Union	49.3	45.7	45.5	4.8	6.5	8.2	0.8	0.8	0.8
Russian Federation	14.8	14.7	14.7	2.3	5.3	5.6	1.8	1.8	1.8
Ukraine	3.7	3.3	3.2	1.4	1.3	0.6	2.6	2.9	3.2
United Kingdom of Great Britain and Northern Ireland	6.8	6.1	6.1	1.1	1.1	1.0	1.5	1.5	1.5
OCEANIA	6.5	6.1	6.1	1.9	2.7	1.6	0.1	0.1	0.1
Australia	6.1	5.7	5.7	1.8	2.6	1.6	0.2	0.2	0.2
WORLD	151.9	144.5	145.4	28.8	33.5	34.6	1.0	1.0	1.0
LIFDC	4.8	4.3	4.3	2.4	1.3	1.2	2.0	1.9	1.9
LDC	2.5	2.3	2.3	0.1	0.1	0.1	1.9	1.8	1.8

APPENDIX TABLE 6(A): SORGHUM STATISTICS

	Production			Imports			Exports		
	2019-2021 average	2022 <i>estim.</i>	2023 <i>f'cast</i>	19/20-21/22 average	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>	19/20-21/22 average	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>
	<i>million tonnes</i>								
ASIA	8.5	8.2	8.2	7.8	5.7	7.9	0.1	0.1	0.1
China	3.2	3.2	3.2	7.3	5.3	7.5	-	-	-
India	4.6	4.2	4.2	-	-	-	0.0	-	-
Japan	-	-	-	0.3	0.3	0.3	-	-	-
AFRICA	27.4	28.7	26.8	0.9	1.0	1.1	0.6	0.5	0.3
Burkina Faso	1.8	2.0	1.8	-	-	-	-	-	-
Ethiopia	4.2	3.4	3.4	-	-	-	0.4	0.2	0.2
Nigeria	6.7	6.7	6.7	-	-	-	-	-	-
Sudan	4.1	5.2	3.9	0.3	0.3	0.4	0.0	0.1	-
CENTRAL AMERICA & THE CARIBBEAN	4.7	5.0	4.9	0.4	0.3	0.3	-	-	-
Mexico	4.5	4.7	4.6	0.4	0.2	0.2	-	-	-
SOUTH AMERICA	5.9	6.6	7.7	-	-	-	1.2	1.2	2.0
Argentina	2.2	2.8	2.6	-	-	-	1.2	1.2	2.0
Brazil	2.3	2.9	3.9	-	-	-	-	-	-
Venezuela (Bolivarian Republic of)	0.1	-	-	-	-	-	-	-	-
NORTHERN AMERICA	9.9	4.8	9.1	-	-	-	6.6	2.9	5.0
United States of America	9.9	4.8	9.1	-	-	-	6.6	2.9	5.0
EUROPE	1.3	0.8	1.1	0.1	0.1	0.1	0.1	0.1	0.1
European Union	1.0	0.6	0.8	0.1	0.1	0.1	-	-	-
OCEANIA	1.1	2.6	2.5	0.0	0.1	-	0.9	2.5	2.0
Australia	1.1	2.6	2.5	-	-	-	0.9	2.5	2.0
WORLD	58.7	56.6	60.2	9.3	7.2	9.5	9.5	7.2	9.5
LIFDC	20.0	21.2	19.4	0.9	1.0	1.1	0.6	0.5	0.3
LDC	18.1	19.2	17.5	0.7	0.8	0.9	0.5	0.4	0.3

APPENDIX TABLE 7(A): OTHER COARSE GRAIN STATISTICS: MILLET - RYE
- OATS AND OTHER GRAINS

	Production			Imports			Exports		
	2019-2021 average	2022 <i>estim.</i>	2023 <i>f'cast</i>	19/20-21/22 average	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>	19/20-21/22 average	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>
	<i>million tonnes</i>								
ASIA	20.4	19.4	19.7	0.8	0.8	0.7	0.1	0.1	0.1
AFRICA	21.0	21.5	20.9	0.2	0.3	0.1	0.3	0.3	0.4
CENTRAL AMERICA & THE CARIBBEAN	0.1	-	0.1	0.2	0.4	0.1	-	-	-
SOUTH AMERICA	2.7	2.8	2.7	0.2	0.2	0.2	0.1	0.1	0.1
NORTHERN AMERICA	6.1	7.6	5.8	1.8	1.9	1.9	2.2	2.3	2.1
EUROPE	45.3	43.4	43.8	0.7	0.8	0.7	1.0	0.9	1.0
OCEANIA	1.9	1.6	1.7	0.1	0.1	0.2	0.4	0.3	0.4
WORLD	97.5	96.7	94.9	3.9	4.1	3.9	4.1	4.1	3.9

APPENDIX TABLE 6(B): SORGHUM STATISTICS

	Total Utilization			Stocks ending in			Per caput food use		
	19/20-21/22 average	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>	2020-2022 average	2023 <i>estim.</i>	2024 <i>f'cast</i>	19/20-21/22 average	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>
	<i>million tonnes</i>						<i>(..... Kg/year.....)</i>		
ASIA	16.7	13.6	15.6	1.2	1.3	1.3	1.2	1.1	1.0
China	10.9	8.2	10.2	0.8	1.0	1.0	0.5	0.5	0.5
India	4.5	4.2	4.2	0.1	0.1	0.1	3.0	2.8	2.7
Japan	0.4	0.3	0.3	0.1	0.1	0.1	-	0.0	0.0
AFRICA	28.8	28.7	28.0	3.2	2.9	2.7	17.3	17.0	16.7
Burkina Faso	1.8	1.8	1.9	0.3	0.3	0.2	49.8	50.4	50.2
Ethiopia	3.9	3.3	3.2	0.5	-	-	25.4	22.6	22.2
Nigeria	6.8	6.8	6.7	0.2	0.1	0.1	31.0	30.3	28.9
Sudan	4.9	5.3	4.7	0.2	0.3	0.1	94.4	94.9	95.0
CENTRAL AMERICA & THE CARIBBEAN	5.1	5.0	5.1	0.4	0.6	0.6	0.4	0.3	0.3
Mexico	4.9	4.8	4.9	0.4	0.6	0.6	-	0.0	0.0
SOUTH AMERICA	4.9	5.1	6.0	0.5	0.5	0.4	-	0.0	0.0
Argentina	1.2	1.2	0.9	0.1	0.2	0.1	-	0.0	0.0
Brazil	2.3	2.9	3.9	0.2	0.3	0.3	-	0.0	0.0
Venezuela (Bolivarian Republic of)	0.1	-	-	-	-	-	-	0.0	0.0
NORTHERN AMERICA	3.4	3.1	3.1	0.8	0.6	0.8	0.1	0.1	0.1
United States of America	3.4	3.0	3.0	0.8	0.6	0.8	0.1	0.1	0.1
EUROPE	1.3	1.3	1.4	1.4	0.7	0.5	0.2	0.2	0.2
European Union	1.1	1.1	1.1	1.4	0.6	0.4	0.3	0.3	0.3
OCEANIA	0.4	0.3	0.2	0.4	0.2	0.3	0.2	0.2	0.2
Australia	0.4	0.3	0.2	0.3	0.2	0.3	-	0.0	0.0
WORLD	60.8	57.1	59.4	8.1	6.9	6.6	3.7	3.7	3.7
LIFDC	21.3	21.2	20.6	3.0	2.6	2.5	14.0	13.8	13.7
LDC	19.3	19.1	18.5	2.5	1.9	1.8	14.2	13.9	13.9

APPENDIX TABLE 7(B): OTHER COARSE GRAIN STATISTICS: MILLET - RYE - OATS AND OTHER GRAINS

	Total Utilization			Stocks ending in			Per caput food use		
	21/22 average	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>	2020-2022 average	2023 <i>estim.</i>	2024 <i>f'cast</i>	19/20-21/22 average	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>
	<i>million tonnes</i>						<i>(..... Kg/year.....)</i>		
ASIA	20.9	20.4	20.6	2.0	1.3	1.0	3.4	3.2	3.3
AFRICA	20.3	21.1	21.2	10.7	11.0	10.8	11.2	11.6	11.4
CENTRAL AMERICA & THE CARIBBEAN	0.3	0.2	0.3	-	-	-	0.2	0.3	0.2
SOUTH AMERICA	2.9	3.0	2.8	0.1	0.2	0.2	1.1	1.2	1.1
NORTHERN AMERICA	5.8	6.3	6.1	1.1	1.9	1.2	2.5	2.5	2.5
EUROPE	44.2	43.4	42.9	8.8	8.7	9.4	11.3	11.6	11.6
OCEANIA	1.5	1.5	1.6	0.6	0.4	0.4	5.3	5.2	5.1
WORLD	95.9	96.1	95.4	23.4	23.4	22.9	5.3	5.4	5.3

APPENDIX TABLE 8(A): RICE STATISTICS

	Production			Imports			Exports		
	19/20-21/22 average	2022/23	2023/24 f'cast	2019-2021 average	2022 estim.	2023 f'cast	2019-2021 average	2022 estim.	2023 f'cast
	<i>million tonnes, milled equivalent</i>								
ASIA	463.4	466.7	471.4	20.9	26.9	25.6	39.5	48.5	46.9
Bangladesh	37.2	38.3	38.9	0.9	0.9	0.6	-	-	-
China	146.1	144.0	144.6	4.3	6.6	5.4	2.6	2.3	2.5
China (mainland)	144.8	142.8	143.4	3.8	6.2	5.0	2.5	2.2	2.4
Taiwan Province of China	1.2	1.2	1.2	0.1	0.1	0.1	0.2	0.2	0.1
India	124.3	130.8	131.0	-	-	-	15.2	22.1	20.4
Indonesia	34.9	35.1	35.4	0.5	0.5	1.7	-	-	-
Iran (Islamic Republic of)	2.6	2.3	1.9	1.3	1.8	1.6	-	-	-
Iraq	0.3	-	-	1.2	2.1	1.9	-	-	-
Japan	7.4	7.3	7.2	0.7	0.7	0.7	0.1	0.1	0.1
Malaysia	1.6	1.7	1.8	1.2	1.2	1.3	-	0.1	-
Myanmar	16.1	14.8	15.6	-	-	-	2.1	2.2	2.4
Pakistan	8.4	7.0	8.7	-	-	-	4.1	4.6	3.3
Philippines	12.8	12.9	12.9	2.8	3.9	3.5	-	-	-
Republic of Korea	3.7	3.8	3.7	0.4	0.4	0.4	0.1	0.1	0.1
Saudi Arabia	-	-	-	1.3	1.3	1.2	-	-	-
Sri Lanka	3.4	2.3	2.7	0.0	0.8	0.2	-	-	-
Thailand	20.6	22.8	23.0	0.3	0.1	0.2	6.5	7.7	8.4
Viet Nam	28.2	27.7	27.8	1.0	1.9	1.5	6.7	7.2	7.5
AFRICA	24.8	24.6	25.8	16.8	18.7	17.7	0.8	0.6	0.3
Cote d'Ivoire	1.0	1.0	1.1	1.6	2.0	2.0	-	-	-
Egypt	4.1	3.7	3.9	0.4	0.6	0.3	-	-	-
Madagascar	2.8	3.1	3.2	0.5	0.8	0.6	-	-	-
Nigeria	5.0	5.1	5.4	2.1	2.4	2.6	-	-	-
Senegal	0.9	1.0	1.0	1.2	1.9	1.4	0.0	0.1	-
South Africa	-	-	-	0.9	0.9	0.9	-	-	-
United Republic of Tanzania	2.5	1.9	2.0	0.2	0.2	0.2	0.5	0.3	0.2
CENTRAL AMERICA & THE CARIBBEAN	1.8	1.7	1.7	2.5	2.4	2.5	0.1	-	-
Cuba	0.2	0.1	0.1	0.5	0.5	0.5	-	-	-
Mexico	0.2	0.1	0.1	0.7	0.7	0.8	-	-	-
SOUTH AMERICA	16.8	16.4	16.1	1.9	1.8	1.9	3.5	4.0	3.6
Argentina	0.9	0.8	0.6	-	-	-	0.4	0.4	0.3
Brazil	7.6	7.3	6.8	0.8	0.8	0.9	1.0	1.4	1.0
Peru	2.3	2.4	2.3	0.3	0.1	0.2	0.1	-	0.1
Uruguay	0.8	1.0	1.0	-	-	-	0.8	1.0	1.0
NORTHERN AMERICA	6.4	5.1	6.1	1.5	1.8	1.7	3.0	2.2	2.0
Canada	-	-	-	0.4	0.5	0.4	-	-	-
United States of America	6.4	5.1	6.1	1.1	1.3	1.2	3.0	2.2	2.0
EUROPE	2.5	1.9	2.0	3.0	3.6	3.3	0.5	0.5	0.5
European Union	1.7	1.3	1.2	2.0	2.5	2.2	0.4	0.4	0.4
Russian Federation	0.7	0.6	0.7	0.2	0.2	0.2	0.1	0.1	-
United Kingdom of Great Britain and Northern Ireland	-	-	-	0.4	0.6	0.6	-	-	-
OCEANIA	0.2	0.5	0.4	0.8	0.9	0.8	0.1	0.2	0.3
Australia	0.3	0.5	0.3	0.2	0.2	0.2	0.1	0.2	0.3
WORLD	515.9	516.9	523.5	47.4	56.0	53.6	47.4	56.0	53.6
LIFDC	59.2	60.1	61.4	15.8	16.9	15.9	0.7	0.6	0.3
LDC	80.3	80.1	82.4	12.3	13.3	12.3	4.6	4.9	4.9

APPENDIX TABLE 8(B): RICE STATISTICS

	Total Utilization			Closing stocks			Per caput food use		
	19/20-21/22 average	2022/23 f'cast	2023/24 f'cast	19/20-21/22 average	2022/23 f'cast	2023/24 f'cast	19/20-21/22 average	2022/23 f'cast	2023/24 f'cast
	million tonnes, milled equivalent						Kg/year		
ASIA	439.7	446.7	445.7	181.8	184.4	187.9	75.8	75.9	75.7
Bangladesh	38.2	39.2	39.5	6.4	7.3	7.1	181.3	183.4	184.0
China	150.0	148.4	147.0	103.1	100.0	100.8	76.6	76.3	76.3
China (mainland)	148.4	146.9	145.5	102.6	99.5	100.2	77.4	77.1	77.1
Taiwan Province of China	1.2	1.2	1.2	0.5	0.5	0.5	45.4	44.3	43.8
India	102.4	107.6	107.5	37.7	42.8	44.5	68.3	69.7	68.9
Indonesia	36.5	36.0	36.6	5.4	4.4	5.0	118.2	115.5	115.8
Iran (Islamic Republic of)	3.9	3.8	3.8	0.8	0.8	0.7	38.7	38.1	38.1
Iraq	1.6	2.0	2.1	0.4	0.6	0.7	35.9	42.8	43.7
Japan	8.0	7.9	7.9	3.3	3.4	3.3	48.1	45.8	45.3
Malaysia	2.8	2.9	2.9	0.4	0.3	0.4	78.8	80.1	80.2
Myanmar	13.8	13.4	13.4	3.8	3.2	3.0	186.3	187.3	188.8
Pakistan	4.0	4.2	4.3	0.7	0.2	0.8	13.6	13.9	13.9
Philippines	15.8	16.8	16.8	2.1	2.1	2.2	119.0	120.8	120.9
Republic of Korea	4.1	3.9	3.9	1.0	1.4	1.6	70.3	68.3	67.2
Saudi Arabia	1.2	1.2	1.2	0.4	0.5	0.5	33.2	32.8	32.9
Sri Lanka	3.3	3.3	3.2	0.6	0.5	0.2	124.7	128.9	128.9
Thailand	13.1	14.0	14.1	8.2	9.8	10.1	100.1	102.9	103.5
Viet Nam	22.4	22.8	21.8	3.6	3.8	3.9	146.1	140.8	138.4
AFRICA	41.0	42.6	43.9	6.2	5.8	6.0	26.2	26.1	26.4
Cote d'Ivoire	2.7	2.9	3.0	0.5	0.6	0.6	90.4	91.4	92.5
Egypt	4.3	4.2	4.1	0.8	0.6	0.6	36.7	34.2	34.2
Madagascar	3.2	3.6	3.7	0.4	0.8	0.8	99.6	104.7	106.4
Nigeria	7.2	7.6	7.8	0.4	0.4	0.5	29.9	29.8	30.0
Senegal	2.3	2.5	2.5	0.4	0.5	0.6	123.8	126.0	126.2
South Africa	0.9	0.9	0.9	0.2	0.1	0.1	15.4	15.2	15.2
United Republic of Tanzania	2.2	1.9	2.1	0.5	0.2	0.3	29.3	25.0	25.7
CENTRAL AMERICA & THE CARIBBEAN	4.2	4.2	4.3	0.6	0.5	0.7	18.3	17.8	18.1
Cuba	0.7	0.6	0.6	-	-	-	59.9	54.0	54.0
Mexico	0.9	0.9	0.9	0.1	0.1	0.1	7.2	7.1	7.1
SOUTH AMERICA	15.1	15.0	14.8	2.5	2.2	1.8	31.2	31.0	30.5
Argentina	0.6	0.5	0.4	0.1	-	-	10.9	10.3	8.0
Brazil	7.2	7.1	7.0	0.5	0.6	0.3	31.0	30.7	30.1
Peru	2.5	2.5	2.5	0.4	0.4	0.3	67.2	67.3	67.3
Uruguay	0.1	0.1	-	0.1	0.1	-	7.4	7.3	6.9
NORTHERN AMERICA	5.2	5.3	5.3	1.3	1.0	1.1	10.0	10.2	10.3
Canada	0.4	0.5	0.5	0.1	0.1	0.1	10.9	11.6	11.6
United States of America	4.8	4.8	4.9	1.2	0.9	1.0	9.9	10.0	10.1
EUROPE	5.1	5.0	5.1	0.7	0.6	0.7	5.8	5.7	5.8
European Union	3.5	3.2	3.3	0.5	0.3	0.4	6.2	6.0	6.0
Russian Federation	0.8	0.9	0.9	0.1	0.1	0.1	5.1	5.5	5.5
United Kingdom of Great Britain and Northern Ireland	0.6	0.6	0.6	0.2	0.1	0.1	6.8	7.0	7.1
OCEANIA	0.9	1.0	1.0	0.2	0.3	0.2	19.6	20.5	20.8
Australia	0.3	0.4	0.4	0.1	0.2	0.2	11.3	12.6	12.6
WORLD	511.2	519.8	520.1	193.3	194.8	198.3	53.0	53.0	52.8
LIFDC	74.3	76.8	78.3	12.0	12.5	12.4	51.3	51.1	51.1
LDC	87.7	89.8	91.1	16.8	16.8	16.4	64.5	64.0	63.9

Note: Totals and percentage change computed from unrounded data.

