



Food inflation: what are the consequences?

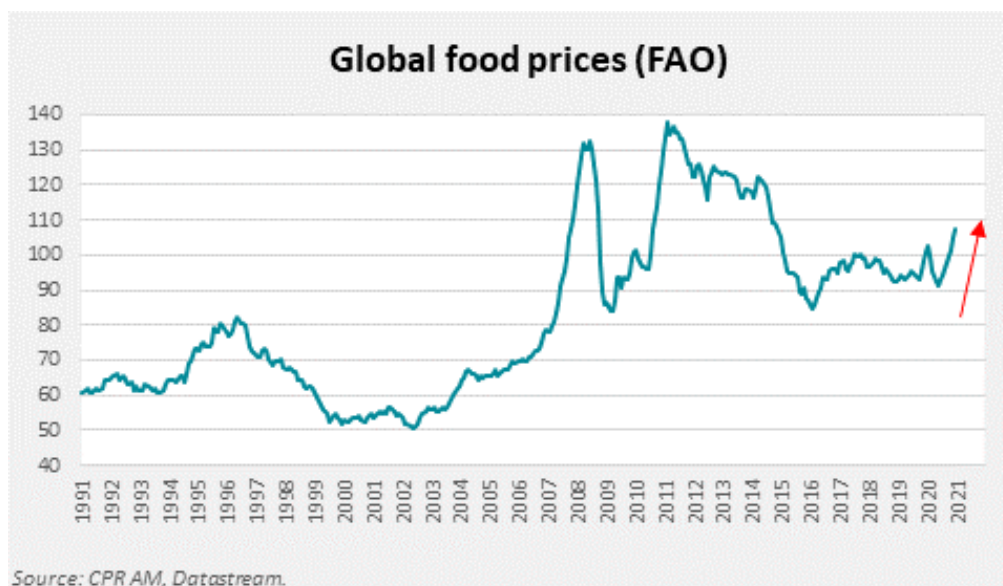
By Laetitia Baldeschi, Head of Strategy,

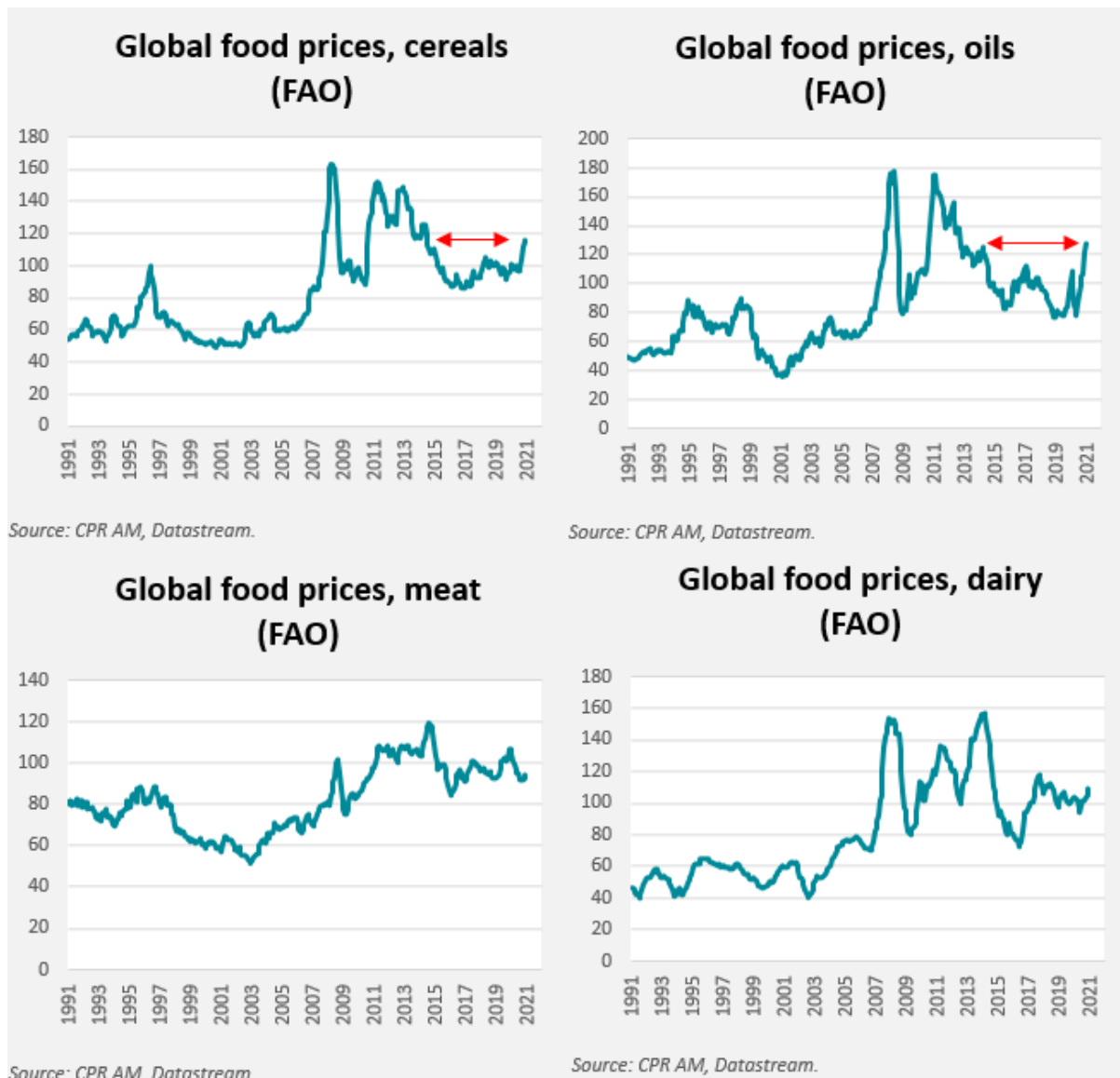
Juliette Cohen, Strategist, and Bastien Drut, Chief Thematic Macro Strategist - CPR AM

