

# Agri-food analysis

## Do you reap what you sow?

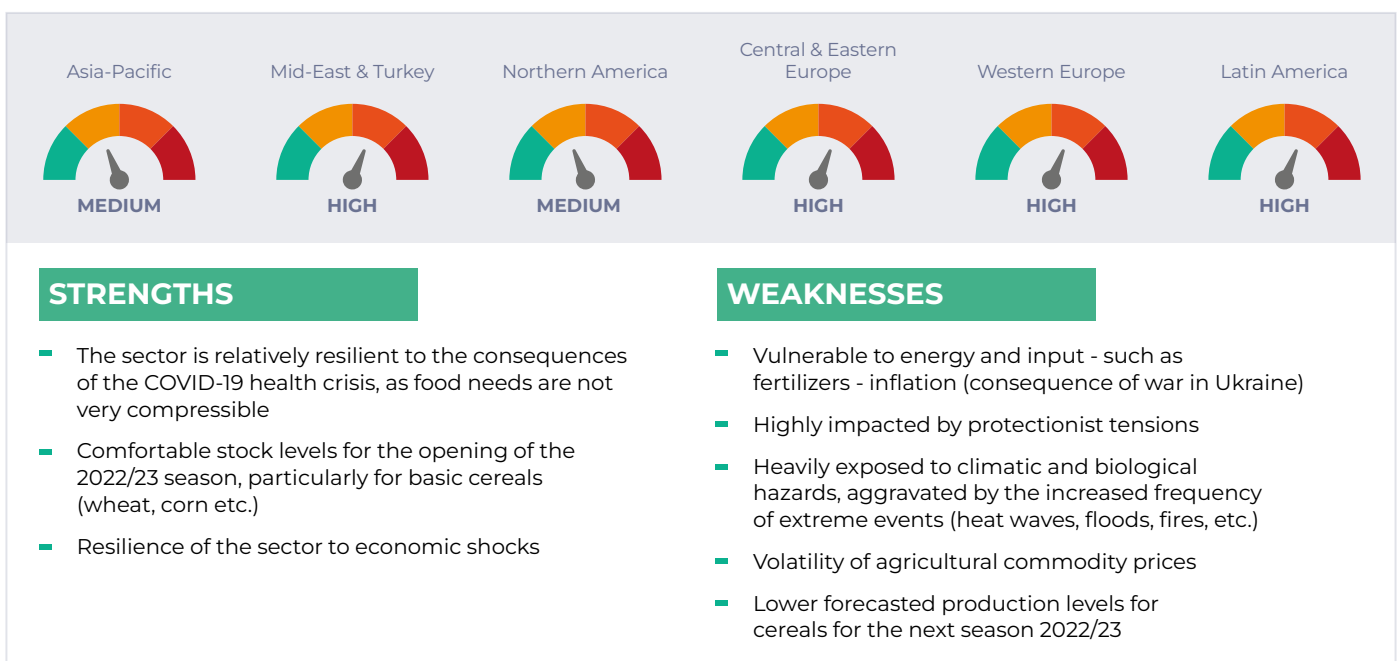
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## RISK ASSESSMENT

The global agri-food sector has experienced several shocks over the past year - health, geopolitical, climatic and biological. The sector proved resilient overall to the consequences of the COVID-19 health crisis due to its essential nature, and benefited greatly from the global economic recovery in 2021. However, it has been weakened by the Russian military intervention in Ukraine (a major agricultural exporter), various epizootics, and extreme weather events.

The downturn in global activity is expected to reinforce this trend. The FAO food price index reached its highest value since September 2011 in May. Indeed, the increase in energy and fertilizer prices (Russia + Belarus - major producers) has caused the price of cereals and vegetable oils to soar, and, in the medium-term, will push

agricultural production costs throughout the agri-food value chain. Thus, meat, egg and milk production costs have risen sharply over the past six months, driven by soaring feed prices.