APPENDIX TABLE 9: CEREAL SUPPLY AND UTILIZATION IN SELECTED EXPORTERS (million tonnes)

	Wheat ¹			Coarse Grains ²			Rice (milled basis)		
	2021/22	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>	2021/22	2022/23 <i>estim.</i>	2023/24 <i>f'cast</i>	2021/22	2022/23 <i>f'cast</i>	2023/24 <i>f'cast</i>
	UNITED STATES of AMERICA (Jun/May)			UNITED STATES of AMERICA			UNITED STATES of AMERICA (Aug/Jul)		
Opening Stocks	23.0	19.0	16.3	34.0	37.6	38.6	1.4	1.3	0.9
Production	44.8	44.9	45.2	398.1	358.8	402.4	6.1	5.1	6.1
Imports	2.6	3.4	3.7	2.6	3.3	2.6	1.2	1.3	1.2
Total Supply	70.4	67.3	65.2	434.7	399.7	443.6	8.7	7.7	8.2
Domestic use	29.6	29.9	30.2	326.6	313.6	324.5	4.8	4.8	4.9
Exports	21.8	21.1	19.8	70.5	47.6	59.6	2.6	1.9	2.4
Closing stocks	19.0	16.3	15.1	37.6	38.6	59.5	1.3	0.9	1.0
	CANADA (August/July)			CANADA			THAILAND (Aug/July)		
Opening Stocks	6.0	3.7	4.3	3.7	3.7	4.8	9.0	9.5	9.8
Production	22.4	33.8	34.3	25.2	30.6	28.1	21.8	22.8	23.0
Imports	0.2	0.1	0.1	6.4	2.1	2.3	0.1	0.2	0.2
Total Supply	28.6	37.6	38.7	35.3	36.4	35.2	30.9	32.5	33.0
Domestic use	9.8	8.9	9.1	25.6	24.1	24.2	13.8	14.0	14.1
Exports	15.0	24.4	24.5	6.0	7.6	6.9	7.7	8.6	8.8
Closing stocks	3.7	4.3	5.2	3.7	4.8	4.1	9.5	9.8	10.1
	ARGENTINA (Dec./Nov.)			ARGENTINA			INDIA (Oct./Sept.)		
Opening Stocks	2.7	1.2	1.0	8.2	6.8	8.8	37.6	40.1	42.8
Production	22.1	12.6	18.5	70.0	67.2	49.4	129.5	130.8	131.0
Imports	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0
Total Supply	24.8	13.8	19.5	78.3	74.1	58.3	167.1	170.9	173.8
Domestic use	6.3	6.3	6.5	24.2	26.5	24.1	105.0	107.6	107.5
Exports	17.3	6.5	11.5	47.3	38.8	29.0	22.0	20.5	21.8
Closing stocks	1.2	1.0	1.5	6.8	8.8	5.2	40.1	42.8	44.5
	AUSTRALIA (Oct./Sept.)			AUSTRALIA			PAKISTAN (Sept./Aug.)		
Opening Stocks	1.7	2.0	4.1	2.9	3.2	3.2	1.0	0.8	0.2
Production	36.2	39.2	28.2	18.3	18.7	14.5	9.3	7.0	8.7
Imports	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Supply	37.9	41.2	32.4	21.2	21.9	17.7	10.3	7.8	8.9
Domestic use	8.5	8.6	8.6	7.6	7.7	7.6	4.5	4.2	4.3
Exports	27.5	28.5	19.8	10.4	11.1	7.9	5.0	3.4	3.9
Closing stocks	2.0	4.1	4.0	3.2	3.2	2.2	0.8	0.2	0.8
	EUROPEAN UNION (July/June)			EUROPEAN UNION			VIET NAM (Jan./Dec.)		
Opening Stocks	10.8	16.8	19.0	24.9	25.7	25.2	3.4	4.2	3.8
Production	138.1	134.1	138.8	157.2	133.9	148.4	28.5	27.7	27.8
Imports	4.2	10.5	6.3	18.1	26.8	19.1	2.0	1.9	1.5
Total Supply	153.1	161.4	164.1	200.2	186.4	192.7	33.9	33.8	33.1
Domestic use	105.9	109.9	110.2	160.1	151.9	152.9	23.3	22.8	21.8
Exports	30.4	32.5	35.5	14.3	9.3	11.4	6.4	7.2	7.5
Closing stocks	16.8	19.0	18.4	25.7	25.2	28.4	4.2	3.8	3.9
	TOTAL OF ABOVE			TOTAL OF ABOVE			TOTAL OF ABOVE		
Opening Stocks	44.2	42.7	44.7	73.7	77.0	80.6	52.4	55.9	57.5
Production	263.6	264.6	265.0	668.8	609.2	642.8	195.2	193.4	196.6
Imports	7.0	14.0	10.2	27.2	32.3	24.1	3.3	3.4	2.9
Total Supply	314.8	321.3	319.9	769.7	718.5	747.5	250.9	252.7	257.0
Domestic use	160.1	163.6	164.6	544.1	523.8	533.3	151.4	153.4	152.6
Exports	112.0	113.0	111.1	148.5	114.4	114.8	43.7	41.6	44.4
Closing stocks	42.7	44.7	44.2	77.0	80.6	99.4	55.9	57.5	60.3

¹ Trade data include wheat flour in wheat grain equivalent. For the EU semolina is also included

² **Argentina** (December/November) for rye, barley and oats, (March/February) for maize and sorghum. **Australia** (November/October) for rye, barley and oats, (March/February) for maize and sorghum. **Canada** (August/July), **EU** (July/June), **United States** (June/May) for rye, barley and oats, (September/August) for maize and sorghum

APPENDIX TABLE 10: TOTAL OILCROPS STATISTICS (million tonnes)

	Production ¹			Imports			Exports		
	18/19-20/21 average	2021/22 <i>estim.</i>	2022/23 <i>f'cast</i>	18/19-20/21 average	2021/22 <i>estim.</i>	2022/23 <i>f'cast</i>	18/19-20/21 average	2021/22 <i>estim.</i>	2022/23 <i>f'cast</i>
ASIA	149.3	154.1	160.3	141.4	131.2	140.5	3.9	3.5	3.7
China	64.2	64.5	69.3	105.5	98.6	105.9	1.1	1.0	0.9
China (mainland)	64.1	64.4	69.2	102.8	95.9	103.1	1.1	1.0	0.9
Taiwan Province of China	0.1	0.1	0.1	2.7	2.7	2.8	-	-	-
India	45.5	48.7	50.6	0.7	0.8	0.3	1.4	1.4	1.5
Indonesia	12.5	13.7	13.9	3.0	2.7	3.1	0.1	0.1	0.1
Iran (Islamic Republic of)	0.9	0.9	0.9	2.1	2.3	2.5	0.1	-	0.1
Japan	0.2	0.3	0.3	6.0	5.7	6.0	-	-	-
Malaysia	4.9	4.7	4.8	1.1	1.0	1.0	-	-	-
Pakistan	4.0	3.6	2.9	3.5	2.6	2.8	-	-	-
Republic of Korea	0.2	0.2	0.2	1.6	1.5	1.6	-	-	-
Thailand	1.2	1.2	1.2	4.0	3.3	3.7	-	-	-
Türkiye	3.5	3.6	3.9	4.3	3.8	4.2	0.1	-	0.1
AFRICA	22.6	24.3	24.9	6.4	6.7	4.8	2.0	2.3	2.5
Nigeria	5.3	6.1	6.3	0.1	-	-	0.2	0.2	0.2
CENTRAL AMERICA & THE CARIBBEAN	2.1	2.0	2.0	8.6	8.7	9.4	0.2	0.2	0.2
Mexico	1.4	1.3	1.2	7.8	8.0	8.6	-	-	-
SOUTH AMERICA	202.1	192.8	205.8	7.1	5.7	12.0	104.8	90.0	104.1
Argentina	53.9	49.3	28.8	4.9	3.8	10.0	8.5	3.7	3.7
Brazil	130.5	130.7	160.5	0.6	0.5	0.5	87.3	79.7	93.0
Paraguay	11.3	4.8	10.1	-	0.1	-	6.4	2.9	6.0
Uruguay	2.3	3.6	1.7	-	-	-	2.4	3.5	1.1
NORTHERN AMERICA	134.8	153.0	152.5	2.0	2.2	2.1	69.2	70.7	68.2
Canada	27.2	21.1	26.0	0.6	0.7	0.8	15.0	10.6	14.0
United States of America	107.5	131.9	126.5	1.4	1.5	1.3	54.3	60.0	54.2
EUROPE	79.8	82.1	82.7	28.3	28.5	28.6	9.4	9.8	11.9
European Union	30.8	30.9	32.0	24.4	23.4	23.5	1.0	1.2	1.2
Russian Federation	22.4	23.6	27.4	2.3	2.2	2.0	3.0	1.7	2.9
Ukraine	23.4	23.3	18.8	0.1	-	-	4.6	6.1	6.9
OCEANIA	3.0	8.9	10.3	-	-	-	2.7	6.1	6.9
Australia	2.6	8.5	9.9	-	-	-	2.6	6.0	6.8
WORLD	593.6	617.3	638.4	193.8	183.0	197.4	192.1	182.6	197.4
LIFDC	17.5	17.4	17.4	2.8	2.7	2.8	1.9	2.2	2.1
LDC	15.2	15.2	15.1	2.3	2.2	2.3	1.7	2.0	1.9

¹ The split years bring together northern hemisphere annual crops harvested in the latter part of the first year shown, with southern hemisphere annual crops harvested in the early part of the second year shown; for tree crops which are produced throughout the year, calendar year production for the second year shown is used.

APPENDIX TABLE 11: TOTAL OILS AND FATS STATISTICS¹ (million tonnes)

	Imports			Exports			Utilization		
	18/19-20/21 average	2021/22 <i>estim.</i>	2022/23 <i>f'cast</i>	18/19-20/21 average	2021/22 <i>estim.</i>	2022/23 <i>f'cast</i>	18/19-20/21 average	2021/22 <i>estim.</i>	2022/23 <i>f'cast</i>
ASIA	53.1	48.3	53.5	53.7	49.8	54.5	133.4	133.2	139.2
Bangladesh	2.2	2.2	2.2	-	-	-	2.7	2.6	2.6
China	14.7	9.5	13.1	0.6	0.6	0.6	45.5	42.0	44.9
China (mainland)	14.2	9.0	12.6	0.6	0.6	0.6	44.5	41.0	43.9
Taiwan Province of China	0.5	0.5	0.5	-	-	-	1.0	1.0	1.0
India	14.4	15.0	15.2	0.3	0.3	0.3	26.5	27.8	28.7
Indonesia	0.2	0.1	0.1	30.1	27.4	30.4	19.8	22.3	23.6
Iran (Islamic Republic of)	1.0	1.6	1.6	-	-	-	2.3	2.5	2.5
Japan	1.4	1.3	1.3	-	-	-	3.3	3.2	3.2
Malaysia	1.7	2.0	1.7	18.7	17.0	17.7	5.3	5.4	5.4
Pakistan	3.7	3.2	3.6	0.1	-	-	5.5	5.1	5.3
Philippines	1.2	1.3	1.3	1.0	1.1	1.0	2.3	2.4	2.3
Republic of Korea	1.4	1.4	1.5	-	-	-	1.9	1.8	1.8
Singapore	0.9	0.9	1.3	0.2	0.2	0.4	0.8	0.7	0.8
Türkiye	1.9	2.3	2.4	0.7	0.7	1.2	3.5	3.7	3.8
AFRICA	12.0	11.3	11.9	2.3	2.2	2.2	20.1	19.9	20.0
Algeria	1.0	1.0	1.0	-	0.1	0.1	1.1	1.1	1.1
Egypt	1.9	1.8	2.0	0.2	0.1	0.2	2.7	2.7	2.5
Nigeria	1.4	1.0	1.2	0.1	-	0.1	3.7	3.6	3.7
South Africa	0.9	0.9	0.9	-	-	-	1.5	1.6	1.6
CENTRAL AMERICA & THE CARIBBEAN	2.7	2.7	2.7	1.6	1.8	1.9	5.9	5.9	6.0
Mexico	1.6	1.6	1.7	-	-	-	4.0	4.1	4.1
SOUTH AMERICA	3.4	3.5	3.2	10.4	11.5	11.3	19.7	19.1	19.1
Argentina	0.1	0.1	0.1	6.4	6.1	5.5	3.9	3.8	3.5
Brazil	0.6	0.8	0.8	1.6	3.0	3.4	10.5	9.9	10.4
Paraguay	-	-	-	0.7	0.5	0.4	0.3	0.2	0.2
Uruguay	0.1	0.1	0.1	-	-	-	0.1	0.1	0.2
NORTHERN AMERICA	5.7	5.9	6.9	8.0	6.5	7.0	23.4	24.5	25.6
Canada	0.4	0.5	0.5	4.2	3.3	4.1	2.0	2.1	2.2
United States of America	5.3	5.4	6.4	3.8	3.2	3.0	21.4	22.4	23.4
EUROPE	17.1	16.5	16.3	16.7	14.8	16.4	41.7	40.9	41.1
European Union	13.9	12.9	12.8	3.9	4.2	4.3	33.8	31.9	32.2
Russian Federation	1.6	1.5	1.4	5.0	4.7	6.2	4.6	4.8	4.7
Ukraine	0.3	0.3	0.3	7.1	5.0	5.1	1.0	1.1	1.0
OCEANIA	0.8	0.8	0.8	2.0	2.2	2.2	1.5	1.5	1.4
Australia	0.7	0.7	0.7	0.8	0.8	0.8	1.1	1.1	1.0
WORLD	94.7	89.0	95.5	94.5	88.7	95.5	245.5	245.0	252.4
LIFDC	9.5	9.0	9.4	1.3	1.4	1.4	14.5	14.1	14.4
LDC	8.4	7.9	8.2	0.8	0.8	0.8	12.1	11.7	11.9

¹ Includes oils and fats of vegetable, marine and animal origin.

APPENDIX TABLE 12: TOTAL MEALS AND CAKES STATISTICS¹ (million tonnes)

	Imports			Exports			Utilization		
	18/19-20/21 average	2021/22 <i>estim.</i>	2022/23 <i>f'cast</i>	18/19-20/21 average	2021/22 <i>estim.</i>	2022/23 <i>f'cast</i>	18/19-20/21 average	2021/22 <i>estim.</i>	2022/23 <i>f'cast</i>
ASIA	44.0	46.0	46.0	14.1	13.6	14.8	189.2	193.2	195.8
China	6.6	7.3	7.8	1.5	0.8	0.7	103.4	105.5	107.6
China (mainland)	6.1	6.8	7.3	1.5	0.8	0.7	100.7	102.8	104.9
Taiwan Province of China	0.5	0.5	0.5	-	-	-	2.7	2.7	2.7
India	0.7	1.2	1.0	2.3	2.4	3.4	19.0	21.0	21.4
Indonesia	5.2	5.7	5.7	5.4	5.6	5.8	5.9	6.3	6.4
Iran (Islamic Republic of)	1.7	2.1	1.9	-	-	-	4.4	4.4	4.2
Japan	2.5	2.3	2.2	-	-	-	6.6	6.5	6.5
Malaysia	1.6	1.4	1.5	2.5	2.3	2.3	2.6	2.5	2.6
Pakistan	0.5	0.5	0.5	0.1	0.1	0.1	4.5	4.0	3.7
Philippines	3.0	3.4	3.2	0.3	0.4	0.4	3.8	4.2	4.0
Republic of Korea	3.7	3.4	3.4	0.1	0.1	-	4.8	4.6	4.6
Saudi Arabia	1.8	1.5	1.3	-	-	-	2.2	2.1	2.0
Thailand	3.4	3.4	3.7	0.2	0.2	0.2	7.4	7.1	7.3
Türkiye	2.2	2.5	2.4	0.2	0.2	0.2	6.6	6.8	7.0
Viet Nam	6.1	5.9	6.2	0.3	0.3	0.3	8.0	7.8	7.9
AFRICA	4.4	3.5	3.4	1.3	1.4	1.4	14.8	14.6	13.6
Egypt	0.5	0.4	0.4	-	-	-	4.0	4.1	2.8
South Africa	0.6	0.7	0.5	0.1	0.1	0.1	2.2	2.3	2.3
CENTRAL AMERICA & THE CARIBBEAN	4.0	3.8	3.9	0.2	0.2	0.2	11.2	11.4	11.6
Mexico	2.2	2.0	2.1	0.1	0.1	0.1	8.6	8.7	8.9
SOUTH AMERICA	6.3	7.2	7.3	51.2	54.4	52.2	36.0	35.2	35.8
Argentina	-	-	-	28.3	27.8	24.5	8.4	7.8	7.5
Bolivia (Plurinational State of)	-	-	-	1.7	2.6	2.2	0.3	0.3	0.3
Brazil	-	-	-	17.6	20.5	22.1	18.1	17.5	18.1
Chile	1.2	1.2	1.2	0.2	0.3	0.3	1.5	1.5	1.6
Paraguay	-	-	-	2.2	1.8	1.7	1.1	1.0	0.9
Peru	1.4	1.6	1.6	0.9	1.1	1.1	1.9	2.0	2.0
Uruguay	0.2	0.1	0.2	-	-	-	0.2	0.1	0.2
Venezuela (Bolivarian Republic of)	0.7	0.6	0.6	-	-	-	0.9	0.7	0.7
NORTHERN AMERICA	5.6	5.1	5.5	18.9	18.3	19.5	44.0	44.0	44.8
Canada	1.2	1.4	1.3	5.8	5.4	6.2	3.4	3.0	2.9
United States of America	4.3	3.7	4.2	13.1	12.9	13.4	40.6	41.0	41.8
EUROPE	29.3	29.4	29.5	10.7	10.1	11.0	72.9	72.9	73.9
European Union	27.2	25.2	25.3	1.7	2.1	2.0	57.8	55.5	56.3
Russian Federation	-	0.1	0.1	2.8	3.3	4.2	7.5	8.0	8.0
Ukraine	-	-	-	5.6	4.1	4.1	2.1	2.2	2.3
OCEANIA	3.7	3.8	3.8	0.2	0.4	0.4	4.5	4.7	4.7
Australia	1.5	1.5	1.5	0.1	0.2	0.3	2.2	2.2	2.3
WORLD	97.4	98.8	99.4	96.6	98.3	99.4	372.6	375.9	380.2
LIFDC	2.6	2.8	2.8	0.8	0.9	0.8	8.9	8.9	9.0
LDC	1.3	1.4	1.5	0.6	0.6	0.6	6.8	6.9	6.9

¹ Expressed in product weight; includes meals and cakes derived from oilcrops as well as fish meal and other meals from animal origin.