In recent months, the price of some agricultural products, and in particular cereals, has been rising sharply. This sequence is obviously reminiscent of that of 2010. The causes and consequences of this acceleration of prices of agricultural raw materials are multiple. This is no doubt one of the topics to monitor in 2021.

The prices of some agricultural commodities are on the rise

Food prices have accelerated markedly over the past three months. Thus, the global food price index produced by the FAO (Food and Agriculture Organization) is at its highest since the end of 2014. This price increase does not affect all food products and it is above all the price of cereals and vegetal oils which has increased sharply recently. On the other hand, the pressures remained contained for sugar and meat for the moment. This streak is reminiscent of the rise in food prices that followed the 2008 financial crisis





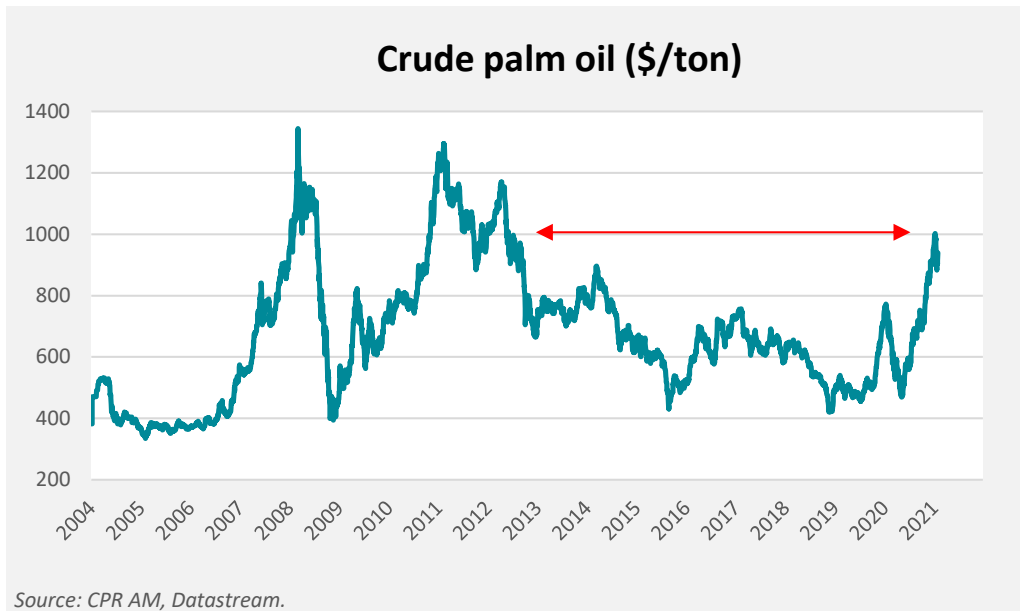
Different reasons behind the price increases of agricultural commodities

In the long-run, agricultural commodity prices are determined by the conditions of supply and demand and their trend has been downward since their peak in the 1970s. On the other hand, in the short-run, other determinants intervene such as climatic conditions, and in particular droughts and floods, plant and animal diseases and changes in trade policies (customs duties, quotas, etc.). The African swine fever epizootic in China in 2018-2019 which decimated the hog population and which caused a sharp rise in pork prices provides a good illustration of this.