According to the 6th IPCC report, extreme weather events are now occurring at a rate not witnessed since the beginning of the 20th century and are set to accelerate with global warming. Therefore, extreme weather events are expected to recur with increasing regularity - such as localized heat waves, major floods as in Pakistan, forest fires, or weather phenomena such as El Niño/La Niña. The latter, characterized by strong temperature variations in the South Pacific, is expected to start again in November, mainly affecting the Argentinean and Brazilian corn and soybean crops. Furthermore, Coface expects biological

risks to put downward pressure on global agricultural production this year - recently exacerbated by the African Swine Fever (ASF) epidemic, which continues to plague Europe and Africa, despite its near disappearance in Asia, as well as the consequences of the expansion of the Fall armyworm and the locust invasion in Africa.

Signing of the Black Sea Grains Initiative and the likely prospect of La Niña fading toward the end of Q1 2023 will serve to mitigate some of the pressure on global food supplies. However, we caution that food prices are likely to remain elevated through H1 2023 and into H2 2023, resulting in continued pressure on global food security.

Finally, the difficulties of the agricultural sector, because of particularly unfavourable economic shocks, are pushing the European authorities to delay the progress of 'environmental' initiatives for agriculture, while the slowdown in the production of certain cereals (maize) and soaring production costs are threatening food supplies on the continent and throughout the world.

## SECTOR ECONOMIC INSIGHTS

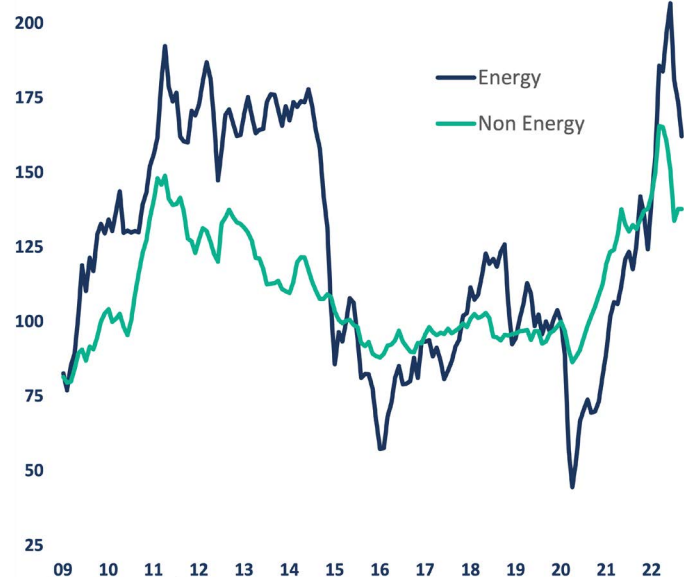
### INFLATIONARY PRESSURES AND TRADE CONTRACTION WEAKEN THE GLOBAL AGRI-FOOD SECTOR

Strong demand, combined with supply dynamics calibrated to the crisis period, contributed to a rise in global food prices well before the onset of the Russian invasion of Ukraine in February 2022. The gradual lifting of health restrictions in most countries had led to a strong rebound in global demand. The war in Ukraine has added to the volatility of commodity prices and high price levels, particularly for wheat, coarse grains and vegetable oils.

Ukraine is indeed a leading global exporter of cereals (16% of world wheat exports in 2019) and vegetable oils. As for Russia, which was quickly placed under embargo, and its Belarusian ally, they are among the world's largest exporters of fertilisers. The market panic and the prospect of shortages led to an inflationary surge.

Given the high oil price - Coface estimates that Brent crude oil prices should average around USD 105 per barrel in 2022 (and prospects of close to USD 100 for 2023) - the soaring production costs (cereals, vegetable oils) of 'energy-intensive' agro-industrial systems, which are mechanised and dependent on chemical inputs, have affected the entire downstream value chain. As a result, international food commodity prices have risen sharply - the FAO Index is at price levels well above 2021 (+11.4% year-on-year).