APPENDIX TABLE 13: SUGAR STATISTICS (million tonnes - raw value)

	Production		Imports		Exports		Utilization	
	2021/22 estim.	2022/23 f'cast	2021/22 estim.	2022/23 f'cast	2021/22 estim.	2022/23 f'cast	2021/22 estim.	2022/23 f'cast
ASIA	74.3	70.8	34.6	34.1	21.8	18.5	86.3	87.5
China	9.6	9.0	6.0	5.8	0.2	0.2	16.2	16.4
India	35.8	32.8	0.3	0.5	11.5	6.1	27.2	27.5
Indonesia	2.4	2.4	5.9	5.9	0.4	0.4	7.6	7.8
Japan	0.8	0.7	1.0	1.0	-	-	1.8	1.8
Malaysia	-	-	2.0	2.0	0.3	0.3	1.9	1.9
Pakistan	7.9	7.0	0.2	0.1	-	0.3	5.9	5.9
Philippines	1.8	1.8	0.3	0.4	-	-	2.0	2.0
Republic of Korea	-	-	2.0	2.0	0.2	0.2	1.6	1.6
Thailand	10.2	11.0	0.1	0.1	6.6	9.0	2.8	2.9
Türkiye	2.5	2.6	0.4	0.5	0.1	0.1	2.6	2.6
Viet Nam	0.7	0.9	1.5	1.5	-	-	2.2	2.2
AFRICA	10.9	10.9	16.1	15.7	3.5	3.3	21.5	21.9
Algeria	-	-	2.2	2.2	0.4	0.3	1.9	1.9
Egypt	2.9	2.8	0.1	0.1	0.1	0.1	3.3	3.3
Eswatini	0.7	0.7	-	-	0.6	0.6	0.1	0.1
Ethiopia	0.4	0.4	1.3	1.4	-	-	1.3	1.3
Kenya	0.7	0.8	0.4	0.3	-	-	1.1	1.1
Morocco	0.4	0.4	1.5	1.5	0.7	0.7	1.2	1.2
Mozambique	0.4	0.4	0.1	0.1	0.1	0.1	0.3	0.3
Nigeria	-	-	2.0	1.7	-	-	1.6	1.6
South Africa	1.9	2.0	0.4	0.3	0.5	0.6	1.7	1.7
Sudan	0.3	0.3	1.4	1.4	-	-	1.7	1.7
United Republic of Tanzania	0.4	0.4	0.2	0.2	-	-	0.6	0.6
Zambia	0.4	0.4	-	-	0.1	0.1	0.2	0.2
CENTRAL AMERICA & THE CARIBBEAN	13.0	12.1	0.5	0.5	4.9	4.3	7.7	7.7
Cuba	0.5	0.5	-	-	-	-	0.5	0.5
Dominican Republic	0.6	0.6	-	-	0.3	0.2	0.4	0.4
Guatemala	2.8	2.8	-	-	1.6	1.6	1.0	1.0
Mexico	6.2	5.4	-	-	1.6	1.1	4.1	4.2
SOUTH AMERICA	38.7	46.6	1.7	1.8	26.8	29.7	17.6	17.8
Argentina	1.6	1.5	-	-	0.3	0.2	1.4	1.4
Brazil	32.1	40.0	-	-	25.5	28.5	10.5	10.5
Colombia	2.2	2.2	0.2	0.2	0.6	0.6	1.7	1.8
Peru	1.2	1.2	0.3	0.3	0.1	0.1	1.4	1.4
Venezuela (Bolivarian Republic of)	0.2	0.3	0.4	0.4	-	-	0.6	0.6
NORTHERN AMERICA	8.4	8.6	4.6	4.5	0.1	0.1	12.6	12.7
Canada	0.1	0.1	1.3	1.3	0.1	0.1	1.3	1.3
United States of America	8.3	8.4	3.3	3.2	-	-	11.3	11.4
EUROPE	25.9	24.2	3.3	3.7	1.6	1.6	27.3	27.0
European Union	16.5	14.9	1.6	2.2	0.9	0.6	17.0	16.7
Russian Federation	5.8	6.1	0.3	0.1	0.4	0.4	6.1	6.3
Ukraine	1.5	1.3	-	-	0.1	0.3	1.0	0.9
United Kingdom of Great Britain and Northern Ireland	1.0	0.7	0.8	0.8	0.1	0.1	1.8	1.8
OCEANIA	4.3	4.4	0.3	0.3	2.7	3.2	1.4	1.4
Australia	4.1	4.2	-	-	2.6	3.1	1.1	1.1
Fiji	0.2	0.2	-	-	0.1	0.1	-	-
WORLD	175.6	177.5	61.0	60.4	61.3	60.7	174.5	176.1
LIFDC	5.3	5.3	13.3	13.2	1.2	1.1	16.0	16.3
LDC	4.2	4.2	12.3	12.2	1.1	0.9	13.3	13.6

APPENDIX TABLE 14: TOTAL MEAT STATISTICS¹ (thousand tonnes - carcass weight equivalent)

	Production		Imports		Exports		Utilization	
	2022 <i>estim.</i>	2023 <i>f'cast</i>	2022 <i>estim.</i>	2023 <i>f'cast</i>	2022 <i>estim.</i>	2023 <i>f'cast</i>	2022 <i>estim.</i>	2023 <i>f'cast</i>
ASIA	156 331	157 943	21 834	22 338	5 549	5 634	172 521	174 677
China	94 695	95 251	8 220	8 524	1 012	1 032	101 904	102 743
India	9 266	9 405	2	2	1 394	1 426	7 873	7 980
Indonesia	5 157	5 199	298	310	5	5	5 450	5 504
Iran (Islamic Republic of)	2 582	2 552	174	184	21	23	2 735	2 713
Japan	4 219	4 229	3 695	3 647	18	17	7 819	7 887
Malaysia	1 828	1 843	537	563	83	82	2 282	2 323
Pakistan	5 226	5 498	2	2	70	68	5 158	5 432
Philippines	2 890	2 979	1 189	1 204	9	10	4 070	4 173
Republic of Korea	2 758	2 772	1 589	1 597	82	81	4 218	4 291
Saudi Arabia	1 214	1 224	863	952	69	73	2 007	2 102
Thailand	4 771	4 880	48	53	1 477	1 495	3 371	3 437
Türkiye	4 664	4 775	69	72	831	836	3 903	4 011
Viet Nam	5 273	5 483	631	624	26	27	5 878	6 080
AFRICA	21 974	21 752	3 089	3 015	293	296	24 769	24 471
Algeria	785	786	4	5	-	-	789	790
Angola	321	326	458	420	-	-	778	747
Egypt	2 843	2 632	218	240	2	2	3 059	2 869
Nigeria	1 471	1 469	8	7	-	-	1 479	1 476
South Africa	3 525	3 536	409	430	143	145	3 791	3 821
CENTRAL AMERICA & THE CARIBBEAN	11 103	11 322	3 993	3 997	986	973	14 110	14 346
Cuba	233	232	358	372	-	-	591	604
Mexico	7 891	8 087	2 583	2 556	736	729	9 738	9 914
SOUTH AMERICA	48 851	49 593	1 477	1 439	11 731	12 002	38 600	39 030
Argentina	6 316	6 220	71	52	1 074	979	5 314	5 294
Brazil	31 234	31 968	81	74	9 152	9 604	22 163	22 438
Chile	1 556	1 529	644	600	455	406	1 744	1 723
Colombia	3 065	3 151	261	272	52	52	3 274	3 371
Uruguay	747	723	116	130	515	489	350	364
NORTHERN AMERICA	54 397	54 370	3 411	3 226	10 587	10 498	47 103	47 153
Canada	5 247	5 205	756	783	2 166	2 124	3 848	3 887
United States of America	49 149	49 165	2 648	2 436	8 421	8 374	43 247	43 259
EUROPE	63 431	62 268	5 508	5 562	9 872	9 585	59 065	58 245
Belarus	1 221	1 230	95	89	406	407	909	913
European Union	42 797	41 654	1 530	1 617	7 334	7 012	36 994	36 260
Russian Federation	11 227	11 400	498	446	775	790	10 945	11 055
Ukraine	2 247	2 155	157	164	449	478	1 955	1 841
United Kingdom of Great Britain and Northern Ireland	4 184	4 071	2 637	2 660	801	788	6 020	5 942
OCEANIA	6 479	6 682	552	541	2 804	3 086	4 257	4 136
Australia	4 442	4 652	272	264	1 765	2 040	2 953	2 876
New Zealand	1 450	1 434	83	81	1 036	1 042	522	474
WORLD	362 566	363 931	39 865	40 117	41 822	42 075	360 426	362 058
LIFDC	15 609	15 561	1 962	1 873	220	211	17 351	17 223
LDC	12 930	12 945	1 756	1 724	62	59	14 624	14 610

¹ includes bovine, ovine, pig, poultry and other meats all expressed in carcass weight equivalents

APPENDIX TABLE 15: BOVINE MEAT STATISTICS (thousand tonnes - carcass weight equivalent)

	Production		Imports		Exports		Utilization	
	2022 <i>estim.</i>	2023 <i>f'cast</i>	2022 <i>estim.</i>	2023 <i>f'cast</i>	2022 <i>estim.</i>	2023 <i>f'cast</i>	2022 <i>estim.</i>	2023 <i>f'cast</i>
ASIA	22 115	22 599	7 463	7 576	1 770	1 805	27 778	28 376
China	7 195	7 405	3 719	3 727	64	68	10 850	11 065
India	4 350	4 445	-	-	1 378	1 410	2 972	3 035
Indonesia	520	527	288	298	1	1	807	825
Iran (Islamic Republic of)	362	371	64	71	5	4	421	438
Japan	492	500	777	777	11	10	1 228	1 273
Malaysia	41	40	271	280	18	17	293	303
Pakistan	2 455	2 533	1	1	65	63	2 391	2 471
Philippines	183	184	237	240	5	5	415	420
Republic of Korea	330	355	595	596	4	4	920	947
AFRICA	7 329	7 274	406	409	81	82	7 654	7 601
Algeria	146	146	4	5	-	-	150	151
Angola	105	108	17	19	-	-	122	127
Egypt	595	588	181	185	1	1	776	772
South Africa	1 050	1 057	4	4	53	54	1 001	1 007
CENTRAL AMERICA & THE CARIBBEAN	2 979	3 016	369	374	613	621	2 736	2 768
Mexico	2 177	2 220	200	207	409	424	1 968	2 003
SOUTH AMERICA	16 696	16 767	553	559	4 768	4 828	12 481	12 498
Argentina	3 133	3 003	7	5	825	799	2 315	2 209
Brazil	10 350	10 570	70	64	2 907	3 025	7 513	7 609
Chile	190	199	335	340	27	30	498	510
Colombia	718	727	10	9	52	52	676	685
Uruguay	616	590	44	47	489	464	171	173
NORTHERN AMERICA	14 285	13 653	1 741	1 790	2 226	2 076	13 780	13 412
Canada	1 395	1 382	239	239	574	575	1 060	1 054
United States of America	12 890	12 271	1 501	1 549	1 652	1 501	12 718	12 357
EUROPE	10 237	10 073	1 343	1 314	1 362	1 344	10 218	10 043
European Union	6 714	6 608	387	406	851	844	6 250	6 170
Russian Federation	1 614	1 590	277	247	112	105	1 779	1 733
Ukraine	293	259	9	7	21	20	280	246
United Kingdom of Great Britain and Northern Ireland	906	912	514	503	163	169	1 257	1 245
OCEANIA	2 621	2 732	65	61	1 807	2 028	879	764
Australia	1 878	1 998	22	19	1 188	1 412	712	605
New Zealand	728	718	12	10	616	613	123	115
WORLD	76 263	76 112	11 941	12 082	12 627	12 784	75 526	75 461
LIFDC	6 543	6 480	208	203	152	145	6 599	6 539
LDC	4 657	4 656	142	142	10	9	4 788	4 790

APPENDIX TABLE 16: OVINE MEAT STATISTICS (thousand tonnes - carcass weight equivalent)

	Production		Imports		Exports		Utilization	
	2022 <i>estim.</i>	2023 <i>f'cast</i>	2022 <i>estim.</i>	2023 <i>f'cast</i>	2022 <i>estim.</i>	2023 <i>f'cast</i>	2022 <i>estim.</i>	2023 <i>f'cast</i>
ASIA	10 333	10 430	670	723	36	36	10 967	11 117
Bangladesh	237	238	-	-	-	-	237	238
China	5 252	5 297	380	406	2	2	5 631	5 701
India	823	822	-	-	9	10	814	813
Iran (Islamic Republic of)	289	295	3	5	-	-	292	300
Pakistan	782	797	-	-	4	3	778	794
Saudi Arabia	145	147	30	32	-	-	175	179
Türkiye	605	631	1	1	5	4	601	628
AFRICA	3 432	3 426	12	12	51	49	3 393	3 389
Algeria	364	365	-	-	-	-	364	365
Nigeria	408	407	-	-	-	-	408	407
South Africa	158	156	2	2	4	4	156	154
CENTRAL AMERICA & THE CARIBBEAN	147	148	12	13	3	3	156	157
Mexico	108	109	-	-	3	3	106	106
SOUTH AMERICA	333	334	4	4	27	25	313	314
Brazil	141	142	4	4	-	-	145	146
NORTHERN AMERICA	88	87	196	191	3	3	286	275
United States of America	70	70	165	160	3	3	237	227
EUROPE	1 166	1 179	202	211	119	127	1 252	1 262
European Union	576	570	139	151	36	34	679	686
Russian Federation	211	210	-	-	1	1	210	209
United Kingdom of Great Britain and Northern Ireland	276	298	56	53	75	85	256	266
OCEANIA	1 175	1 237	35	35	853	905	386	367
Australia	735	798	1	1	478	521	264	278
New Zealand	439	438	3	3	375	384	92	58
WORLD	16 673	16 841	1 131	1 190	1 093	1 149	16 753	16 882
LIFDC	3 161	3 153	13	13	46	44	3 127	3 122
LDC	2 571	2 564	2	3	27	24	2 546	2 542

APPENDIX TABLE 17: PIG MEAT STATISTICS (thousand tonnes - carcass weight equivalent)

	Production		Imports		Exports		Utilization	
	2022 <i>estim.</i>	2023 <i>f'cast</i>	2022 <i>estim.</i>	2023 <i>f'cast</i>	2022 <i>estim.</i>	2023 <i>f'cast</i>	2022 <i>estim.</i>	2023 <i>f'cast</i>
ASIA	65 661	66 051	5 719	5 713	258	273	71 021	71 512
China	56 360	56 597	2 470	2 532	129	144	58 701	58 985
India	316	315	1	1	1	1	316	316
Indonesia	263	265	7	8	-	-	270	273
Japan	1 293	1 302	1 528	1 472	3	3	2 771	2 790
Malaysia	217	214	47	55	2	2	262	267
Philippines	1 217	1 261	496	489	2	2	1 710	1 748
Republic of Korea	1 419	1 398	721	728	9	9	2 079	2 120
Thailand	746	770	1	1	30	30	717	741
Viet Nam	2 880	2 983	127	101	21	22	2 986	3 062
AFRICA	2 011	2 016	335	337	30	30	2 315	2 323
Madagascar	17	15	-	-	-	-	17	15
Nigeria	307	305	6	5	-	-	313	310
South Africa	338	349	30	29	24	23	344	355
Uganda	129	130	-	-	-	-	130	130
CENTRAL AMERICA & THE CARIBBEAN	2 131	2 175	1 690	1 669	325	306	3 495	3 538
Cuba	119	116	21	23	-	-	140	139
Mexico	1 730	1 782	1 334	1 304	305	285	2 759	2 801
SOUTH AMERICA	7 719	7 879	485	495	1 705	1 837	6 499	6 536
Argentina	723	757	49	40	1	3	771	794
Brazil	5 167	5 254	3	2	1 471	1 585	3 699	3 671
Chile	576	588	136	137	229	246	483	479
Colombia	517	541	166	164	-	-	683	705
NORTHERN AMERICA	14 524	14 609	1 019	874	4 150	4 169	11 376	11 318
Canada	2 272	2 191	269	281	1 426	1 378	1 126	1 109
United States of America	12 252	12 418	748	591	2 724	2 791	10 249	10 208
EUROPE	29 645	28 405	1 426	1 484	4 966	4 707	26 106	25 182
Belarus	362	366	60	56	38	42	385	380
European Union	22 284	21 142	129	131	4 385	4 143	18 028	17 129
Russian Federation	4 522	4 658	54	33	242	255	4 334	4 435
Serbia	304	303	75	73	18	18	362	359
Ukraine	642	565	67	70	2	1	708	634
United Kingdom of Great Britain and Northern Ireland	1 046	885	903	982	264	228	1 685	1 639
OCEANIA	585	576	326	319	39	39	872	855
Australia	436	426	242	238	36	36	642	627
Papua New Guinea	84	85	5	4	-	-	89	89
WORLD	122 276	121 710	10 998	10 890	11 473	11 361	121 684	121 265
LIFDC	1 492	1 484	187	190	5	5	1 674	1 669
LDC	1 938	1 930	225	233	2	2	2 161	2 160

APPENDIX TABLE 18: POULTRY MEAT STATISTICS (thousand tonnes - carcass weight equivalent)

	Production		Imports		Exports		Utilization	
	2022 <i>estim.</i>	2023 <i>f'cast</i>	2022 <i>estim.</i>	2023 <i>f'cast</i>	2022 <i>estim.</i>	2023 <i>f'cast</i>	2022 <i>estim.</i>	2023 <i>f'cast</i>
ASIA	54 700	55 354	7 933	8 277	3 389	3 427	59 279	60 206
China	25 232	25 352	1 635	1 844	793	795	26 074	26 402
India	3 776	3 822	-	-	5	5	3 771	3 817
Indonesia	4 254	4 284	-	-	2	3	4 251	4 281
Iran (Islamic Republic of)	1 923	1 877	108	108	16	18	2 014	1 966
Japan	2 429	2 421	1 359	1 366	5	5	3 784	3 787
Kuwait	67	68	174	182	7	7	234	243
Malaysia	1 566	1 585	177	182	62	62	1 680	1 705
Republic of Korea	1 005	1 015	242	236	68	68	1 184	1 183
Saudi Arabia	910	910	615	692	54	57	1 471	1 545
Thailand	1 863	1 910	2	2	1 340	1 358	554	553
Türkiye	2 472	2 533	63	65	763	768	1 772	1 830
AFRICA	7 415	7 226	2 321	2 242	127	131	9 609	9 337
Angola	40	42	327	283	-	-	368	325
South Africa	1 922	1 915	373	395	59	61	2 236	2 249
CENTRAL AMERICA & THE CARIBBEAN	5 759	5 898	1 918	1 936	45	43	7 632	7 791
Cuba	26	29	334	346	-	-	360	375
Mexico	3 801	3 902	1 046	1 042	19	16	4 828	4 928
SOUTH AMERICA	23 931	24 436	434	380	5 030	5 110	19 336	19 705
Argentina	2 319	2 316	15	6	227	157	2 107	2 165
Brazil	15 551	15 977	5	3	4 598	4 817	10 957	11 163
Chile	769	719	172	122	193	124	748	717
NORTHERN AMERICA	25 189	25 708	442	359	4 193	4 235	21 352	21 838
Canada	1 540	1 592	215	230	161	166	1 594	1 656
United States of America	23 649	24 116	223	125	4 032	4 069	19 754	20 178
EUROPE	22 128	22 363	2 266	2 283	3 382	3 367	21 008	21 279
European Union	13 074	13 189	669	721	2 027	1 958	11 716	11 952
Russian Federation	4 816	4 878	161	160	419	428	4 553	4 610
Ukraine	1 290	1 310	80	86	426	456	944	940
United Kingdom of Great Britain and Northern Ireland	1 948	1 968	1 114	1 071	294	301	2 768	2 738
OCEANIA	1 636	1 674	125	125	88	97	1 673	1 702
Australia	1 375	1 416	5	5	59	67	1 322	1 354
New Zealand	223	219	2	2	29	30	195	191
WORLD	140 760	142 659	15 439	15 601	16 254	16 409	139 889	141 859
LIFDC	2 934	2 950	1 542	1 455	15	16	4 461	4 390
LDC	2 910	2 932	1 375	1 336	22	22	4 263	4 246

APPENDIX TABLE 19: MILK AND MILK PRODUCTS STATISTICS (thousand tonnes - milk equivalent)