Climate change, which increases the likelihood of extreme weather events, could lead to larger variations in agricultural prices around the long-term trend. Incidentally, the African continent appears to be particularly affected by climatic phenomena, with longer and more severe droughts linked to the increase in the frequency and strength of La Niña events.

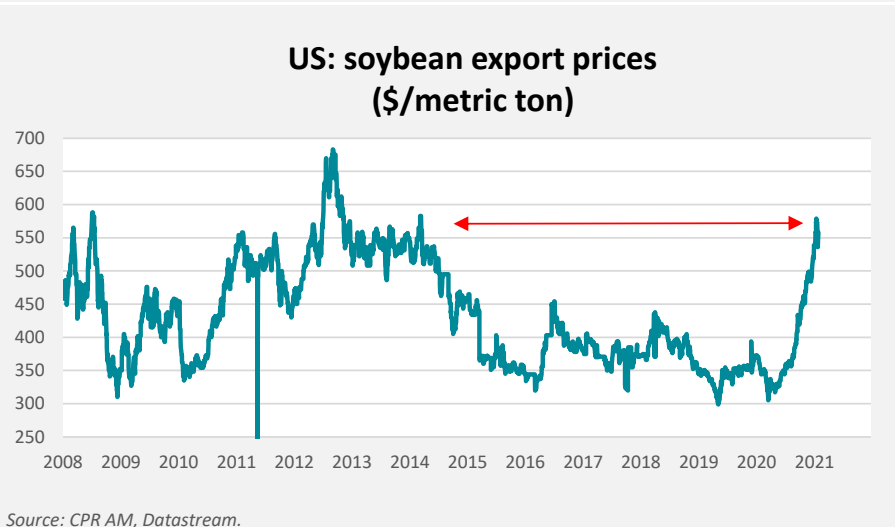
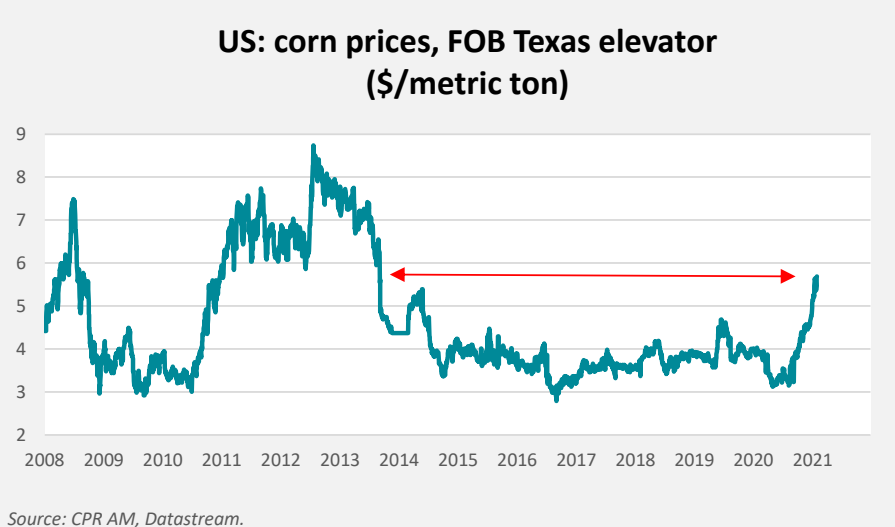
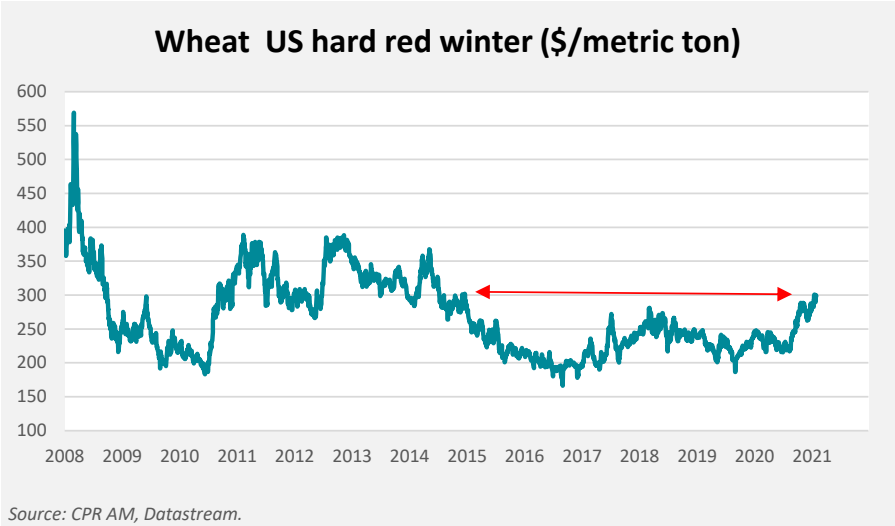
If we focus on the price increases of recent weeks, the factors differ depending on the commodity. Regarding edible oils, it is above all the price of palm oil that is soaring with the decision of Indonesia (where more than half of world production is located) to sharply increase the taxation of this commodity. Indeed, Indonesia increased both tariffs and export duties. The export tax is progressive