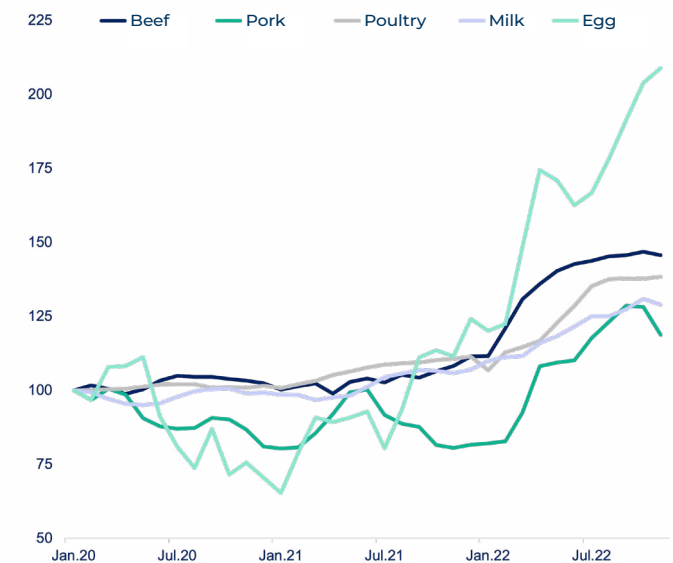
**COMMODITY PRICES**  
(GSCI, 100 IN JAN. 1, 2020)



Sources: Datastream, Coface

These tensions on food prices have led some countries to implement protectionist measures (such as export restrictions/bans) on certain commodities, thus adding to inflationary and supply tensions. India, for instance, concerned about food security risks for part of its population, restricted wheat exports (mid-May 2022), then sugar (June 2022), then rice (September 2022). Finally, tensions on global maritime freight add a little more to the contraction of trade and supply difficulties, especially for perishable goods such as fruit and vegetables, meat, etc.

**PRODUCTION COSTS**  
(IPPAP, FRANCE, 2020=100)



Sources: Insee, Coface

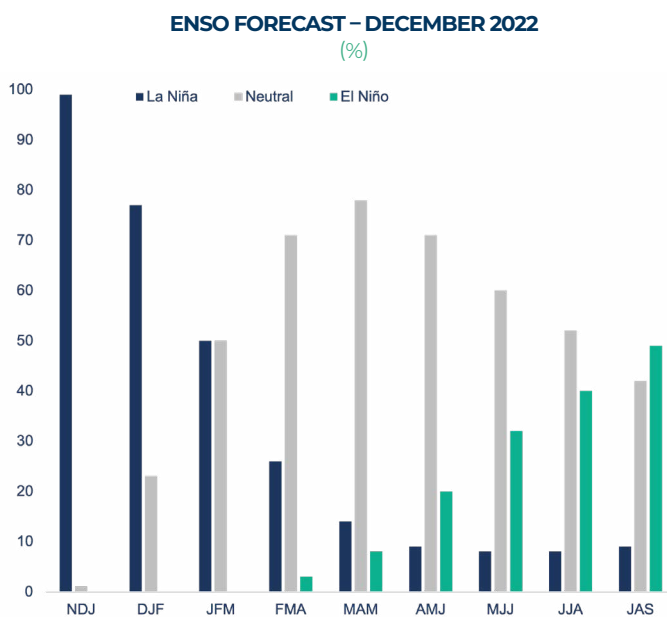
However, the trend is reversing since the beginning of July 2022. Due to a readjustment between market forecasts (concomitant with the situation in Ukraine) and geographically limited shortages (mainly in countries highly dependent on cereal imports from Ukraine), cereal and vegetable oil prices have fallen overall. Although the effects of the economic shock of the Russian military intervention in Ukraine seem to be dissipating, halting the inflationary surge of the last six months, price levels will remain at elevated levels (albeit easing from the historically high price levels seen in 2022), driven by high oil and chemical input prices, and stagnation or slight fall in grain production levels overall. However, the EU's suspension of tariffs and duty-free quotas on goods from Ukraine as of the summer of 2022, to allow Ukrainian grain to be shipped to third countries, is expected to reduce pressure on crop prices. This action allows the free shipping of these products into the EU, but most of the quantities originally destined for Africa and Western Europe have not been redirected, but have been released onto the Central European market, thus has become saturated with Ukrainian grain, sunflower seed and rapeseed. Ukrainian dumping has also led to a fall in global prices. Nevertheless, we anticipate that food systems will continue to face substantial challenges during 2023, which will result in a range of policy responses, some trade-focused and others designed to increase domestic production and to improve domestic resilience. The shadow of food shortages still looms in several countries and fuels speculation.