	Production			Imports			Exports		
	2020-2021 average	2022 <i>estim.</i>	2023 <i>f'cast</i>	2020-2021 average	2022 <i>estim.</i>	2023 <i>f'cast</i>	2020-2021 average	2022 <i>estim.</i>	2023 <i>f'cast</i>
ASIA	405 549	421 452	429 207	50 759	49 234	48 935	8 896	9 148	8 975
China	36 995	40 813	43 455	18 813	17 454	17 083	100	100	133
India ¹	215 512	226 090	230 108	107	74	78	415	597	587
Indonesia	1 579	1 599	1 610	3 205	3 775	3 863	59	65	67
Iran (Islamic Republic of)	8 108	7 840	7 820	130	86	85	1 120	1 583	1 592
Japan	7 515	7 617	7 625	2 035	1 905	1 927	24	107	81
Malaysia	48	47	47	2 379	2 422	2 308	527	367	359
Pakistan	61 740	64 280	64 970	321	313	277	12	11	10
Philippines	27	26	27	2 576	2 804	2 865	89	89	87
Republic of Korea	2 072	1 986	1 968	1 396	1 536	1 548	39	41	40
Saudi Arabia	2 913	2 920	2 925	2 655	2 634	2 720	1 487	1 294	1 310
Singapore	-	-	-	1 461	1 464	1 454	402	424	418
Thailand	1 307	1 222	1 220	1 668	1 746	1 775	295	323	310
Türkiye	23 352	21 563	21 413	120	97	98	1 160	1 001	944
AFRICA	53 470	52 799	52 448	10 565	9 921	10 063	1 205	958	908
Algeria	3 309	3 370	3 375	3 222	3 404	3 571	-	1	-
Egypt	5 507	5 175	5 123	1 160	1 096	1 080	392	147	139
Kenya	5 765	5 875	5 760	155	180	180	2	7	6
South Africa	3 845	3 766	3 747	368	326	322	388	377	353
Tunisia	1 427	1 426	1 420	102	94	97	23	33	32
CENTRAL AMERICA & THE CARIBBEAN	19 244	19 698	19 958	6 045	5 917	6 077	840	611	603
Costa Rica	1 217	1 220	1 217	63	68	65	139	107	101
Mexico	12 929	13 336	13 590	3 727	3 553	3 687	303	132	135
SOUTH AMERICA	67 943	66 519	66 112	3 223	3 207	3 337	4 372	4 615	4 437
Argentina	11 673	11 904	11 780	14	31	32	2 269	2 429	2 334
Brazil	36 669	34 830	34 620	1 028	1 151	1 226	106	124	107
Colombia	7 204	7 421	7 362	491	525	521	32	20	17
Uruguay	2 307	2 310	2 305	52	42	41	1 518	1 504	1 456
NORTHERN AMERICA	111 675	112 700	113 702	2 865	3 285	3 293	13 841	14 888	15 157
Canada	9 714	9 733	9 780	836	911	912	868	843	873
United States of America	101 961	102 967	103 922	2 021	2 368	2 376	12 973	14 045	14 285
EUROPE	234 531	233 207	233 140	12 526	11 942	11 945	35 218	32 568	32 861
Belarus	7 793	7 869	7 945	69	77	78	4 436	4 407	4 443
European Union	160 028	159 934	159 613	3 324	3 389	3 231	25 580	23 194	23 499
Russian Federation	32 282	32 977	33 472	3 808	3 574	3 623	384	406	413
Ukraine	8 989	7 320	7 040	388	205	288	499	535	459
United Kingdom of Great Britain and Northern Ireland	15 682	15 584	15 620	3 734	3 397	3 435	3 237	2 933	2 955
OCEANIA	30 950	29 508	29 442	1 733	1 661	1 765	23 046	21 768	22 028
Australia	9 051	8 435	8 160	1 221	1 232	1 330	2 900	2 985	2 631
New Zealand	21 878	21 051	21 260	255	180	195	20 141	18 779	19 394
WORLD	923 362	935 882	944 008	87 715	85 166	85 416	87 418	84 556	84 969
LIFDC	61 090	61 433	61 591	5 463	4 998	4 987	713	686	675
LDC	39 947	39 748	39 705	5 185	4 706	4 690	347	332	321

¹ For production, the annual dairy cycle starting in April is applied

Note: Trade values that refer to milk equivalents were derived by applying the following weights: butter (6.60), cheese (4.40), skim/whole milk powder (7.60), whole condensed/evaporated milk (2.10), yoghurt (1.0), cream (3.60), casein (7.40), skim milk (0.70), liquid milk (1.0), whey dry (7.6). The conversion factors cited refer to the solids content method. Refer to IDF Bulletin No. 390 (March 2004)

APPENDIX TABLE 20: FISH AND FISHERY PRODUCTS STATISTICS¹

	Capture fisheries production		Aquaculture fisheries production		Exports			Imports		
	2020	2021	2020	2021	2021	2022	2023	2021	2022	2023
	<i>Million tonnes (live weight equivalent)</i>				<i>USD billion</i>			<i>USD billion</i>		
						<i>estim.</i>	<i>f'cast</i>		<i>estim.</i>	<i>f'cast</i>
ASIA²	46.8	46.6	77.5	80.3	62.7	67.3	67.3	56.7	65.2	67.8
China	13.2	12.9	49.6	51.2	23.5	24.9	25.0	22.7	27.7	30.2
China, Hong Kong SAR	0.1	0.1	-	-	0.5	0.6	0.8	3.6	3.4	3.8
Taiwan Province of China	0.6	0.7	0.3	0.3	1.7	1.7	1.7	1.8	2.1	2.0
India	4.6	5.0	8.6	9.4	7.5	7.9	8.2	0.2	0.2	0.2
Indonesia	6.9	7.1	5.2	5.5	5.3	5.5	5.1	0.5	0.7	0.7
Japan	3.2	3.1	0.6	0.6	2.5	2.6	2.6	14.1	14.9	14.7
Philippines	1.9	1.8	0.9	0.9	0.9	0.9	0.8	0.6	0.8	0.8
Republic of Korea	1.4	1.3	0.6	0.6	2.0	2.4	2.3	5.9	6.6	6.6
Thailand	1.6	1.4	1.0	1.0	5.4	5.8	5.5	3.8	4.3	4.3
Viet Nam	3.5	3.5	4.7	4.7	9.1	9.8	10.0	2.0	2.1	2.1
AFRICA	9.8	10.4	2.3	2.3	7.9	8.8	9.1	5.4	5.7	5.9
Egypt	0.4	0.4	1.6	1.6	-	0.1	0.1	0.8	0.9	0.9
Morocco	1.4	1.4	-	-	2.8	2.9	2.9	0.3	0.3	0.4
Namibia	0.3	0.4	-	-	0.8	0.8	0.8	0.1	0.1	0.1
Nigeria	0.8	0.8	0.3	0.3	-	0.1	0.1	0.9	0.9	0.9
Senegal	0.5	0.5	-	-	0.6	0.7	0.7	0.1	0.1	0.1
South Africa	0.6	0.5	-	-	0.7	0.7	0.7	0.4	0.5	0.5
CENTRAL AMERICA & THE CARIBBEAN	2.0	2.2	0.4	0.4	2.9	2.7	2.7	2.1	2.1	2.1
Mexico	1.5	1.6	0.3	0.2	1.4	1.0	1.0	1.0	0.9	0.8
Panama	0.2	0.2	-	-	0.1	0.2	0.2	0.1	0.1	0.1
SOUTH AMERICA	10.1	11.6	3.3	3.4	20.9	24.7	25.3	3.1	3.5	3.6
Argentina	0.8	0.9	-	-	1.9	1.7	1.9	0.2	0.2	0.2
Brazil	0.7	0.8	0.6	0.6	0.4	0.4	0.4	1.3	1.5	1.6
Chile	1.8	2.0	1.5	1.4	6.8	8.5	8.8	0.5	0.5	0.6
Ecuador	0.6	0.9	0.8	0.9	7.1	9.2	9.2	0.2	0.3	0.3
Peru	5.6	6.5	0.1	0.2	3.8	3.9	4.0	0.3	0.3	0.3
NORTHERN AMERICA	5.3	5.3	0.6	0.6	13.8	13.5	13.6	33.5	35.3	33.6
Canada	0.7	0.7	0.2	0.2	7.1	6.5	6.4	3.6	3.9	3.7
United States of America	4.3	4.3	0.4	0.4	5.6	5.8	6.0	29.9	31.4	29.9
EUROPE	13.8	13.5	3.3	3.6	65.1	70.1	71.1	69.9	73.1	74.2
European Union ²	3.9	3.6	1.1	1.2	37.8	40.2	41.2	58.1	61.6	62.2
of which extra-EU	-	-	-	-	7.4	8.0	8.5	29.6	32.2	31.7
Iceland	1.0	1.0	-	0.1	2.6	2.9	2.9	0.1	0.1	0.2
Norway	2.5	2.4	1.5	1.7	13.9	15.5	15.9	1.4	1.6	1.7
Russian Federation	5.1	5.2	0.3	0.3	6.1	6.7	6.4	2.6	2.2	2.6
OCEANIA	1.5	1.5	0.2	0.2	3.2	3.2	3.3	1.9	2.2	2.2
Australia	0.2	0.2	0.1	0.1	0.9	0.8	0.9	1.5	1.8	1.8
New Zealand	0.4	0.3	0.1	0.1	1.3	1.2	1.2	0.2	0.2	0.3
WORLD³	89.6	91.2	87.6	90.9	176.6	190.2	192.4	172.6	187.1	189.4
Excl. intra-EU	-	-	-	-	146.2	158.0	159.7	144.1	157.7	158.9
LIFDC	7.8	8.2	3.2	3.4	20.0	21.9	22.5	4.6	4.6	4.7
LDC	9.8	10.0	4.6	4.5	3.9	4.3	4.4	1.3	1.3	1.3

¹ Production and trade data exclude whales, seals, other aquatic mammals and aquatic plants. Trade data include fishmeal and fish oil

² EU-27. Including intra-trade. Cyprus is included in Asia as well as in the European Union

³ For capture fisheries production, the aggregate includes also 1 060 tonnes in 2019 and 1 030 tonnes in 2020 of not identified countries these data are not included in any other aggregates. Totals may not match due to rounding

APPENDIX TABLE 21: SELECTED INTERNATIONAL PRICES FOR WHEAT AND COARSE GRAINS

Period	Wheat			Maize		Barley		Sorghum
	US No. 2 Hard Red Winter Ord. Prot. ¹	US Soft Red Winter No. 2 ²	Argentina Trigo Pan ³	US No. 2 Yellow ²	Argentina ³	France feed Rouen	Australia feed Southern States	US No. 2 Yellow ²
..... (USD/tonne)								
Annual (July/June)								
2011/12	297	258	259	280	268	270	247	286
2012/13	346	311	337	311	277	297	299	304
2013/14	317	265	335	217	218	243	241	244
2014/15	266	220	254	173	177	205	243	247
2015/16	211	194	208	167	170	174	185	192
2016/17	197	170	190	156	173	159	162	172
2017/18	230	188	204	159	165	193	222	192
2018/19	232	210	233	166	166	219	265	183
2019/20	220	219	231	163	163	184	215	190
2020/21	269	254	263	219	224	242	218	308
2021/22	275	257	266	230	231	246	222	319
2022 – May	521	440	467	345	315	427	374	389
2022 – June	460	380	480	336	299	365	387	373
2022 – July	383	311	425	306	271	309	348	325
2022 – August	383	315	408	294	281	302	330	318
2022 – September	419	344	403	313	294	306	308	360
2022 – October	439	352	422	344	308	311	298	371
2022 – November	423	336	415	321	301	309	301	367
2022 – December	387	315	394	302	312	302	289	361
2023 – January	380	314	375	303	311	299	292	365
2023 – February	395	312	364	298	313	301	286	363
2023 – March	370	284	349	285	299	286	273	343
2023 – April	378	277	345	291	283	266	275	342
2023 – May	368	253	361	269	254	241	260	311

¹ Delivered United States f.o.b Gulf; ² Delivered United States Gulf; ³ Up River f.o.b.
Sources: International Grain Council and USDA.

APPENDIX TABLE 22: TOTAL WHEAT AND MAIZE FUTURES PRICES

	July		September		December		March	
	July 2023	July 2022	Sept 2023	Sept 2022	Dec 2023	Dec 2022	Mar 2024	Mar 2023
..... (USD/tonne)								
Wheat								
April 20	250	403	254	403	259	402	263	401
April 27	231	401	235	400	242	399	246	399
May 4	235	396	239	397	245	397	249	398
May 11	236	409	240	411	246	412	250	413
May 18	225	432	229	433	236	434	242	428
May 25	222	405	227	428	234	429	239	424
Maize								
April 20	246	319	221	302	219	295	223	296
April 27	229	320	209	303	209	295	213	296
May 4	232	313	208	296	208	290	212	291
May 11	229	310	203	296	202	290	206	291
May 18	219	308	195	197	197	291	201	293
May 25	233	304	201	291	203	285	207	286

Source: Chicago Board of Trade (CBOT)

APPENDIX TABLE 23: SELECTED INTERNATIONAL PRICES FOR RICE AND PRICE INDICES

Period	International prices				FAO indices				
	Thai 100% B ¹	Thai broken ²	US long grain ³	Pakistan Basmati ⁴	FAO All Rice Price Index	Indica	Japonica	Aromatic	Glutinous
Annual (Jan/Dec)(USD per tonne) (2014-2016=100)				
2016	407	348	438	795	91	96	79	77	102
2017	415	334	456	1131	99	100	80	101	88
2018	445	365	531	1023	106	108	91	108	89
2019	435	385	500	982	101	101	80	106	124
2020	515	431	597	970	110	114	90	98	124
2021	476	415	570	778	106	112	101	87	87
2022	451	405	649	1068	109	110	129	102	88
Monthly									
2022 – May	479	437	650	986	109	111	125	103	90
2022 – June	464	433	653	1149	111	112	127	106	85
2022 - July	433	396	662	1245	108	109	128	107	82
2022 - August	446	391	672	1250	109	108	129	110	85
2022 – September	451	387	676	1142	111	112	135	107	84
2022 – October	444	385	687	1133	112	113	140	106	92
2022 – November	448	395	698	1157	115	115	146	107	97
2022 – December	479	418	702	1252	119	120	159	110	103
2023 – January	532	473	719	1537	126	127	161	120	101
2023 - February	507	448	728	1396	125	126	158	117	99
2023 - March	490	437	727	1250	121	123	146	112	96
2023 – April	515	453	719	1273	124	127	150	113	96
2023 – May	524	446	715	1372	128	131	147	117	98

¹ White rice - 100% second grade - f.o.b. Bangkok - indicative traded prices.

² A1 super - f.o.b. Bangkok - indicative traded prices.

³ US No.2 - 4% broken f.o.b.

⁴ Super Kernel White Basmati Rice 2%.

Note: The FAO Rice Price Index is based on 21 rice export quotations. 'Quality' is defined by the percentage of broken kernels, with higher (lower) quality referring to rice with less (equal to or more) than 15 percent broken. The sub-index for Aromatic Rice follows movements in prices of Basmati and Fragrant rice.

Sources: FAO for indices. Rice prices: Creed Rice Market Report, Livericeindex.com, Thai Department of Foreign Trade (DFT), Viettraders and other public sources

APPENDIX TABLE 24: SELECTED INTERNATIONAL PRICES FOR OILCROP PRODUCTS AND PRICE INDICES

Period	International prices ¹					FAO indices ⁸		
	Soybeans ²	Soybean oil ³	Palm oil ⁴	Soybean cake ⁵	Rapeseed meal ⁶	Oilseeds	Vegetable oils	Oilcakes/meals
 (USD per tonne) (2014-2016=100)		
Annual (Oct/Sept)								
2012/13	563	1099	835	539	345	132	120	129
2013/14	521	949	867	534	324	120	116	128
2014/15	407	777	658	406	270	95	93	99
2015/16	396	773	655	351	232	93	95	85
2016/17	404	806	729	336	225	95	103	81
2017/18	402	820	648	381	258	94	94	93
2018/19	370	744	523	328	247	88	80	81
2019/20	379	783	668	338	243	90	93	84
2020/21	561	1272	1075	464	347	133	149	115
2021/22	641	1671	1423	520	405	156	196	129
Monthly								
2022 - May	713	1948	1685	504	440	176	229	129
2022 - June	690	1771	1591	529	362	164	212	129
2022 - July	614	1529	1173	548	333	145	169	130
2022 - August	629	1660	1086	560	365	147	163	133
2022 - September	643	1615	1046	529	346	142	150	126
2022 - October	621	1598	1045	528	367	144	151	127
2022 - November	646	1627	1090	526	356	149	155	126
2022 - December	649	1408	1043	556	369	148	145	133
2023 - January	649	1356	1018	595	395	148	140	142
2023 - February	649	1256	995	610	413	147	136	146
2023 - March	575	1132	1024	576	366	131	132	137
2023 - April	555	1077	1025	518	345	126	130	125
2023 - May ⁷	523	975	942	485	298	117	119	116

¹ Spot prices for nearest forward shipment

² Soybeans: US, No.2 yellow, c.i.f. Rotterdam

³ Soybean oil: Dutch, fob ex-mill

⁴ Palm oil: Crude, c.i.f. Northwest Europe

⁵ Soybean cake: Pellets, 44/45 percent, Argentina, c.i.f. Rotterdam

⁶ Rapeseed meal: 34 percent, Hamburg, f.o.b. ex-mill

⁷ The international prices shown represent averages for three out of four quotations for the month.

⁸ The FAO indices are based on the international prices of five selected seeds, ten selected oils and five selected cakes and meals. The indices are calculated using the Laspeyres formula; the weights used are derived from the export values of each commodity for the 2014–2016 period.

Sources: FAO and Oil World.

APPENDIX TABLE 25: SELECTED INTERNATIONAL PRICES FOR SUGAR AND SUGAR PRICE INDEX

Annual (Jan/Dec)	I.S.A. daily price average ¹	FAO Sugar Price Index (2014/16 = 100)
	Raw sugar	
	(US Cents/lb)	(2014/16=100)
2010	21.3	131.7
2011	26	160.9
2012	21.5	133.3
2013	17.7	109.5
2014	17	105.2
2015	13.4	83.2
2016	18	111.6
2017	16	99.1
2018	12.5	77.4
2019	12.7	78.6
2020	12.9	79.5
2021	17.7	109.3
2022	18.5	114.5
Monthly		
May - 2021	17.3	106.8
June - 2021	17.4	107.7
July - 2021	17.7	109.6
August - 2021	19.5	120.5
September - 2021	19.6	121.2
October - 2021	19.2	119.1
November - 2021	19.4	120.2
December - 2021	18.8	116.4
January - 2022	18.2	112.7
February - 2022	17.9	110.5
March - 2022	19.1	117.9
April.2022	19.6	121.5
May - 2022	19.5	120.4
June - 2022	19.0	117.3
July - 2022	18.2	112.8
August - 2022	17.9	110.5
September - 2022	17.7	109.7
October - 2022	17.5	108.6
November - 2022	18.5	114.4
December - 2022	18.9	117.2
January - 2023	18.9	116.8
February - 2023	20.2	125.2
March - 2023	20.5	127.0
April.2023	24.1	149.4
May - 2023	25.4	157.6

¹ International Sugar Agreement (ISA) prices: simple average of the closing quotes for the first three future positions of the New York Intercontinental Exchange (ICE) Sugar Contract No. 11.

Source: International Sugar Organization (ISO). FAO for the sugar index.