and ranges from \$ 55 to \$ 255 per ton depending on the price and was \$ 180 for the month of December for example (to get an idea of the magnitude of the tax, the price per ton was \$ 600 in mid-2020). This is one way for Indonesia to finance its biofuels program. The price of palm oil is at its highest for 8 years.



Regarding cereals, the prices of corn, soybeans and wheat are back to levels not observed since 2013/2014. Several reasons explain the phenomenon:

- **Several countries are buying large quantities of cereals to rebuild strategic reserves, which they drew on during the Covid crisis.**
- **China is rebuilding its pork production capacity (with swine flu, the number of pigs fell by two thirds between 2018 and 2020 and China had to import 10 million tonnes of pork in 2020, + 60% compared to 2019), which increases its demand for soybeans to feed livestock. In particular, US soybean exports to China have risen sharply in recent months.**
- **The FAO indicated in its quarterly report “Crop Prospects and Food Situation” of December 2020 that the La Nina meteorological phenomenon had degraded culture conditions in the United States.**
- **In order to limit domestic inflation, Russia has implemented an increase in export taxes for wheat of 50 euros per tonne from March 1 to June 30, while Russia is by far the world's largest exporter of wheat. Russia will also implement a tax of 10 euros per tonne for barley exports and 25 euros for corn exports. Russia would consider making these export taxes permanent, but possibly with a different formula.**
- **Argentina has suspended its corn exports until February 28 (it is the 3rd largest exporter in the world), in part to ensure that the meat industries will have enough grain and to limit price increases.**



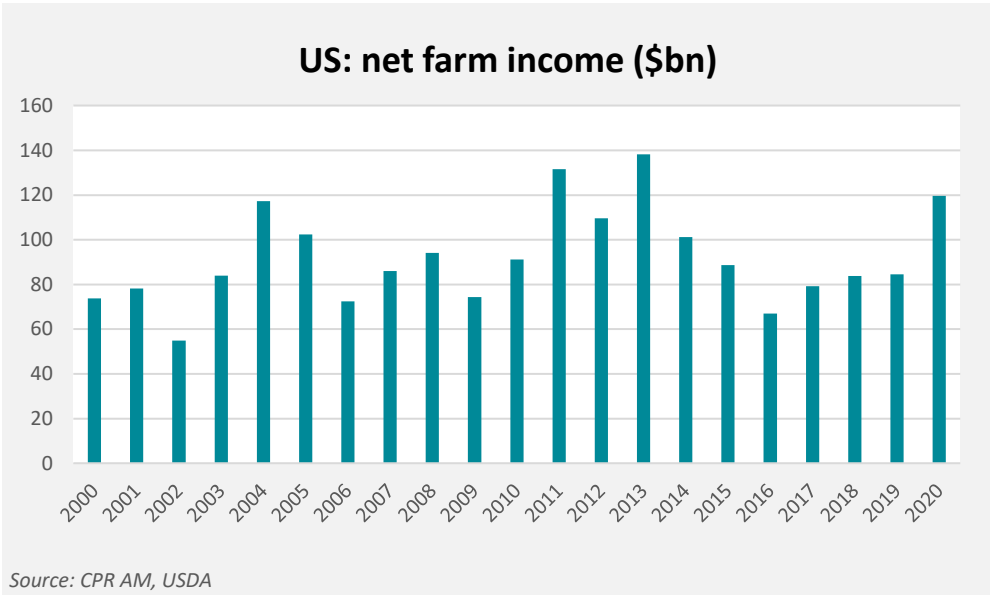
Meat prices have not really increased in recent months, but it is likely that higher grain prices will lead to higher meat prices.