### CLIMATIC AND BIOLOGICAL RISKS, WHICH EXISTED PRIOR TO THE COVID-19 CRISIS, REMAIN AND ARE INCREASING IN INTENSITY

Extreme weather events, such as severe heat waves, floods (as in Pakistan), forest fires, and El Niño/La Niña weather events have increased. Reports of a return of La Niña from November to January 2023 have raised fears of an impact on the Argentinean and Brazilian maize and soybean harvests (with the prospect of higher prices) given that these two countries are among the world's main producers of these cereals.

ENSO (El Niño Southern Oscillation) episodes will constrain agriculture production in 2023. Most models in the IRI ENSO-plume indicate a discontinuation of the current La Niña event and transition to ENSO-neutral during Jan-Mar 2023. There is a high chance for ENSO-neutral to persist till April-June 2023, and a transition to El Niño afterwards. Whether it gets warm enough to form a full-scale El Niño or not, in 2023 - without the cooling effect of La Niña - there is a very good chance that it will be the hottest year ever recorded by man in the Middle

East, South Asia and parts of Europe, leading to more heat waves and droughts.



Furthermore, the intensity and frequency of epizootics increases the risks to the global livestock segment and to price volatility. Indeed, occurrences of epizootics in recent years have seriously weakened livestock yields - such as avian influenza in Europe (46 million poultry slaughtered in the first half of 2022) and African swine fever in China (240 million pigs between 2018 and 2019). African Swine Fever (ASF) broke out in Europe and Asia in the summer of 2018. Asia was heavily affected by the disease, which spread across the region, wreaking havoc on pork producers, especially in China, which accounts for 50% of global pork production and consumption. Since the arrival of ASF in August 2018, the country had lost 40% of its pig herd. The consequences are noticeable on meat imports directly but also on the price of cereals (especially corn) and fodder. Although the country has returned to its pre-ASF livestock levels, the authorities are closely monitoring these developments, given the strong risks of propagation in intensive livestock structures and the dangers of zoonosis (porosity between animals and humans in the transmission of certain viruses).

In addition to these epizootics, there are some other biological risks of importance to the agri-food sector: the Fall Armyworm (FAW) and locusts. FAW is a caterpillar that feeds mainly on maize, but also on rice, sorghum and cotton, among others. It was first detected in West Africa in early 2016. FAW has now reached 44 countries, in Asia and Africa, but also in Australia. China is the world's second largest maize producer, so the presence of FAW could lead to additional inflationary pressures on global maize prices