APPENDIX TABLE 26: SELECTED INTERNATIONAL PRICES FOR MILK PRODUCTS AND DAIRY PRICE INDEX

Period	International prices				FAO dairy price index
	Butter ¹	Skim milk powder ²	Whole milk powder ³	Cheddar cheese ⁴	
Annual (Jan/Dec) (USD per tonne) (2014-2016=100) ...
2012	3 740	3 063	3 336	3 877	112
2013	4 784	4 148	4 730	4 563	141
2014	4 278	3 606	3 854	4 542	130
2015	3 306	2 089	2 537	3 076	87
2016	3 473	1 986	2 481	2 807	83
2017	5 641	2 011	3 163	3 664	108
2018	5 587	1 834	3 060	3 736	107
2019	4 443	2 440	3 186	3 435	103
2020	3 844	2 606	3 041	3 506	102
2021	4 995	3 181	3 855	3 816	119
2022	6 608	3 863	4 253	4 535	142
Monthly					
2022 – May	7 008	4 228	4 388	4 370	144
2022 – June	7 133	4 261	4 532	4 659	150
2022 – July	6 793	3 974	4 326	4 687	146
2022 – August	6 610	3 702	4 011	4 756	143
2022 – September	6 555	3 661	3 982	4 753	143
2022 – October	6 268	3 464	3 893	4 706	139
2022 – November	6 079	3 151	3 750	4 803	137
2022 – December	5 740	3 132	3 714	4 963	138
2023 – January	5 290	2 915	3 507	4 986	135
2023 – February	4 968	2 781	3 424	4 809	129
2023 – March	5 021	2 737	3 410	4 652	127
2023 – April	5 018	2 671	3 282	4 455	123
2023 – May	5 048	2 730	3 423	4 119	119

¹ Butter - 82% butterfat - f.o.b. Oceania and EU; average indicative traded prices.

² Skim Milk Powder - 1.25% butterfat - f.o.b. Oceania and EU - averaged indicative traded prices.

³ Whole Milk Powder - 26% butterfat - f.o.b. Oceania and EU - average indicative traded prices.

⁴ Cheddar Cheese, 39% max. moisture, f.o.b. Oceania and EU, indicative traded prices

Note: The FAO Dairy Price Index is derived from a trade-weighted average of a selection of representative internationally-traded dairy products from the European Union and Oceania.

APPENDIX TABLE 27: SELECTED INTERNATIONAL MEAT PRICES

Period	Bovine meat prices			Ovine meat price		Pig meat prices			Poultry meat prices	
	Australia	United States of America	Brazil	New Zealand	Australia	United States of America	Brazil	Germany	United States of America	Brazil
Annual (Jan/Dec) (USD per tonne)									
2012	4 176	5 885	4 765	4 656	4 486	2 952	2 700	2 233	1 228	1 889
2013	4 009	6 314	4 527	4 130	4 132	2 981	2 797	2 311	1 229	1 972
2014	5 016	7 361	4 712	4 701	4 686	3 233	3 411	2 106	1 205	1 886
2015	4 699	7 195	4 320	3 643	4 042	2 669	2 482	1 582	1 002	1 604
2016	4 171	6 390	4 053	3 578	3 978	2 648	2 129	1 682	914	1 501
2017	4 463	6 676	4 196	4 488	4 710	2 687	2 475	1 871	1 000	1 631
2018	4 198	7 118	4 045	5 244	4 979	2 587	1 959	1 728	970	1 537
2019	4 873	7 119	4 119	5 127	5 097	2 626	2 245	1 989	972	1 618
2020	4 676	6 898	4 336	4 561	5 071	2 569	2 370	1 834	962	1 407
2021	5 544	8 313	5 032	5 643	5 898	2 756	2 432	1 655	1 164	1 626
2022	5 795	8 853	5 905	5 616	5 151	2 852	2 363	1 979	1 338	1 985
Monthly										
2022-May	6 133	9 102	6 452	5 354	5 499	2 874	2 392	2 000	1 354	2 070
2022-June	5 907	9 043	6 825	5 560	5 439	2 953	2 430	2 008	1 507	2 180
2022-July	5 660	8 761	6 549	5 657	5 159	3 061	2 381	1 961	1 472	2 192
2022-August	5 494	8 622	6 133	5 844	4 824	2 976	2 386	2 071	1 466	2 074
2022-September	5 401	8 497	6 001	5 643	4 612	3 036	2 451	2 142	1 406	2 057
2022-October	5 301	8 165	5 847	5 389	4 412	2 982	2 473	2 005	1 306	2 057
2022-November	5 180	8 038	5 227	5 493	4 447	2 976	2 558	2 053	1 234	2 041
2022-December	4 892	7 779	4 951	5 880	4 644	2 820	2 555	2 208	1 202	2 000
2023-January	4 866	7 767	4 843	5 903	4 764	2 699	2 475	2 261	1 151	1 983
2023-February	4 994	8 103	4 855	5 988	5 542	2 709	2 465	2 491	1 179	1 884
2023-March	5 409	8 351	4 813	5 966	4 188	2 780	2 432	2 568	1 213	1 851
2023-April	5 556	8 470	4 787	6 038	4 268	2 792	2 533	2 666	1 232	1 887
2023-May	5 352	8 569	5 082	6 108	4 069	2 810	2 585	2 652	1 249	1 944

Notes:

Bovine meat prices:

Australia: Cow 90CL export prices to the USA (FAS)

United States of America: Meat of bovine (fresh, chilled or frozen), export unit value

Brazil: Meat of bovine (fresh, chilled or frozen), export unit value

Ovine meat prices:

New Zealand: Medium trade lamb 17.5kg

Australia: Medium trade lamb 18-20kg

Pig meat prices:

United States of America: Meat of Swine (fresh, chilled or frozen), export unit value

Brazil: Meat of Swine (fresh, chilled or frozen), export unit value

Germany: Monthly market price for pig carcass grade E

Poultry meat prices:

United States of America: Chicken Cuts and Edible Offal (fresh, chilled or frozen), export unit value

Brazil: Meat and Edible Offal of Poultry (fresh, chilled or frozen), export unit value

Prices for the two most recent months may be estimates and subject to revision.

APPENDIX TABLE 28: SELECTED INTERNATIONAL MEAT PRICES AND FAO MEAT PRICE INDICES

FAO indices					
Period	Total meat	Poultry meat	Pig meat	Bovine meat	Ovine meat
Annual (Jan/Dec) (2014-2016=100)				
2012	105	115	111	93	111
2013	106	118	113	93	101
2014	112	114	117	17	114
2015	97	96	92	102	94
2016	91	90	92	91	92
2017	98	98	98	96	112
2018	95	93	91	96	124
2019	100	96	98	101	124
2020	96	87	94	100	117
2021	108	102	94	118	141
2022	119	122	102	128	131
Monthly					
2022-May	123	126	103	136	132
2022-June	126	135	105	136	134
2022-July	124	134	106	131	132
2022-August	121	129	106	126	130
2022-September	120	127	109	124	125
2022-October	117	124	106	121	119
2022-November	115	122	107	115	121
2022-December	112	119	107	110	128
2023-January	111	117	106	109	130
2023-February	113	113	110	112	140
2023-March	115	113	113	116	123
2023-April	117	115	115	118	125
2023-May	118	118	116	119	124

Notes:

The **FAO Meat Price Indices** consist of 2 poultry meat product quotations (the average weighted by assumed fixed trade weights), 3 bovine meat product quotations (average weighted by assumed fixed trade weights), 3 pig meat product quotations (average weighted by assumed fixed trade weights), 2 ovine meat product quotation (average weighted by assumed fixed trade weights): the four meat group average prices are weighted by world average export trade shares for 2014/2016.

Prices for the two most recent months may be estimates and subject to revision.

APPENDIX TABLE 29: FISH PRICE INDICES

Period	Total	Whitefish	Salmon	Shrimp	Pelagic excl. tuna	Tuna
Annual (Jan/Dec) (2014-2016=100)					
2012	97	111	78	87	115	119
2013	104	104	99	99	107	119
2014	107	105	102	113	100	108
2015	92	97	84	92	99	91
2016	102	97	114	94	101	101
2017	106	108	117	96	92	112
2018	106	118	119	88	96	105
2019	102	121	108	86	92	100
2020	95	107	97	86	92	93
2021	102	116	109	92	99	87
2022	121	156	134	93	107	102
Monthly						
2021 - January	96	117	90	84	93	94
2021 - February	96	115	96	84	94	89
2021 - March	101	111	115	84	94	92
2021 - April	102	112	120	86	90	90
2021 - May	107	120	128	90	104	84
2021 - June	105	124	112	90	118	80
2021 - July	103	113	112	94	109	81
2021 - August	100	111	102	95	107	83
2021 - September	99	114	98	96	98	86
2021 - October	103	116	108	97	94	87
2021 - November	102	117	105	98	96	84
2021 - December	108	122	119	98	96	93
2022 - January	111	119	127	97	101	106
2022 - February	117	125	146	97	91	106
2022 - March	128	177	147	97	93	97
2022 - April	134	178	170	97	100	93
2022 - May	132	167	163	96	112	101
2022 - June	135	185	158	95	119	99
2022 - July	121	162	135	95	99	94
2022 - August	119	160	116	93	125	104
2022 - September	109	153	98	90	96	105
2022 - October	119	151	107	90	162	114
2022 - November	111	151	112	86	93	101
2022 - December	114	149	128	84	92	106
2023 - January	122	135	148	84	97	141
2023 - February	129	166	156	82	100	130
2023 - March	132	155	180	82	97	126
2023 - April	130	156	171	78	101	130

Source of the raw data for the FAO Fish Price Index: EUMOFA, INFOFISH, INFOPECSA, INFOYU, Statistics Norway.

APPENDIX TABLE 30: SELECTED INTERNATIONAL COMMODITY PRICES

	Currency and unit	Effective date	Latest quotation	One month ago	One year ago	Average 2018-2022
Sugar (ISA daily price)	US cents per lb	30-05-23	25.01	26.45	19.45	14.84
Coffee (ICO daily price)	US cents per lb	30-05-23	169.87	176.00	193.71	131.88
Cocoa (ICCO daily price)	US cents per lb	26-05-23	133.33	128.92	107.35	107.06
Tea (FAO Tea Composite Price)	USD per kg	28-04-23	2.64	2.73	2.83	2.58
Cotton (COTLOOK A index)	US cents per lb	31-05-23	94.05	95.16	163.75	94.46
Jute "BTD" (Fob Bangladesh Port)	USD per tonne	31-05-23	920.00	950.00	1120.00	1031.92

MARKET INDICATORS

Futures markets

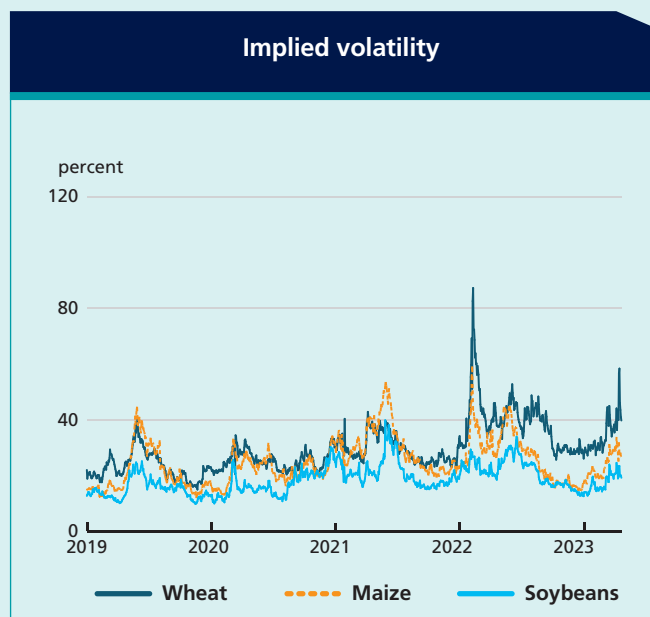
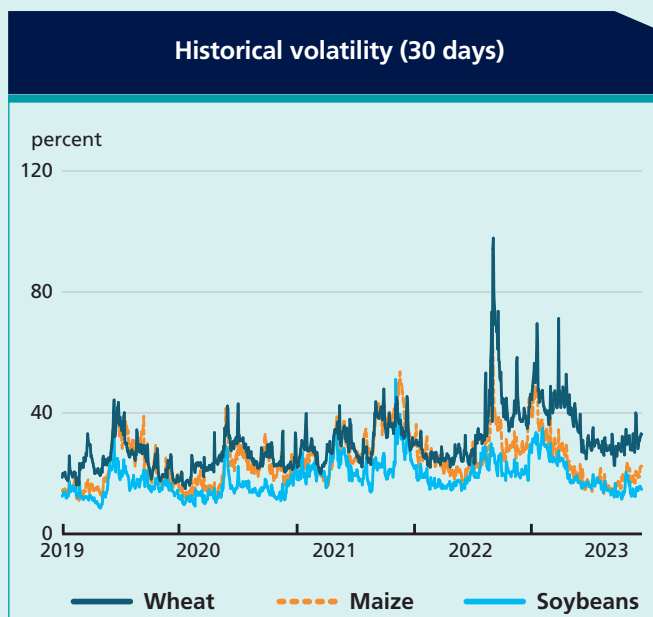
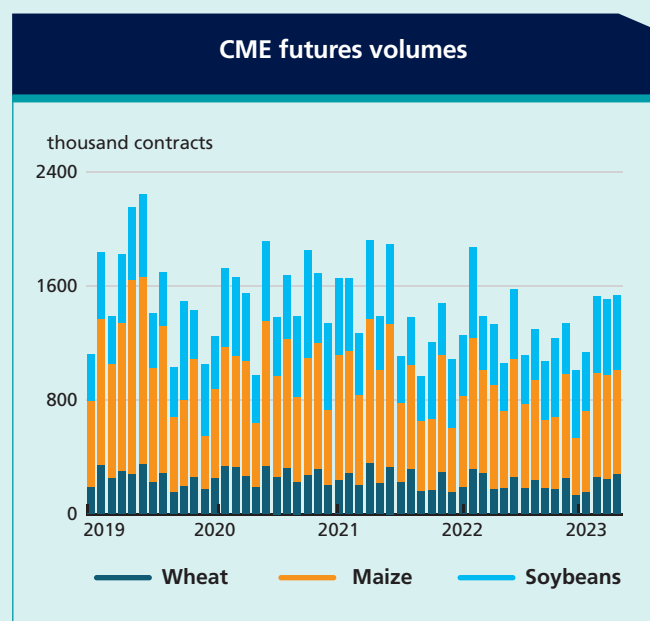
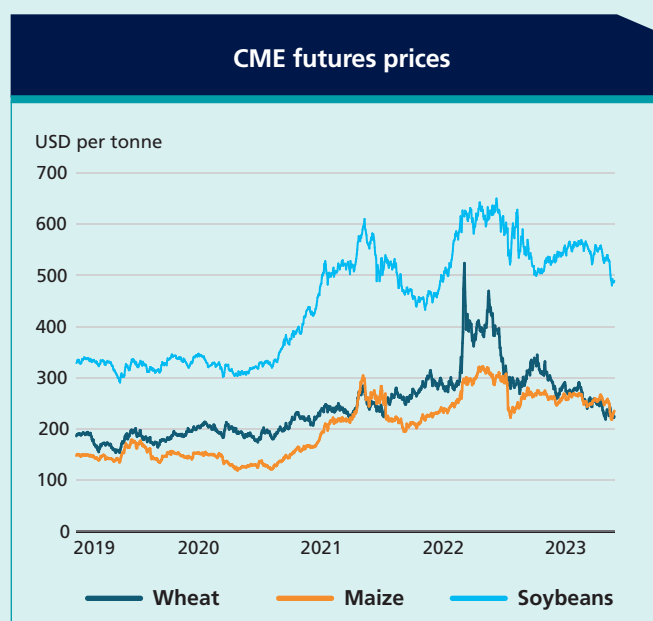
Alexis Poullain

PRICES

Futures prices of grains and soybeans have been in retreat since the beginning of 2023, indicating a significant easing of tensions in the wheat, maize and soybean markets. Notably, prices for nearby delivery of Chicago wheat have fallen below USD 230 per tonne for the first time in over two years. Maize prices are currently hovering around USD 240 per tonne, lower than the levels seen in January 2022 before the outbreak of the war in Ukraine. The downward pressure on wheat and maize persists, primarily due to the continuation of the Black Sea Grain Initiative (BSGI),

which has ensured a consistent flow of Ukrainian wheat and maize to export markets since July 2022. The BSGI has further contributed to the availability of ample volumes of competitively-priced old-crop wheat from the Russian Federation and other Black Sea exporters. Meanwhile, soybean prices in Chicago were trading around USD 490 per tonne, influenced by the record-setting soybean harvest in Brazil and the continued robust demand from soy crushers in Asia and in the United States of America (United States).

In addition to these factors, the overall financial market conditions remain somewhat subdued. The prevailing



narrative has shifted from perceiving inflation as “transitory” to viewing it as “sticky,” prompting central banks to consider further interest rate hikes despite the inherent risk of banking crises. At the same time, ongoing debt negotiations in the United States and the persistent spectre of recession have contributed to a general climate of economic uncertainty. These dynamics bolster the United States dollar index and put downward pressure on international prices of agricultural commodities. Although grain and soybean prices have retreated since the beginning of the year, they remain at higher levels than their respective averages of the past five years. While ending stocks appear sufficient to facilitate the transition to the new crops, the delicate supply-demand balance only allows a limited room for weather or geopolitical disruptions.

VOLATILITY

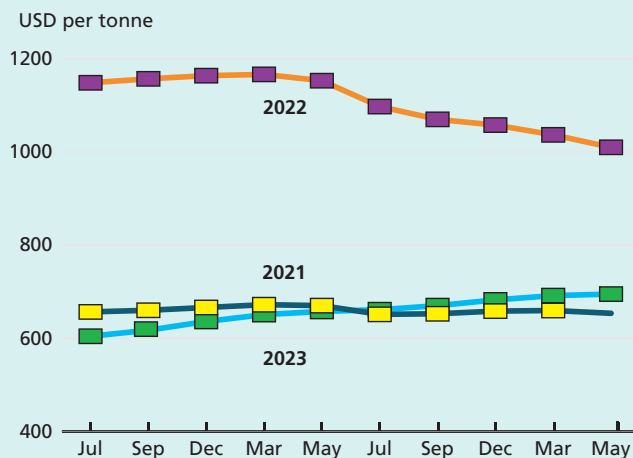
The heightened volatility in grain and soybean prices after the start of the war in Ukraine eventually subsided. Prices realigned within their historical range and returned to more stable levels, with 30-day historical volatility in maize and soybeans below 20 percent. In the case of wheat, historical volatility rebounded slightly in the past semester but remained relatively low, below 30 percent. Nevertheless, it is worth noting that implied volatility, measured by the level of option prices, exhibited bursts during the last semester, suggesting that the current price equilibrium is highly unstable. Market participants continue to factor in a risk premium due to the geopolitical tensions in the Black Sea region and the potential impact of existing or likely crop damage stemming from the highly likely occurrence of an El Niño event. As long as risks fail to materialize or diminish, maize, soybean and wheat prices and volatility will continue to trend lower, but any shock has the potential to revive the magnitude of price changes.