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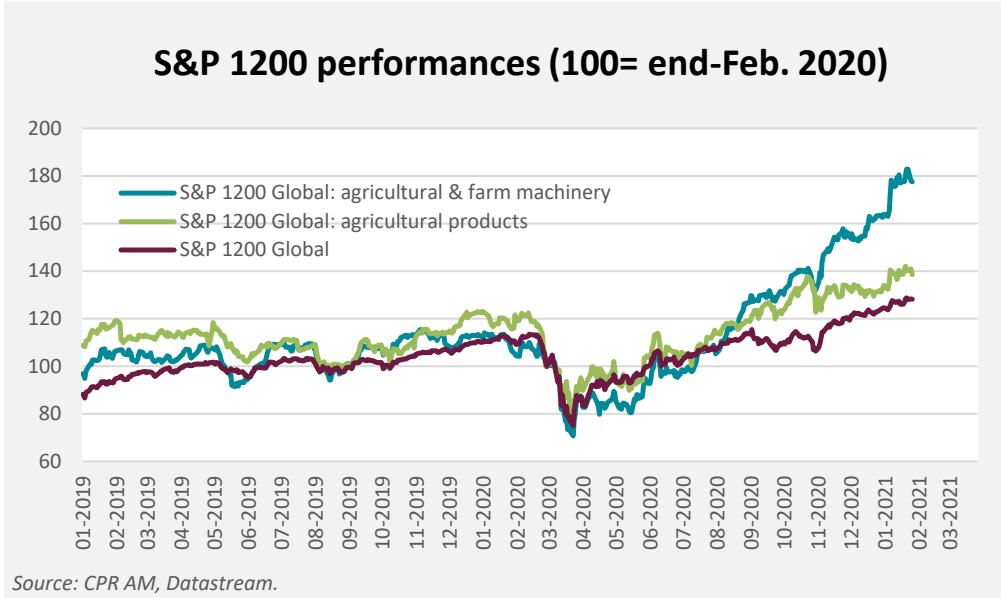


What consequences for the agricultural sector?

The increase in cereal prices will be generally favorable to farms, and in particular to those specializing in cereals. The United States is one of the main exporters of corn, wheat and especially soybeans. This comes in a context that is already relatively favorable for US farms: in December, the USDA estimated that their profits should reach \$ 120 bn in 2020, which would be the highest level since 2013. For the year 2020, US farmers have been able to benefit from exceptional aid programs from the federal state (in particular \$ 16 bn via the Coronavirus Food Assistance Program, CFAP), which has reached its highest for twenty years. By the way, the years with the highest profits (2011/2013) coincide with years of high grain prices. The same had been observed in Europe.



This has enabled a number of farms to invest in new equipment and this has driven a number of listed stocks in the agricultural sector, and in particular agricultural equipment (see in the graph below the agricultural sectors products and agricultural & farm machinery from the S&P 1200, a global stock index covering approximately 70% of the world's market capitalization). In addition, labor shortages caused by the pandemic have precipitated investments to automate / robotize certain processes.



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What impact on inflation?

As several studies show¹, variations in domestic food prices are often far removed from those of agricultural commodity prices observed on international markets. Their volatility is much lower than that of commodity prices, whether in developed or developing countries, and this can be explained by several factors. First, there are differences in the nature of unprocessed products purchased by individuals and those traded in international markets. Then there are the additional costs: packaging, transport, distribution, which do not apply in the same proportions. Finally, domestic food prices differ from international market prices, due to the trade policies implemented by States: strategic stocks, price controls on certain products, subsidies, trade agreements, etc.

Nonetheless, an IMF study² found that fluctuations in agricultural commodities have played a significant role in domestic inflation for a large number of countries over the past 60 years, although this effect has become progressively less strong over the years. This study estimates that since 1980, a 10% increase in the price of agricultural commodities has led on average to an increase in domestic inflation of a quarter of a percentage point in developed countries. The effect is stronger for emerging countries, which reflects the fact that the weight of food in the consumer basket is higher and that inflation expectations are less firmly anchored there. Food constitutes a larger share of the consumption basket in emerging countries (23% in Turkey or 46% in India) than in developed countries (around 14 to 15% in the euro zone and the United States).