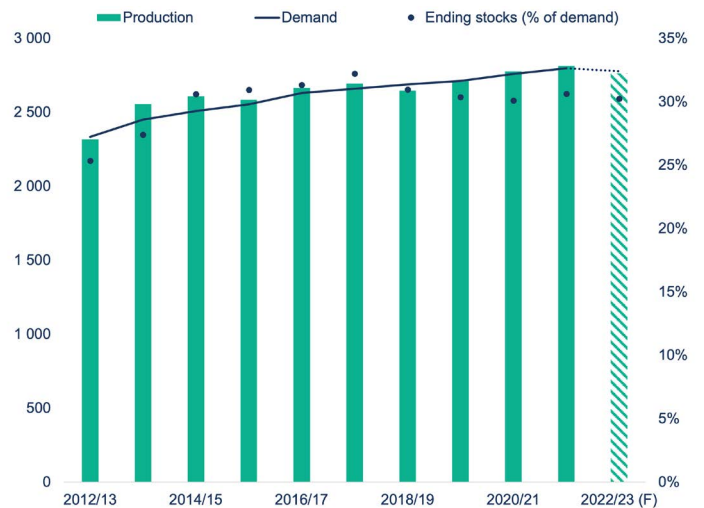
(which will be subject to a production slowdown in 2022/23). The UN Food and Agriculture Organization (FAO) is piloting a programme (USD 500 million, 2020-2022) to coordinate the response to the fall armyworm invasion worldwide. Moreover a locust invasion affected East Africa, the Arabian Peninsula, Iran and Pakistan.

## THE QUESTIONING OF EUROPEAN BEST PRACTICES REGARDING THE ENVIRONMENT AND SUSTAINABLE AGRICULTURE WHILE HARVEST PROSPECTS CALL FOR MAXIMISING PRODUCTION VOLUMES

2022 marked the return of fears about large-scale food crises in emerging economies – for instance, by India’s export restrictions on its rice, a staple food in many countries, particularly in Asia and Africa where it is consumed by more than 3 billion people - and food shortages in advanced economies. 2023 will carry much the same concerns. Elevated agricultural crop prices and supply challenges related especially to the Russia-Ukraine war have prompted a focus on food security and cost reduction which will remain prominent in 2023.

The European Commission, which has been promoting sustainable agriculture initiatives, may have to revise its plans. The sharp decline in maize production in Europe, the threat of summer droughts that could threaten harvests - of wheat in the northern hemisphere and maize in the southern hemisphere - in 2023, and yield losses threaten supply shortages in Europe and the weakening of the entire agri-food value chain.

### CEREALS MARKET (MT)



Sources: FAO, Coface

Similarly, customs measures on fertiliser imports could be temporarily lifted in order to alleviate the production costs associated with imported fertilisers. Indeed, the increase in the price of chemical inputs has weighed on the 2021/22 season and compromised sufficient production (e.g. maize), in a context of global inflation. Any action to combat the increase in consumer prices for food products is welcomed by countries.

Therefore, even though extreme climatic phenomena marked the year 2022, and are expected to occur again in 2023, the European authorities, in response to the geo-economic situation, are (temporarily) putting the brakes on their «environmental» initiatives for agriculture.

## KEY TAKEAWAYS

### Cereals prices have fallen significantly since early July

- Cereals shortages due to Russian military action in Ukraine have been lower than expected by financial markets
- A few countries highly dependent on Ukrainian cereals have been facing difficulties due to harvest destructions
- At the same time, the free flow of Ukrainian grain into the EU is also affecting world prices.
- Worldwide harvests are quite good and balance global demand in 2022
- Soaring prices have been driven by a contraction in the global trade of cereals

### Production costs keep cereals prices high

- Inflationary tensions on energy and chemicals inputs (fertilizers, fungicides) impact mechanized and intensive farming
- High price level of animal feed (especially corn) significantly affect production costs of livestock and drive soaring prices of “second-rank” agrifood products (dairy, meat, eggs)
- Fresh vegetables and fruits hit by high volatility costs of production – long term trends suggest increasing costs

### Important risks in 2023

- FAO and USDA forecast cereals trade to drop (1,8%) and stock contraction will not be spared
- Declining grain production in Russia and in Ukraine due to the ongoing war.
- High prices of inputs and energy
- Risk of season climate disruption: droughts, flooding, bush fire, etc.
- Increasing food security tensions