VOLUMES AND OPEN INTEREST

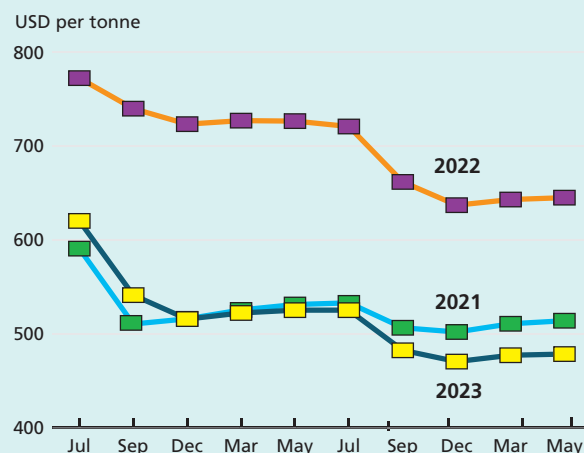
Despite a noticeable rebound in trade activity since the beginning of the year, trading volumes and open interest remained subdued for all three agricultural futures on the Chicago Mercantile Exchange (CME) compared to the average of the last five years. From January to April 2023, trading volumes decreased by approximately 9 percent for maize and 5 percent for wheat, while they rebounded by 10 percent for soybeans. The decline in open interest, representing the number of outstanding contracts, also reflects a muted interest in grain and oilseed positioning,

Forward curves snapshots as of May 2020, 2021 and 2022

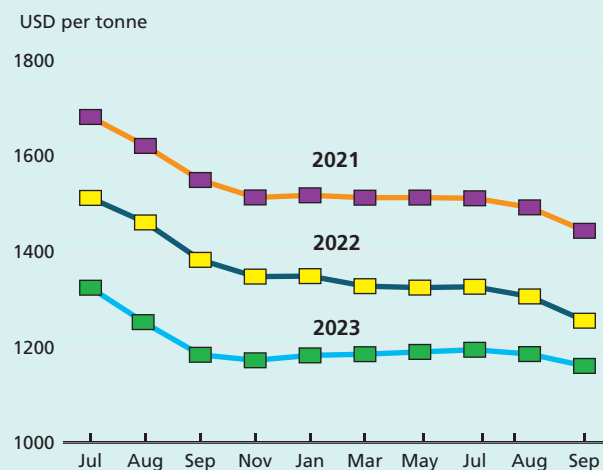
Wheat



Maize



Soybeans



as the cumulative open interest for wheat, maize and soybeans returned to levels seen in 2014. The environment of high working capital constraints, due to large margin calls, led commercial and financial participants to reduce the duration and size of their positions.

Trading volumes and open interest remained comparatively stable on Euronext, which is the European contract most commonly considered as an adjacent benchmark for Black Sea markets, making it well suited to hedge price risks in the current context.

FORWARD CURVES

Wheat exhibits a classic grain market configuration known as contango, where far-dated contracts reflect storage costs and are priced higher than spot prices. The contango illustrates the premium rewarded by the market for storage, as demand for the United States wheat is muted both domestically and on the international stage, thereby increasing storage needs.

By contrast, there is a sharp inversion, or backwardation, on the maize and soybean forward curves. Prices for succeeding delivery months are lower than for nearby or spot months, encouraging sellers to draw down their stocks. This configuration reflects the local situation in the United States, where, despite recent cancellations of purchases from China, there is high replacement demand from United States crushers in the context of expanding biodiesel production capacity.

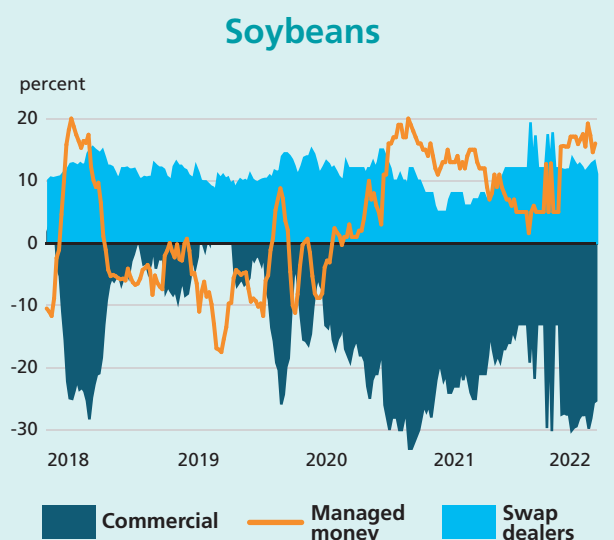
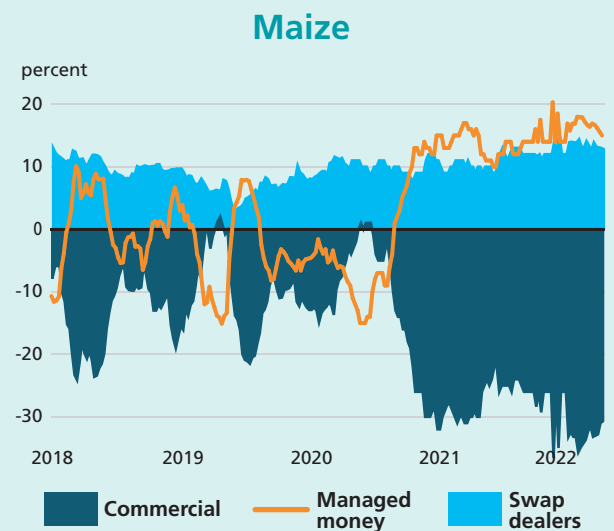
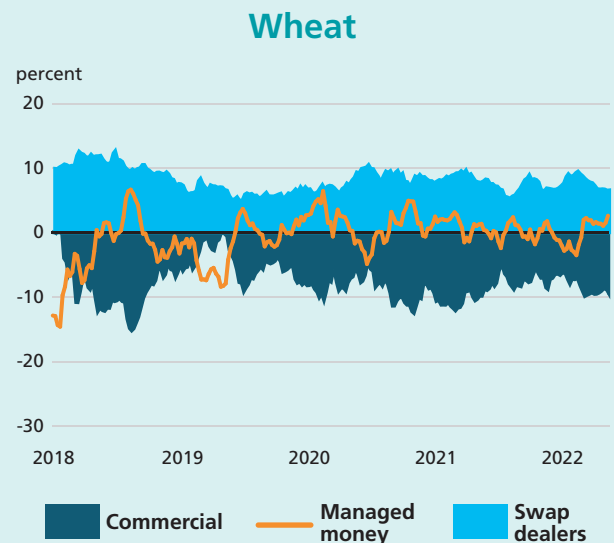
INVESTMENT FLOWS

The overall downward trend in the agricultural commodity space has been unattractive to financial investors since the beginning of 2023. Money managers have significantly reduced their net long position in the Chicago Board of Trade (CBOT) maize and soybean futures, establishing their least bullish stance since November 2021.

The net short position of money managers in CBOT wheat futures and options reached another five-year low in May this year, reflecting their bearish perspective on the market.

Although the position holdings of financial investors are at a low ebb, the notion that they are to blame for the recent price shock has returned to the forefront. Recent initiatives, particularly in the European Union, for additional regulations to govern commodity derivatives market participants are worth monitoring.

CME net-length as % of open interests (Jan 2018 - May 2022)



Ocean freight rates

International Grains Council (IGC)

OCEAN FREIGHT MARKET (NOV 2022 – MAY 2023)

Lingering uncertainty about global economic prospects amid high inflationary pressures in many countries, coupled with the ongoing war in Ukraine, have impacted the dry bulk freight complex during the past six months. The period featured two-sided trends in timecharter rates as demonstrated by the benchmark Baltic Dry Index (BDI). With generally lacklustre charterer interest, compounded by a holiday-related slowdown in activity, the composite indicator initially receded to levels last seen during the onset of the COVID-19 pandemic in early 2020. Markets rebounded strongly in mid-February, boosted by an improved economic outlook for China – the world's key importer of dry bulk products – and by prospects of record maize and soybean crops in Brazil, a major exporter. However, the upswing had stalled by mid-March amid broad-based recessionary fears, with the BDI in late May only modestly higher than six months ago. Notably, the uptick masked mixed changes across vessel segments as a sizable increase in average Capesize rates contrasted with moderate losses in the grains- and oilseeds-carrying segments. Despite divergent trends, vessel earnings across all bulker sizes were assessed to be sharply lower year-on-year, while the BDI was less than one-half of its level in the previous year.

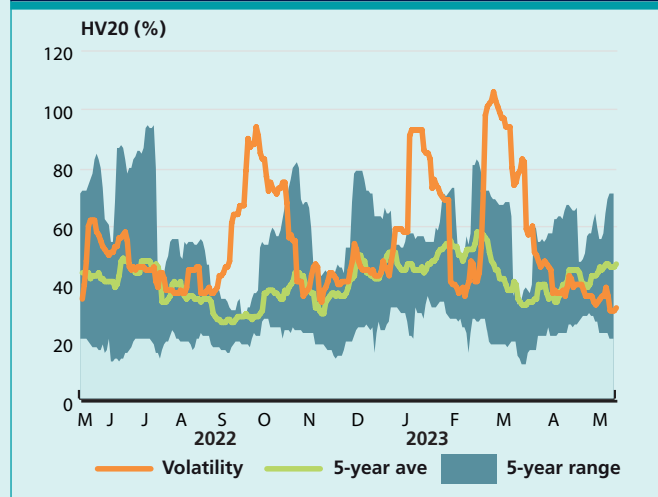
On the vessel supply side, observers noted a larger net expansion of the dry bulk fleet in the first quarter of 2023

Summary of dry bulk freight markets

	24 May 2023	Changes	
		6 months	y/y
		%	
Baltic Dry Index (BDI)*	1295	+ 4%	- 60%
<i>Sub-indices:</i>			
Capesize	1930	+ 39%	- 55%
Panamax	1184	- 19%	- 64%
Supramax	1014	- 14%	- 64%
<i>Baltic Handysize Index (BHSI)**</i>	600	- 20%	- 64%
IGC Grains and Oilseeds Freight Index (GOFI)***	132	- 11%	- 44%

Source: Baltic Exchange, IGC. * 4 January 1985 = 1000. ** 23 May 2006 = 1000. *** 1 January 2013 = 100.

Volatility in Baltic Dry Index (HV20) 24 May 2022 - 24 May 2023



Note: Historical volatility, as measured by the standard deviation (%) of daily quotation movements over a 20-day window (HV20).

Sources: Baltic Exchange, IGC calculations.

compared to the same period last year – a potentially bearish market development. Nonetheless, some market participants pointed to a likely upside for freight rates in the medium-term, as new emissions-related requirements, which formally entered into force on 1 January 2023, are expected to tighten vessel supply and lead to slower bulker speeds, while also giving rise to additional compliance costs.

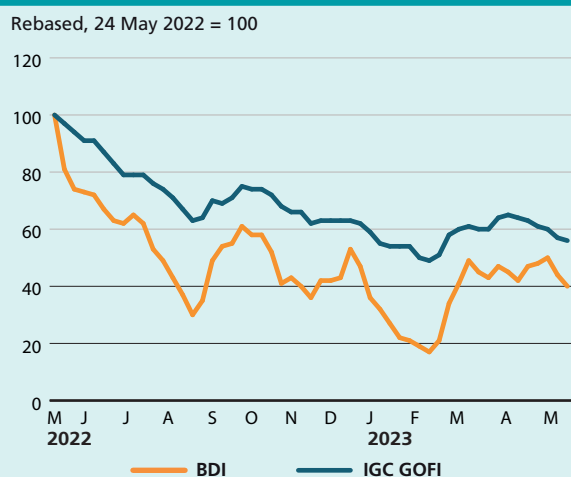
In recent logistics-related developments, Brazil was faced with increased pressure on inland and port logistics during the soybean harvest in early 2023, which was compounded by rain-related shipping delays. Some bottlenecks were also reported for imports at Chinese ports as the country ramped up cargo inspections.

In other regions, challenging logistics in the Black Sea were reportedly exacerbated after the turn of the year, as the move by some reinsurers to limit their coverage for dispatches out of the Russian Federation and Ukraine led to a sharp rise in insurance premiums.

The cost of voyages across the key grains and oilseeds routes (including marine fuel and other related charges) have eased since late November, as evidenced by a net 11 percent drop in the International Grains Council (IGC)'s Grains and Oilseeds Freight Index (GOFI), which tracks nominal freight rates across seven main origins.

The Capesize sector was typically volatile during the past six months. With ongoing demand seen as insufficient

BDI and IGC GOFI 24 May 2022– 24 May 2023



Note: IGC Grains and Oilseeds Freight Index, constructed based on nominal freight rates on major grains/oilseeds routes using trade-weighted approach. Source: Baltic Exchange, IGC

to absorb available tonnage, vessel earnings extended late 2022 weakness into the new calendar year, but the market rallied in February, however, as news of the relaxation of COVID-19-related restrictions in China prompted hopes for a recovery in demand for heavy raw materials, including iron ore. Additionally, the removal of limitations on coal shipments from Australia to China was expected to generate additional demand for bulk carriers.

While fresh business out of the northern Atlantic also proved supportive of freight rates, movements in the Capesize sub-Index have been somewhat choppy since mid-March, as a ramping up of activity in China fell short of expectations, with reports of mounting domestic steel stockpiles and increasing port inventories of iron ore in the first quarter of the year termed bearish for the largest carriers. This was paired with mid-April reports of the cyclone-induced closure of Australia's Hedland Port – the world's largest iron ore export hub. Nevertheless, a continued upturn in coal and iron ore shipments from Australia was noted in recent weeks, coupled with new deals for shipments from Brazil and West Africa.

Panamax rates have declined by around one-fifth since late November. Similar to the Capesize segment, average sector earnings experienced losses through February 2023 as a result of lacklustre demand for minerals in the Atlantic. Buoyant trading in the Pacific, including coal-related business out of Indonesia, aided a subsequent market reversal, with strong demand for grains dispatches from Australia playing an important supportive role, although the pace of shipments has reportedly slowed in recent weeks as Asian importers eyed declining offers in the Black Sea region.

Baltic Capesize Index 24 May 2022– 24 May 2023



Source: Baltic Exchange

Recent trade statistics for China indicate mixed trends across various commodities: while data for April showed a year-on-year upturn in coal arrivals, soybean deliveries over the same period fell short of expectations, estimated to be 10 percent lower year-on-year, with customs-related delays and increased port inspections cited as the main reasons for the drop.

Grains and oilseeds-related developments across the Atlantic Basin have been mixed since the turn of the year as traders experienced a drop in grains and oilseeds trading out of Argentina amid weather-induced production losses while strong grains and soyabean dispatches were reported from Brazil – the latter underpinned by a record domestic harvest. Operators also noted some rain-related shipping delays from Brazil during the early stages of the

Grains and oilseeds carrying sectors: Panamax and Supramax sub-Indices and Handysize Index 24 May 2022– 24 May 2023



Source: Baltic Exchange

harvest, with a backlog of vessels reported at the key port of Paranagua.

Markets for smaller bulkers also displayed two-sided trends amid variable levels of activity in the main loading areas. Subdued trading at the US Gulf weighed on Supramax rates at times, as did variable demand in the Black Sea region, but there was brisker activity out of the Pacific, which buoyed voyage rates on grains and oilseeds routes in the US Pacific Northwest and Australia. Values also drew support from brisk Indonesian coal loadings, notably for China and India, although mining operations and inland transportation in Indonesia were reportedly interrupted by recent heavy rains and landslides. Net declines in Handysize freight rates were largely tied to limited activity in Europe and the Mediterranean – the key regions for this vessel size.

Summary of freight rates on selected routes

USD/t	Cargo / Discharge	24 May 2023	Changes	
			6 months	y/y %
United States of America (Gulf) to:				
China (Dalian)	66 000 / 8 000	46	-8	-41
European Union (Rotterdam)	66 000 / 10 000	22	-15	-49
Japan (Yokohama)	66 000 / 8 000	44	-8	-41
Canada (St. Lawrence) to:				
China (Dalian)	66 000 / 8 000	44	-8	-42
European Union (Rotterdam)	66 000 / 10 000	15	-17	-52
Japan (Yokohama)	66 000 / 8 000	42	-8	-42
Argentina (Up river) to:				
Algeria (Belaja)	25 500 / 2 500	39	-19	-48
Egypt (Alexandria)	49 000 / 6 000	34	-15	-46
European Union (Rotterdam)	66 000 / 10 000	27	-16	-50
Brazil (Santos) to:				
China (Dalian)	66 000 / 8 000	41	-9	-45
European Union (Rotterdam)	66 000 / 10 000	22	-17	-52
Republic of Korea (Inchon)	66 000 / 7 250	40	-9	-45
European Union (France, Rouen) to:				
Algeria (Belaja)	25 500 / 2 500	20	-12	-47
Egypt (Alexandria)	49 000 / 6 000	20	-14	-48
Morocco (Casablanca)	25 500 / 3 000	18	-11	-46
Russian Federation (Novorossiysk) to:				
Egypt (Alexandria)	49 000 / 6 000	18	-20	-45
Morocco (Casablanca)	25 500 / 3 000	22	-15	-51
Tunisia (Bizerte)	25 500 / 2 500	19	-16	-52
Australia (Kwinana) to:				
China (Dalian)	66 000 / 8 000	18	-13	-55
Indonesia (Jakarta)	49 000 / 8 000	15	-6	-58
Republic of Korea (Inchon)	66 000 / 7 250	17	-13	-57

Note: Nominal ocean freight rates for HSS (heavy grains, soybeans, sorghum) cargoes. Values do not represent market fixtures.

Source: IGC

Global food import bill

Josef Schmidhuber and
Bing Qiao

A new record high, but also a marked slowdown in growth is expected for 2023.

The global food import bill (FIB) is forecast to reach USD 1.98 trillion in 2023, representing a 1.5 percent or USD 28.9 billion increase over the previous record, which was attained in 2022. While marking a new absolute high, the speed of expansion is anticipated to slow down significantly relative to 2022 and 2021, when growth rates reached 11 percent and 18 percent, respectively (Figure 1, Table 1).

From a food group perspective, the divergent trends observed in 2022 are expected to persist in 2023. Overall, high-income countries (HICs) are anticipated to import a wide spectrum of food products, whereas upper-middle income countries (UMICs), lower-middle income countries (LMICs) and low-income countries (LICs) will focus their imports on staple foods.

A combination of price and volume effects is expected to drive the FIBs in 2023

Disaggregating FIBs to ascertain the price and volume effects of changes in expenditures at the global level and across all products, the anticipated increase in the 2023 bills reflects a combination of both, with an additional USD 18.4 billion stemming from higher international prices and USD 12.9 billion from higher volumes¹ (Table 2). For fruits and vegetables, cereals², sugar and dairy products, the increase will primarily be price-driven, while growth in oilseeds is expected to be mostly volume-driven. For vegetable oils, higher volumes are more than offset by a negative price effect, resulting in an overall decline in their global FIB.