In the specific case of Europe³, food inflation is on average significantly higher than total inflation: over the last 5 years, total inflation has been 1% on average in the euro zone, while inflation of food items was 1.5%. It has also been shown that agricultural commodities prices explain 25 to 30% of inflation volatility in the euro zone⁴.

To sum up, it is likely that the rise in agricultural commodity prices will lead to an increase in total inflation of a few tenths over the next few months, especially if it persists and is passed on to other food prices such as meat prices.

What social and humanitarian consequences?

The rise in food prices comes at a time when the covid crisis has had terrible consequences on the labour market. The International Labour Office estimates that hours worked fell by 8.8% in 2020 globally compared to 2019 (the equivalent of 255 million full-time jobs). The loss in labour income would thus have been \$ 3,700 billion in 2020. The phenomenon has been particularly pronounced in South America, Africa and the Indian subcontinent. Under these conditions, a rise in food prices has dramatic humanitarian consequences. FAO officials say that these are "the ingredients for social

¹ For example, McCorriston S., 2015, *Food Price Dynamics and Price adjustment in the EU*, Oxford University Press.

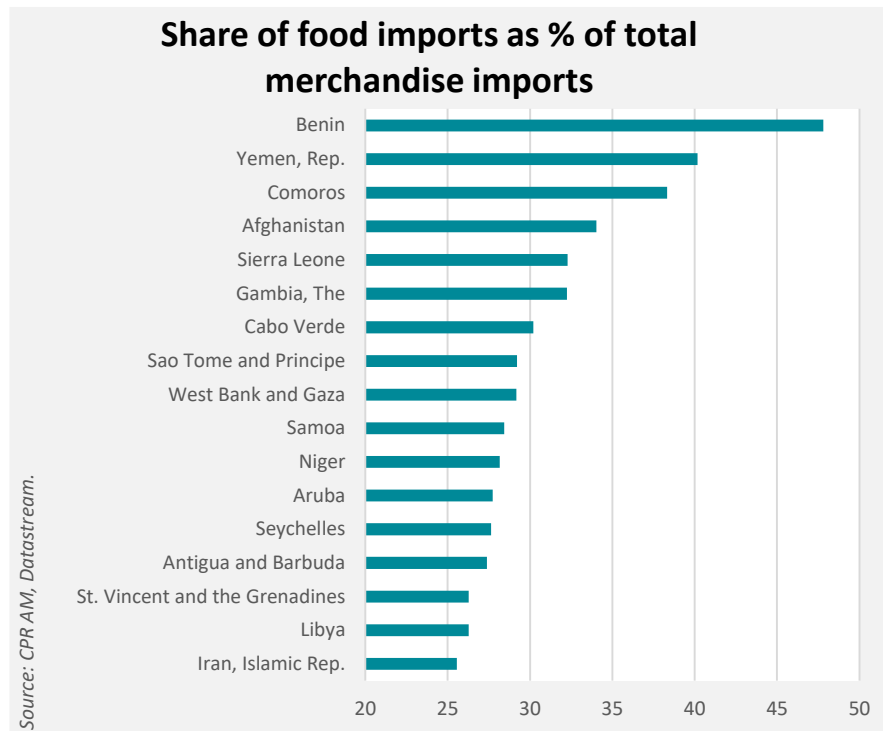
² Furceri D. et al., 2015, "Global food prices and domestic inflation: some cross-country evidence", IMF working paper n°15/133.

³ It is interesting to note that although agricultural and trade policies are common to the whole of Europe, food prices have evolved very differently from one country to another, whether in periods of sharply rising commodity prices such as in 2007-2008 and 2011 or in more 'normal' situations. Here, the differences between countries seem to be linked to the specificities of food chains and the level of competition between players. In 2010, the European Commission created a "Forum for a better functioning of the food chain" to improve competition and quality in the food sector and to monitor market access and price formation.

⁴ Peersman G., 2018, "International Food Commodity Prices and Missing (Dis)Inflation in the Euro Area", National Bank of Belgium working paper 350.

unrest." It is hard not to think about the various episodes of the Arab Spring, which were partly triggered by the soaring food prices of 2010.

The situation is particularly delicate for countries that import massive amounts of food products. World Bank data indicate that food accounted for more than 20% of goods imports for 32 countries in 2018, much of which is located in sub-Saharan Africa. This proportion was 48% for Benin and 40% for Yemen. These countries are among those most threatened by rising food prices.