Vulnerable countries are likely to see contractions in their food imports

Disaggregating the global FIB by country groups suggests that the more vulnerable groups, notably the least-developed countries (LDCs) and the net food-importing developing countries (NFIDCs), will see their food import

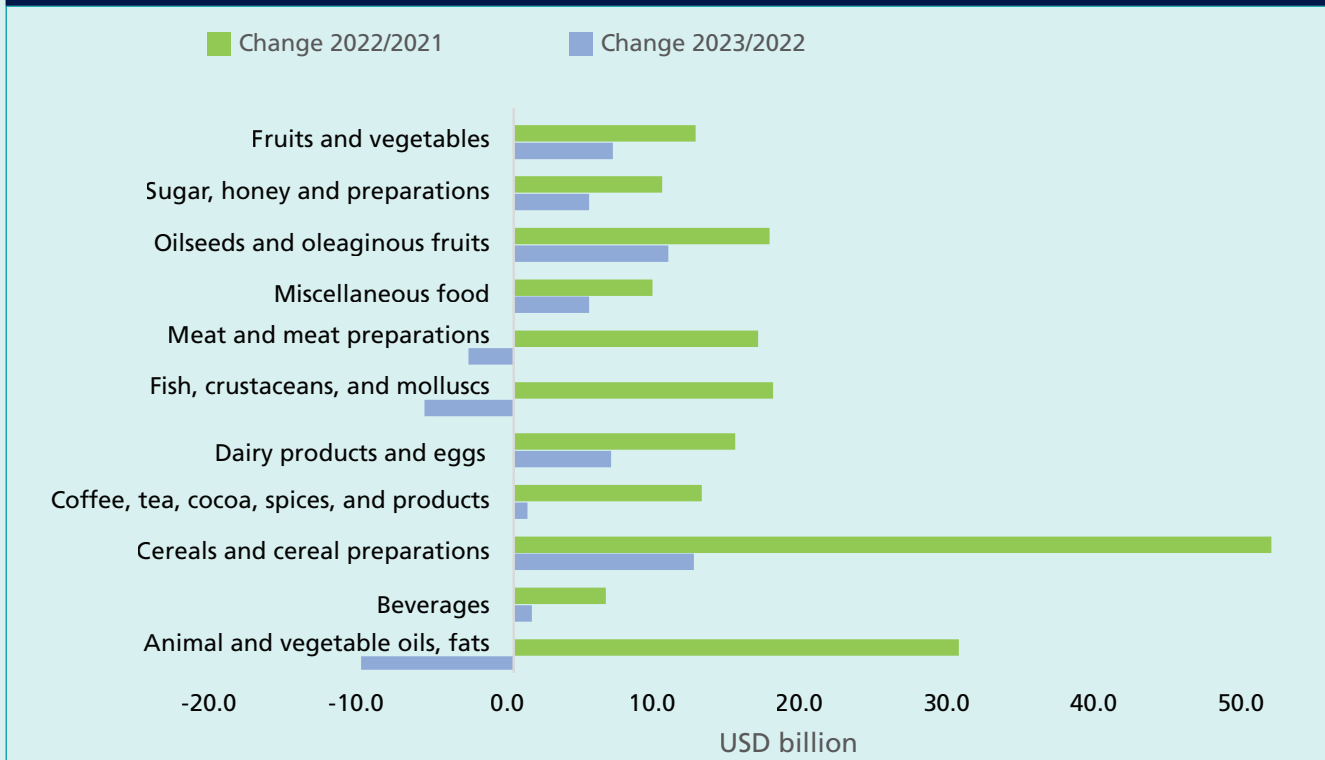
bills contract by 1.5 percent and 4.9 percent, respectively. The decline in food import volumes is a concerning development in both groups, suggesting a decline in purchasing capacity. These concerns are amplified by the fact that lower international prices for a number of primary food items have not, or at least not fully, translated into lower prices at the domestic retail level, suggesting that cost-of-living pressures could persist in 2023.

Turning to related policy measures, pressures on the most vulnerable countries have been mitigated by targeted support instruments, notably the “Food Shock Window” of the International Monetary Fund (IMF). This programme was initiated by FAO’s proposal for a Food Import Financing Facility (FIF) in April 2022. Countries benefiting from the Food Shock Window include, inter alia, Haiti (USD 105 million), Guinea (USD 71 million), South Sudan (USD 113 million) and Malawi (USD 88 million).

¹ There is a negative “mixed effect” of USD 2.4 billion in the overall change in the global FIB. This explains the difference between the overall increase in the global FIB of USD 28.9 billion and the sum of the price and quantity effect of USD 18.4 billion plus USD 12.9 billion.

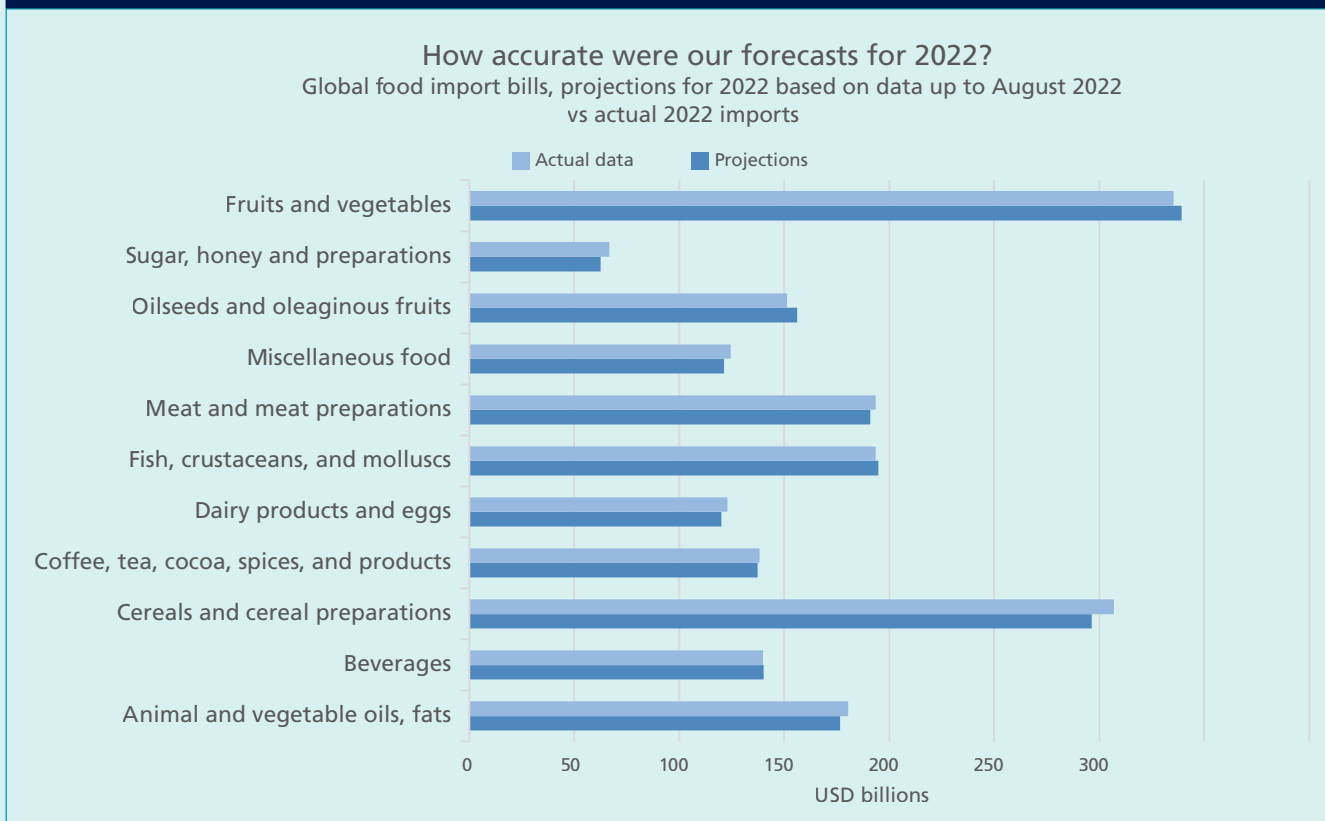
² The positive price effect for cereal imports in 2023 is driven by higher international rice prices, already experienced and further anticipated for 2023.

Figure 1. Changes in the world food import bill by food group



Note: Forecasts are based on data from January 2023 to February 2023
 Source: FAO (EST) and Trade Data Monitor (TDM), authors' calculations

Figure 2. How accurate were our forecasts for 2022?



Source: FAO (EST) and Trade Data Monitor (TDM), authors' calculations

Table 1. Import bills of total food and food products by region (USD billion)

	World				LDCs				NFIDCs				SSA			
	2020	2021	2022	2023*	2020	2021	2022	2023*	2020	2021	2022	2023*	2020	2021	2022	2023*
Animal and vegetable oils, fats	103.0	150.1	180.4	170.0	5.8	8.1	8.6	7.7	12.6	18.8	21.5	17.5	6.1	8.0	9.3	6.7
Beverages	113.3	133.8	140.0	141.2	1.7	1.7	1.8	1.7	3.1	4.0	4.6	4.6	2.1	2.8	3.1	3.2
Cereals and cereal preparations	207.2	255.5	307.0	319.2	13.1	16.8	19.7	20.6	35.0	41.2	53.3	49.5	17.0	19.5	21.8	21.5
Coffee, tea, cocoa, spices, and products	112.5	125.5	138.3	139.2	1.2	1.5	1.7	1.5	4.8	5.4	6.0	5.8	1.5	1.7	1.7	1.7
Dairy products and eggs	95.7	107.9	123.0	129.6	1.6	1.9	2.1	1.9	5.6	6.1	7.1	6.9	2.3	2.6	2.8	2.7
Fish, crustaceans, and molluscs	151.9	175.9	193.6	187.5	1.1	1.4	1.5	1.5	5.0	5.2	5.5	5.6	3.7	4.5	4.7	4.8
Meat and meat preparations	159.7	177.0	193.6	190.5	1.6	2.3	2.9	3.1	6.6	6.6	7.8	7.6	2.7	3.2	3.3	3.2
Miscellaneous food	103.9	115.3	124.7	129.8	3.5	4.0	4.1	4.1	7.7	8.8	9.7	9.7	4.2	4.9	5.0	5.0
Oilseeds and oleaginous fruits	102.5	134.0	151.3	161.8	0.6	1.8	2.0	1.5	7.5	10.2	9.8	9.7	0.2	0.3	0.3	0.3
Sugar, honey and preparations	49.5	56.8	66.9	72.0	3.6	4.3	5.0	4.8	6.5	8.0	9.0	9.7	3.7	4.3	4.3	4.5
Fruits and vegetables	294.9	323.2	335.5	342.2	4.0	4.4	4.8	5.0	11.0	11.9	12.8	13.2	2.9	3.1	3.3	3.2
Total	1 494.1	1 755.0	1 954.2	1 983.2	37.9	48.3	54.1	53.3	105.4	126.4	147.1	139.9	46.4	54.9	59.7	56.9
	HIC				UMIC				LMIC				LIC			
	2020	2021	2022	2023*	2020	2021	2022	2023*	2020	2021	2022	2023*	2020	2021	2022	2023*
Animal and vegetable oils, fats	50.8	69.7	90.3	88.1	24.8	35.6	37.7	35.0	25.2	41.3	48.6	43.7	2.2	3.5	3.8	3.2
Beverages	91.7	106.6	111.6	111.5	16.2	20.3	20.4	21.5	4.7	6.0	6.9	7.2	0.6	0.9	1.1	1.0
Cereals and cereal preparations	104.0	118.9	147.1	155.5	45.6	67.0	73.6	81.2	51.0	60.9	76.9	72.3	6.7	8.7	9.4	10.2
Coffee, tea, cocoa, spices, and products	86.4	95.0	106.4	105.6	16.0	18.8	18.9	20.1	9.4	10.9	12.2	12.6	0.6	0.8	0.8	0.9
Dairy products and eggs	65.3	72.2	84.5	91.1	20.4	24.2	24.6	25.3	9.2	10.5	12.8	12.2	0.8	1.0	1.1	1.0
Fish, crustaceans, and molluscs	115.9	134.6	145.2	139.1	27.2	31.0	37.7	37.5	8.0	9.3	9.5	9.7	0.8	1.0	1.1	1.1
Meat and meat preparations	106.4	117.2	130.7	127.5	44.4	49.0	50.0	51.6	8.1	9.6	11.7	10.3	0.9	1.1	1.2	1.2
Miscellaneous food	65.4	72.4	78.5	82.1	25.8	27.9	30.1	32.0	10.9	12.6	13.8	13.4	1.9	2.4	2.3	2.4
Oilseeds and oleaginous fruits	31.0	38.9	47.7	48.4	58.0	77.1	84.9	95.0	13.4	17.8	18.5	18.3	0.0	0.2	0.2	0.1
Sugar, honey and preparations	27.0	30.6	35.8	40.4	9.2	10.6	13.2	13.4	11.7	13.1	15.9	15.6	1.6	2.4	2.1	2.6
Fruits and vegetables	217.3	232.7	238.6	243.6	49.7	58.3	62.7	65.2	26.2	30.3	32.1	31.2	1.6	1.9	2.1	2.3
Total	961.2	1 088.9	1 216.5	1 232.9	337.4	420.0	453.9	477.8	177.9	222.3	258.9	246.6	17.6	23.9	25.0	25.9

Note: Forecasts are based on data from January 2023 to Feb 2023

Source: FAO (EST) and Trade Data Monitor (TDM), authors' calculations

Table 2. Decomposition of changes in food product bills for global aggregates, 2023 over 2022

Food group	World				LDCs				NFIDCs				SSA			
	Price effect	Volume effect	Mixed effect	Observed change	Price effect	Volume effect	Mixed effect	Observed change	Price effect	Volume effect	Mixed effect	Observed change	Price effect	Volume effect	Mixed effect	Observed change
	----- USD billion ----->															
Animal and vegetable oils, fats	-19.3	10.6	-1.7	-10.4	-1.2	0.4	-0.1	-0.9	-3.9	0.0	-0.1	-4.0	-1.7	-1.1	0.2	-2.6
Beverages	1.2	0.1	0.0	1.2	0.0	-0.1	0.0	-0.1	0.1	-0.1	0.0	0.0	0.1	0.0	0.0	0.1
Cereals and cereal preparations	11.4	0.9	-0.1	12.2	0.1	0.7	0.0	0.9	-1.2	-2.6	0.0	-3.8	-0.3	0.0	0.0	-0.3
Coffee, tea, cocoa, spices, and products	2.0	-1.0	-0.1	0.9	0.0	-0.3	0.0	-0.2	0.0	-0.1	-0.1	-0.2	0.0	-0.1	0.0	-0.1
Dairy products and eggs	4.5	2.2	0.0	6.6	-0.1	-0.2	0.0	-0.2	0.0	-0.2	0.0	-0.2	-0.1	0.0	0.0	0.0
Fish, crustaceans, and molluscs	-1.2	-4.7	-0.2	-6.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1
Meat and meat preparations	-3.5	0.4	0.0	-3.1	0.0	0.2	0.0	0.1	-0.5	0.4	0.0	-0.2	-0.1	0.1	0.0	0.0
Miscellaneous food	5.6	-0.4	-0.1	5.1	0.0	0.0	0.0	0.0	0.3	-0.3	0.0	0.0	0.0	-0.1	0.0	0.0
Oilseeds and oleaginous fruits	-0.3	10.7	0.0	10.5	0.0	-0.3	-0.1	-0.4	0.1	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.0
Sugar, honey and preparations	5.2	0.0	0.0	5.1	0.3	-0.5	0.0	-0.1	0.4	0.3	0.0	0.7	0.1	0.1	0.0	0.2
Fruits and vegetables	12.9	-5.9	-0.2	6.7	0.1	0.1	0.0	0.2	0.5	0.0	0.0	0.4	0.2	-0.2	0.0	-0.1
Total	18.4	12.9	-2.4	28.9	-0.7	0.1	-0.2	-0.8	-4.2	-2.8	-0.2	-7.2	-1.7	-1.2	0.1	-2.7
Food group	HIC				UMIC				LMIC				LIC			
	Price effect	Volume effect	Mixed effect	Observed change	Price effect	Volume effect	Mixed effect	Observed change	Price effect	Volume effect	Mixed effect	Observed change	Price effect	Volume effect	Mixed effect	Observed change
	----- USD billion ----->															
Animal and vegetable oils, fats	-7.6	6.0	-0.6	-2.2	-4.4	2.2	-0.5	-2.7	-6.8	2.6	-0.7	-4.9	-0.6	0.0	0.0	-0.6
Beverages	0.9	-1.0	0.0	-0.2	0.3	0.8	0.0	1.1	0.0	0.3	0.0	0.3	0.0	-0.1	0.0	-0.1
Cereals and cereal preparations	9.4	-0.9	-0.1	8.4	3.9	3.7	0.1	7.6	-1.8	-2.9	0.0	-4.6	-0.2	1.0	0.1	0.8
Coffee, tea, cocoa, spices, and products	1.2	-1.9	-0.1	-0.7	0.4	0.7	0.0	1.2	0.4	0.1	0.0	0.5	0.0	0.0	0.0	0.0
Dairy products and eggs	4.5	2.0	0.1	6.6	0.2	0.6	-0.1	0.7	-0.3	-0.3	0.0	-0.6	0.0	-0.1	0.0	-0.1
Fish, crustaceans, and molluscs	-0.3	-5.7	-0.1	-6.1	-0.6	0.5	-0.2	-0.2	-0.1	0.3	0.0	0.2	0.0	0.1	0.0	0.1
Meat and meat preparations	-1.7	-1.6	0.0	-3.2	-1.5	3.2	0.0	1.6	-0.4	-1.1	0.0	-1.4	0.0	0.0	0.0	-0.1
Miscellaneous food	4.3	-0.7	-0.1	3.6	1.0	0.9	0.0	1.9	0.2	-0.6	0.0	-0.4	0.1	0.0	0.0	0.1
Oilseeds and oleaginous fruits	-0.2	0.9	0.0	0.7	0.2	9.7	0.1	10.1	-0.3	0.1	-0.1	-0.3	0.0	0.0	0.0	0.0
Sugar, honey and preparations	4.4	0.2	0.0	4.6	0.6	-0.4	0.0	0.2	0.0	-0.2	0.0	-0.3	0.2	0.4	0.0	0.6
Fruits and vegetables	12.3	-7.0	-0.4	4.9	1.0	1.4	0.1	2.4	-0.5	-0.4	0.0	-0.9	0.1	0.1	0.0	0.2
Total	27.3	-9.7	-1.2	16.4	1.1	23.3	-0.4	23.9	-9.5	-1.9	-0.9	-12.3	-0.4	1.2	0.1	0.9

Note: Forecasts are based on data from January 2023 to Feb 2023

Source: FAO (EST) and Trade Data Monitor (TDM), authors' calculations

Food price indices

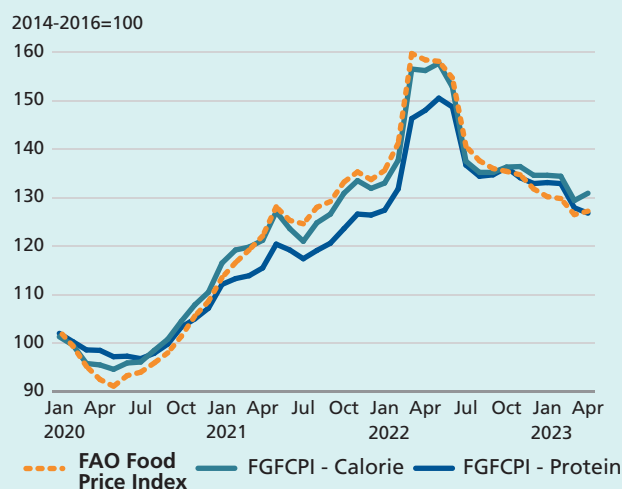
The FAO Global Food Consumption Price Indices¹

The **FAO Global Food Consumption Price Indices (FGFCPIs)**² track monthly changes in the international prices of a basket of food commodities. The FGFCPIs include the five food commodity groups that comprise the FAO Food Price Index (FFPI) as well as oilseeds and fish among their components. Aside from a broader commodity coverage, the FGFCPIs differ from the FFPI in that they weigh the individual commodity groups that compose them by their respective contributions to average global caloric intake (Calorie-base FGFCPI) or to average protein uptake (Protein-base FGFCPI) during the 2014–2016 base period. These weights are derived from the FAO food balance sheets (FBS) (<http://www.fao.org/faostat/en/#data/FBS>).

The **Protein-base FGFCPI** averaged 126.8 points in April 2023, down 5.9 percent from its September 2022 level and essentially in line with the April 2023 average of the FFPI. The decline of the Protein-base FGFCPI since September has been spearheaded by faltering wheat and dairy product quotations, which shed 15.3 and 14.1 percent of their respective values over this period. Nonetheless, quotations of most commodities encompassed by the Protein-base FGFCPI have tended to ease, with the notable exception of rice and fish prices, which have strengthened by 12.1 and 18.6 percent, respectively, since September. These tendencies put the April 2023 value of the Protein-base FGFCPI 14.3 percent below its near-record level of April 2022, but still 24.3 percent above its value in January 2020.

The **Calorie-base FGFCPI** has also eased since September 2022, driven primarily by the 15 percent decline that international wheat and vegetable oil prices have both registered since that time. However, the Calorie-base FGFCPI has exhibited more resistance to downward pressure than the Protein-base FGFCPI and the FFPI. In April 2023, it averaged 130.9 points, down just 3.2 percent from its September 2022 level and still 29.2 percent above its value at the start of 2020. This relative resilience has largely to do with the weights of the components of the various indices. Among the various commodities covered by the indices, although wheat and meat overshadow rice in terms of their importance as a global source of protein, rice makes the largest single contribution to world energy consumption, contributing nearly a quarter of global calories during 2014–2016. Hence, the recent strength

The FAO Global Food Consumption and Food Price Indices (Jan 2020 – Apr 2023)



of international rice quotations has been more visible in the Calorie-base FGFCPI relative to its sister indices. Sugar, which does not constitute a source of protein and has its weight – like that of rice – eclipsed by those of higher-valued commodities such as meat and dairy products in the FFPI, has also contributed to the greater tenacity of the Calorie-base FGFCPI. Indeed, sugar prices have registered particularly pronounced increases in recent months, in April 2023 positioned them as much as 36.2 percent above their September 2022 levels.

Recent developments in international food prices

The **FAO Food Price Index**³ (FFPI) averaged 124.3 points in May 2023, down 3.4 points (2.6 percent) from April and as much as 21.3 percent below its corresponding value a year ago. After reaching an all-time high value in March 2022, the FFPI had fallen 35.4 points (21.3 percent) by May this year, reflecting steep declines in the international prices of vegetable oils and grains and a moderate drop in meat prices. Meanwhile, world sugar prices continued their upward trajectory starting in November last year.

The **FAO Vegetable Oil Price Index** has been in decline almost without interruption since reaching a historic high in

¹ All changes referred to in this section, in absolute or percentage terms, are calculated based on unrounded figures.

² The FAO Global Food Consumption Price Indices are published twice a year in *Food Outlook*.

³ The FAO food price index and its sub-indices are updated on a monthly basis and are available on: <http://www.fao.org/worldfoodsituation>

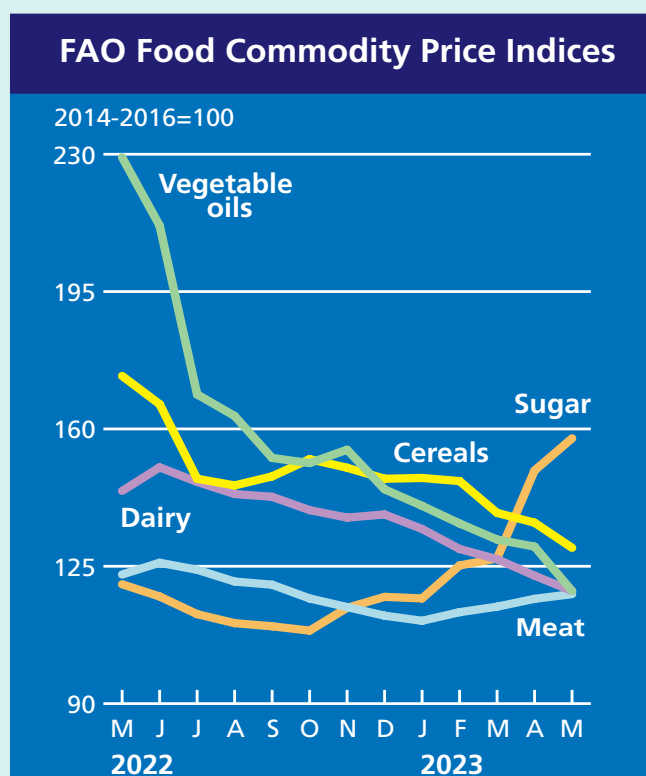
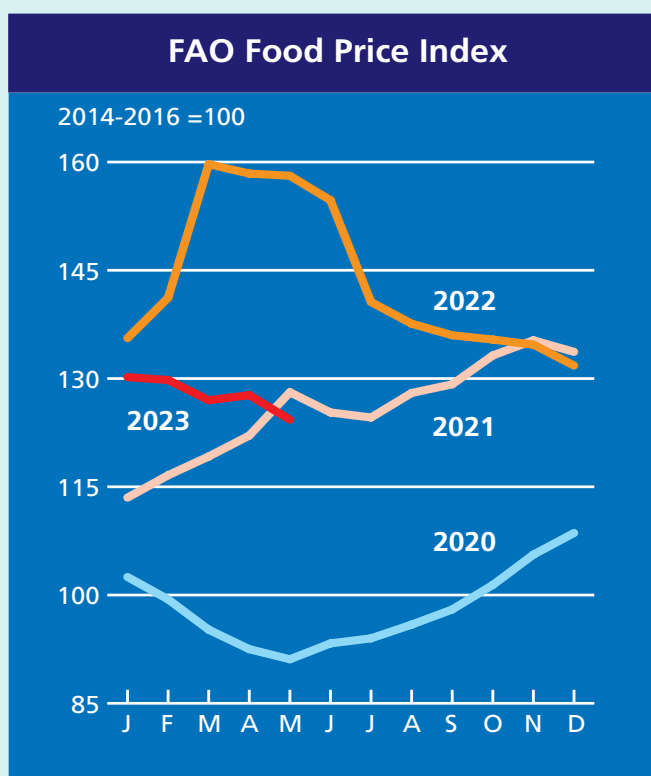
March 2022, mainly due to a marked fall in international palm oil prices caused by relaxed export restrictions by Indonesia that increased export availabilities, combined with a weak global demand amid substantially higher import costs, including for transportation and insurance. World rapeseed and sunflower oil prices also dropped, underpinned by abundant global supplies, benefiting from the Black Sea Grain Initiative (BSGI), which has allowed Ukraine to resume most of its shipments from three Black Sea ports. As for soyoil, notwithstanding persistent and robust demand from the United States of America in support of its biodiesel production, international prices declined, mainly weighed down by increased competition from other oils resulting in a sluggish global import demand. Lower crude oil prices also contributed to the downward pressure by reducing the demand for vegetable oils as a feedstock to produce biofuels.

The **FAO Cereal Price Index** trended downward since reaching its all-time high in May 2022, with the exception of a few short-lived month-on-month increases. International wheat prices have generally decreased since surging to near-record levels in May 2022, driven by improved supply prospects globally and the implementation of the BSGI in July 2022, which has allowed Ukraine to export grains from its Black Sea ports. Since the start of 2023, ample supplies and strong competition among exporters, including the Russian Federation and Australia, underpinned the downward trend in world wheat prices. As of the first week of June 2023, international wheat export prices were down by between 22 percent and

42 percent from their levels a year ago, depending on the type and origin of the wheat. The plentiful global supply forecast in 2023/24, together with fewer trade disruptions and robust competition among exporters, has also lowered wheat futures prices, indicating the continuation of a softer market tone in global wheat markets.

International prices of coarse grains have also declined to their pre-2022 levels. International maize export prices in early June 2023 were down by 18 to 25 percent compared to their values one year ago. International coarse grain prices fell quickly with the reopening of Ukraine's Black Sea ports under the Black Sea Grain Initiative (BSGI) in July 2022, before remaining generally stable for the remainder of 2022. International coarse grain prices began to ease again in early 2023 due to the start of maize harvests in South America, including expectations of a second record output in Brazil and a rebound in production in the United States following a reduced output last year. The expectations for increased export availabilities in the 2023/24 seasons are also behind a 12 percent fall in maize futures prices between January and May 2023.

By contrast, after increasing for the greater part of 2022, international rice prices have remained on an upward trajectory this year. The **FAO All Rice Price Index** averaged 127.8 points in May 2023, up 17.0 percent from its value a year earlier and its highest level since October 2011. Indica and Aromatic prices have spearheaded the price increases registered



since the start of 2023, drawing support from a combination of demand and supply side factors. On the demand side, strong purchases by Asian buyers, often resulting from public efforts to keep domestic prices in check and/or to reconstitute reserves have underpinned quotations. In Pakistan, in the lead up to the country's wheat harvest, local demand for rice was also strong. All the while, exportable availabilities tightened in some major suppliers, due to production disruptions in 2022/23 resulting from poor weather and/or hikes in production costs. In India, where Indica white rice remained subject to a 20 percent export tax, consistently strong government domestic purchases provided further support prices. More recently, concerns over the potential production impacts of an anticipated El Niño phenomenon have also tended to add to the price bullishness. However, the price firmness has not extended to all rice market segments, as both Japonica and Glutinous quotations have eased since the close of 2022.

International sugar prices, as measured by the International Sugar Agreement's daily prices for raw sugar, have trended upwards since the release of the last issue of the Food Outlook report in November 2022, underpinned mainly by a tighter global balance following reduced production expectations in China, the European Union, India, Mexico and Thailand. The slow start of the 2023 harvest in Brazil due to above-average rains, which also raised concerns over the production recovery rate, also sustained the pressure on sugar prices. In addition, the overall appreciation of the Brazilian real against the United States dollar since December 2022 has restrained Brazil's exports and contributed to the increase in world sugar prices. However, the general decline in global crude oil prices since mid-2022 encouraged a greater use of sugarcane for sugar production, limiting the rise in sugar prices.

International dairy prices have trended downward since reaching high levels in June 2022, principally reflecting tepid global demand, especially for spot supplies, notwithstanding generally tight supplies from leading global exporters. Compared to their respective highs reached in March and April 2022, the prices of skim milk powder (SMP) declined the most, followed by whole milk powder (WMP) and butter, primarily driven by a sluggish global import demand, especially from China, the world's largest dairy importer; this was partially compensated by increased imports by countries in the Middle East and Southeast Asia. Market uncertainties stemming from market lockdowns due to the COVID-19 pandemic, weaker national currencies against the United States dollar, and bleak

economic prospects have compounded the price declines. By contrast, international cheese prices generally trended upward until January 2023 –reflecting a persistent import demand, while global supplies remained tight due to limited milk deliveries and solid domestic demand, especially in Western Europe. However, cheese prices began easing in February this year on increased export availabilities amidst seasonally high milk production in the northern hemisphere.

The **FAO Meat Price Index** increased by 6.1 percent between January and May 2023 due to increased prices for pig and bovine meats, with a slight increase in poultry meat. World pig meat prices rose the most due to growing purchases by Asian buyers amidst tight supplies stemming from the impacts of the African swine fever virus among leading producing regions. International quotations for bovine meat have also increased moderately since the beginning of 2023, reflecting increased global import demand amid limited exportable availabilities in several major producers, despite a rise in production in Oceania. Meanwhile, poultry meat prices increased from April 2023 on rising import demand, especially from Asia, reflecting more active food services sales and a better affordability of poultry meat amid tight domestic supplies. On the supply side, global poultry meat supplies remained tight due to widespread outbreaks of highly pathogenic avian influenza virus in leading producing countries. By contrast, ovine meat prices mostly trended downwards, reflecting increased exportable availabilities in Oceania, especially Australia, although import purchases continued to expand.

⁴ Unlike for other commodity groups, most prices utilized in the calculation of the FAO Meat Price Index are not available when the FAO Food Price Index is computed and published; therefore, the value of the Meat Price Index for the most recent months is derived from a mixture of projected and observed prices. This can, at times, require significant revisions in the final value of the FAO Meat Price Index which could in turn influence the value of the FAO Food Price Index.

FAO Food Price Indices

		Food Price Index ¹	Meat ²	Dairy ³	Cereals ⁴	Vegetable Oils ⁵	Sugar ⁶
2005		67.4	71.8	77.2	60.8	64.4	61.2
2006		72.6	70.5	73.1	71.2	70.5	91.4
2007		94.3	76.9	122.4	100.9	107.3	62.4
2008		117.5	90.2	132.3	137.6	141.1	79.2
2009		91.7	81.2	91.4	97.2	94.4	112.2
2010		106.7	91.0	111.9	107.5	122.0	131.7
2011		131.9	105.3	129.9	142.2	156.5	160.9
2012		122.8	105.0	111.7	137.4	138.3	133.3
2013		120.1	106.2	140.9	129.1	119.5	109.5
2014		115.0	112.2	130.2	115.8	110.6	105.2
2015		93.0	96.7	87.1	95.9	89.9	83.2
2016		91.9	91.0	82.6	88.3	99.4	111.6
2017		98.0	97.7	108.0	91.0	101.9	99.1
2018		95.9	94.9	107.3	100.8	87.8	77.4
2019		95.1	100.0	102.8	96.6	83.2	78.6
2020		98.1	95.5	101.8	103.1	99.4	79.5
2021		125.7	107.7	119.1	131.2	164.9	109.3
2022		143.7	118.8	142.4	154.7	187.8	114.5
2022	May	158.1	122.9	144.2	173.5	229.2	120.4
	June	154.7	125.9	150.2	166.3	211.8	117.3
	July	140.6	124.1	146.5	147.3	168.8	112.8
	August	137.6	121.1	143.4	145.6	163.3	110.5
	September	136.0	120.3	142.7	147.9	152.6	109.7
	October	135.4	116.8	139.3	152.3	151.3	108.6
	November	134.7	114.6	137.4	150.1	154.7	114.4
	December	131.8	112.4	138.2	147.3	144.6	117.2
2023	January	130.2	111.1	134.5	147.5	140.4	116.8
	February	129.8	113.3	129.4	146.7	135.9	125.2
	March	127.0	114.7	126.8	138.6	131.8	127.0
	April	127.7	116.7	122.6	136.1	130.0	149.4
	May	124.3	117.9	118.7	129.7	118.7	157.6

1 Food Price Index: Consists of the average of 5 commodity group price indices mentioned above, weighted with the average export shares of each of the groups for 2014-2016: in total 95 price quotations considered by FAO commodity specialists as representing the international prices of the food commodities are included in the overall index. Each sub-index is a weighted average of the price relatives of the commodities included in the group, with the base period price consisting of the averages for the years 2014-2016.

2 Meat Price Index: Based on 35 average export unit values/market prices of four meat types (bovine, pig, poultry and ovine) from 10 representative markets. Within each meat type, export unit values/prices are weighted by the trade shares of their respective markets, while the meat types are weighted by their average global export trade shares for 2014-2016. Quotations for the two most recent months may consist of estimates and be subject to revision..

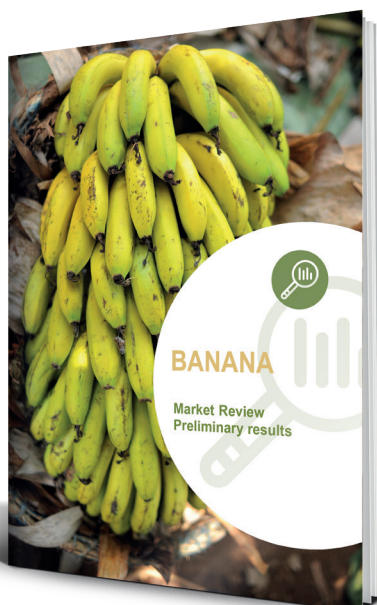
3 Dairy Price Index: Computed using 8 price quotations of four dairy products (butter, cheese, SMP and WMP) from two representative markets. Within each dairy product, prices are weighted by the trade shares of their respective markets, while the dairy products are weighted by their average export shares for 2014-2016.

4 Cereals Price Index: Compiled using the International Grains Council (IGC) wheat price index (an average of 10 different wheat price quotations), the IGC maize price index (an average of 4 different maize price quotations), the IGC barley price index (an average of 5 different barley price quotations), 1 sorghum export quotation and the FAO All Rice Price Index. The FAO All Rice Price Index is based on 21 rice export quotations, combined into four groups consisting of Indica, Aromatic, Japonica and Glutinous rice varieties. Within each varietal group, a simple average of the relative prices of appropriate quotations is calculated; then the average relative prices of each of the four rice varieties are combined by weighting them with their (fixed) trade shares for 2014-2016. The Cereal Price Index combines the relative prices of sorghum, the IGC wheat, maize and barley price indices (re-based to 2014-2016) and the FAO All Rice Price Index by weighing each commodity with its average export trade share for 2014-2016.

5 Vegetable Oils Price Index: Consists of an average of 10 different oils, weighted with average export trade shares of each oil product for 2014-2016.

6 Sugar Price Index: Index form of the International Sugar Agreement prices with 2014-2016 as the base period.

NEW RELEASES!

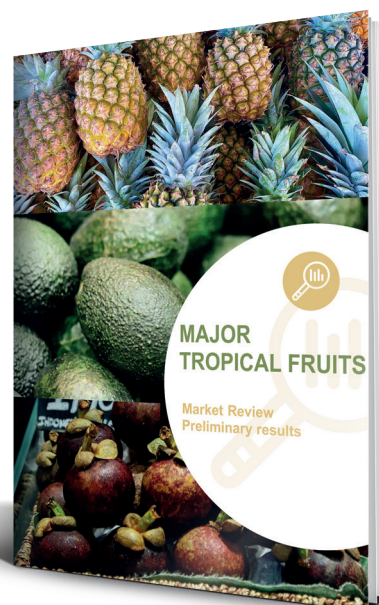


The **Banana Market Review** is issued on an annual basis to Members and Observers of the Sub-Group on Tropical Fruits of the Intergovernmental Group on Bananas and Tropical Fruits and offers an overview of recent developments in international trade in mangoes, pineapples, avocados, and papayas.

Published: May 2023

The report is available at:

<http://www.fao.org/documents/card/en/c/CC3421en>



The **Major Tropical Fruits Review** issued once a year, contains information on global trade in mangoes, pineapples, avocados and papayas. Its sources include information provided by FAO member nations, traders, news bulletins and the opinions of commodity specialists and represents the most authoritative and up-to-date source of information on the world tropical fruit economy.

Published: May 2023

The report is available at:

<https://www.fao.org/documents/card/en/c/CC3939EN>

Food Outlook is published by the Markets and Trade Division of FAO under the Global Information and Early Warning System (GIEWS). It is a biannual publication focusing on developments affecting global food and feed markets. Each report provides comprehensive assessments and short term forecasts for production, utilization, trade, stocks and prices on a commodity by commodity basis and includes feature articles on topical issues. Food Outlook maintains a close synergy with another major GIEWS publication, Crop Prospects and Food Situation, especially with regard to the coverage of cereals. Food Outlook is available in English. The summary section is also available in Arabic, Chinese, French, Russian and Spanish.

Food Outlook and other GIEWS reports are available on the internet as part of the FAO world wide web (<http://www.fao.org/>) at the following URL address: <http://www.fao.org/giews/>. Other relevant studies on markets and global food situation can be found at <http://www.fao.org/worldfoodsituation>.

This report is based on information available up to late May 2023.

For enquiries or further information contact:

Markets and Trade – Economic and Social Development
Markets-Trade@fao.org
giews1@fao.org

Food and Agriculture Organization of the United Nations

Rome, Italy

ISBN 978-92-5-137230-2 ISSN 0251-1959



9 789251 372302

CC3020EN/1/06.23