The acceleration of food inflation is to be followed with great attention. It could make some winners (some farms and producers of agricultural machinery) but could have dramatic humanitarian consequences. It could also lead to a slight acceleration in inflation.

India: Modi's new agricultural reforms

In September 2020, the Indian parliament passed 3 laws that change the organization of the agricultural sector. In effect, these laws allow farmers to sell their produce to buyers of their choice, rather than turning exclusively to state-regulated markets. The large agri-food groups will therefore be able to deal directly with farmers. Until now, the sale of agricultural products has depended on community markets regulated by the State, with a guaranteed minimum price on staple foods such as wheat and rice in particular (« mandi »).

The weight of India's agricultural sector is very important:

- 60% of the population depend on it for living,
- It contributes 16% to the country's added value.
- The "green revolution" of the 1970s allowed India, which regularly faces food shortages, to become a surplus country.

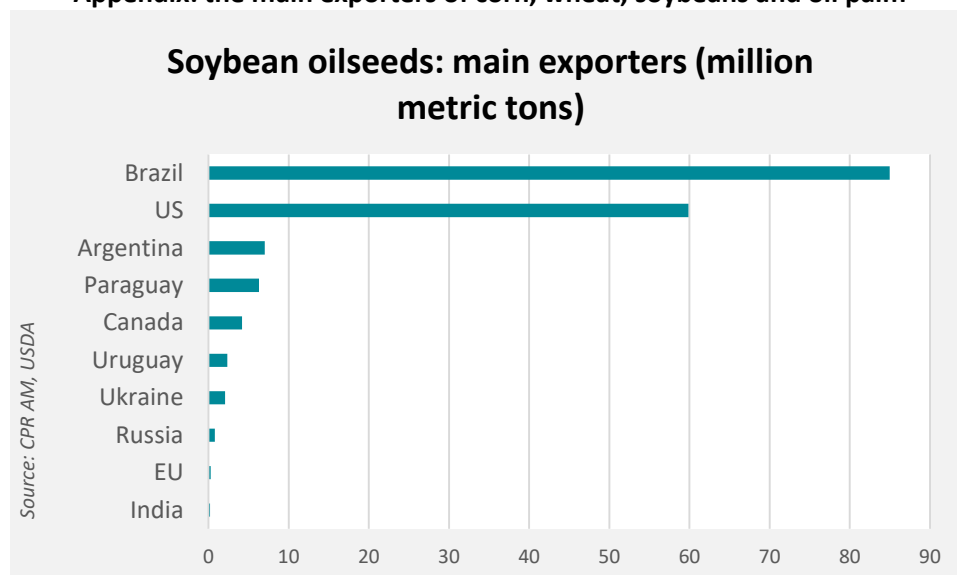
- According to a survey by the Ministry of Agriculture for the period 2015-2016, more than 85% of farmers owned less than two hectares of land.
- The government, according to the Ministry of Finance, provides an average of \$ 32 billion in subsidies to farmers each year.

But farmers' incomes are increasingly impacted by the effects of climate change: increasingly severe and frequent droughts and at the same time, very violent monsoons. According to official data, 10,300 farmers would have died in 2019. In his election promises, Modi had announced the doubling of farmers' income by 2022. The government presents the reform as progress for farmers in that it eliminates intermediaries and should allow them to earn a better living. For the opposition, on the other hand, it is a question of removing everything that has hitherto guaranteed decent prices and incomes for small producers. By putting them depending of private companies which have their own raw material storage system and thus speculate on the resale prices of productions, there is therefore a very real risk of destabilizing all of Indian agriculture. **The farmers enjoy wide support among the population. Farmers status is a major political issue in India, where two out of three Indians live in rural areas.** For the moment, the situation seems blocked:

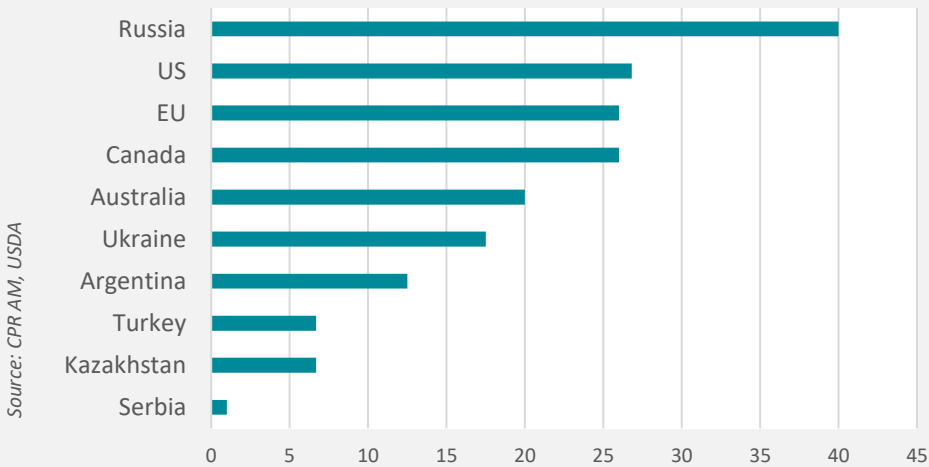
- The Supreme Court temporarily suspended law enforcement on January 12 and called for proposals from experts.
- The government proposed freezing the reform for 18 months.
- The farmers are not giving in after already 2 months of protests and strike movements.

If the reform is implemented, this could result in a drop in the prices of basic foodstuffs in particular, since it results in the elimination of prices guaranteed by the State. The consequences, however, could prove to be catastrophic for the income of peasants and thus have very significant social consequences, contributing to increasing inequalities in the country.

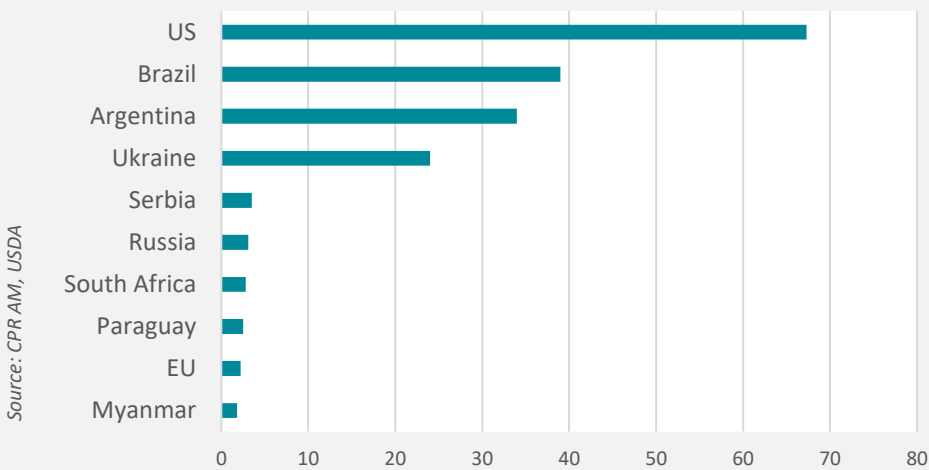
Appendix: the main exporters of corn, wheat, soybeans and oil palm



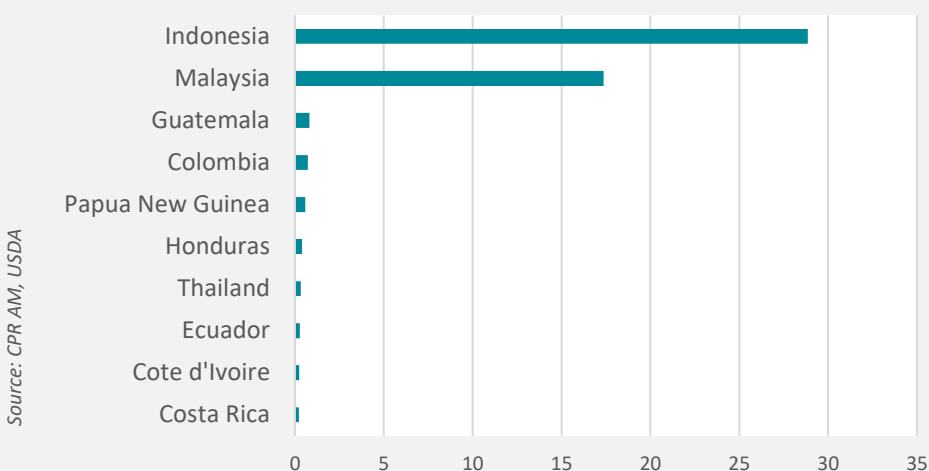
Wheat: main exporters (million metric tons)



Corn: main exporters (million metric tons)



Palm oil: main exporters (million metric tons)



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Information:

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