

# Strategic Analysis Paper

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## Cereal Stockpiles are Likely to Prevent Short-Term Shortage and Avert a Global Food Crisis

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### Key Points

- For the first time in five years, global cereal stockpiles are expected to decline as a result of poor growing conditions in major cereal-producing regions.
- Suggestions that the current situation, wherein the utilisation of cereal crops exceeds annual production, will lead to a global food crisis are premature. A similar situation occurred in 2012-13, which encouraged increased production in following years.
- Record cereal stockpiles, which have consistently increased over the past five years, will prevent a global food crisis from occurring, at least in the short term.
- In the long term, a second consecutive year of adverse growing conditions could see an increase in global food insecurity. Increased production in the Black Sea region and rising commodity prices, however, are likely to avert a global food crisis.

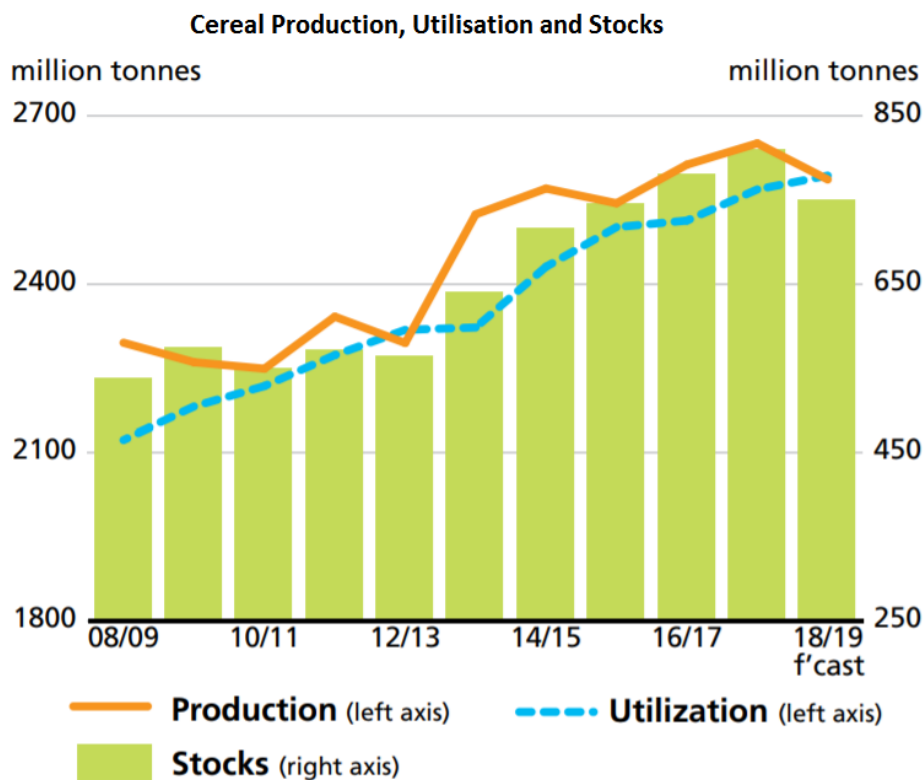
### Summary

With many major food producing countries experiencing a decline in cereal production in 2018, there are fears that the world could face a looming shortage of key food commodities. That fear is misplaced, however, due to the large volume of food commodities that have been stockpiled over the past five years. While most of those supplies are located in China, which is unlikely to release them to the global market, there will still be ample food stocks available to meet global demand in the near term. Looking further ahead, however, a second

consecutive year of poor growing conditions could result in food shortages in import-dependent markets, such as Indonesia and Egypt.

### Analysis

The Food and Agriculture Organization (FAO) monitors the production and supply of eight major food commodities – wheat, coarse grains, rice, oilcrops, sugar, meat, dairy and fish. In doing so, it is able to make judgements about the global food supply. It predicts that, for the first time in five years, global cereal stocks will be lower than were available the previous year. Such a decline is not significant on its own, however, as a similar situation arose in 2012-13.



Source: Food and Agriculture Organization

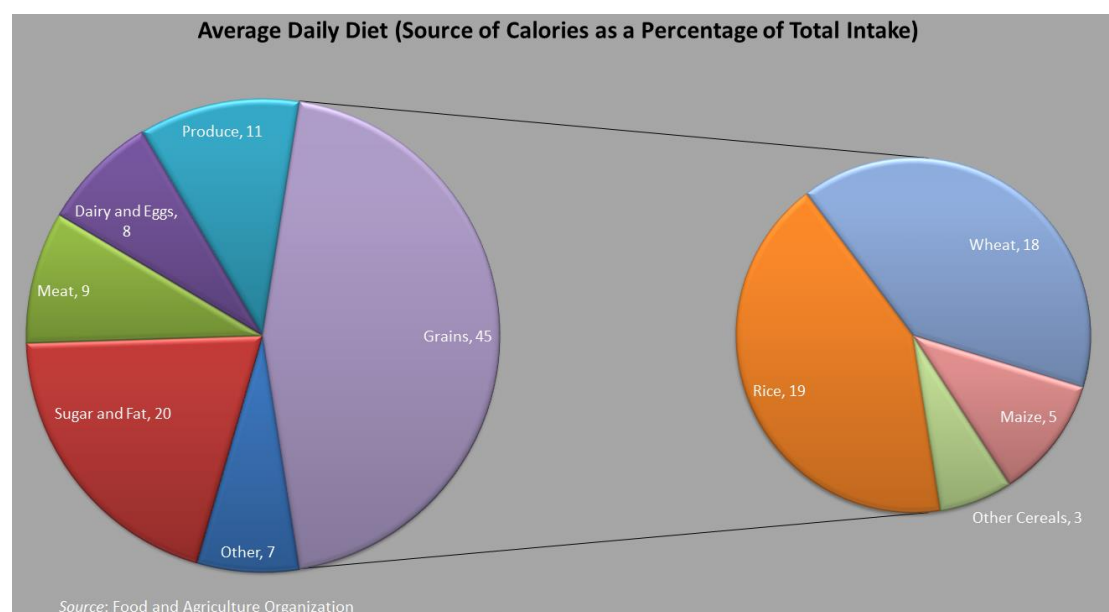
Global food consumption exceeded production in 2012-13, according to the [FAO](#). At that time, countries had, on average, reduced their food reserves to less than 74 days of consumption, a significant drop from 107 days 2003. Since 2013, however, global cereal stockpiles have consistently increased.

In 2014-15, global cereal stockpiles increased to [12-year highs](#). That, alongside increased demand, led to [record trading volumes](#) in those commodities. Supply outstripped demand, however, leading to a reduction in trade value of almost [ten per cent](#) compared to a year earlier. By early 2017, after several years of large harvests, global stockpiles of corn, wheat, rice and soybeans had increased to such levels that storage space became limited. Farmers in some of the largest food exporting countries were left with little option but to [store food in fields](#). Large farming operations expanded their storage capacity, so much so that,

according to some [reports](#), large-scale corn farms in the United States could store almost all of the 2017 corn harvest onsite.

The global food supply depends on four key commodities: wheat, rice, coarse grains and oilseeds. About [two-thirds](#) of the global population derive their daily energy intake from those four commodities alone and any change in their production or price will have significant implications for the global food supply.

The current supply deficit is caused mainly by reduced production in wheat-growing regions of the world, although Abdoreza Abbassian, a senior economist at the FAO, [suggests](#) that ‘we have to watch the corn situation quite carefully, especially in the US ... We could have quite a dramatic turn for [the] worse, if in the coming weeks we get some strange weather hitting corn markets.’

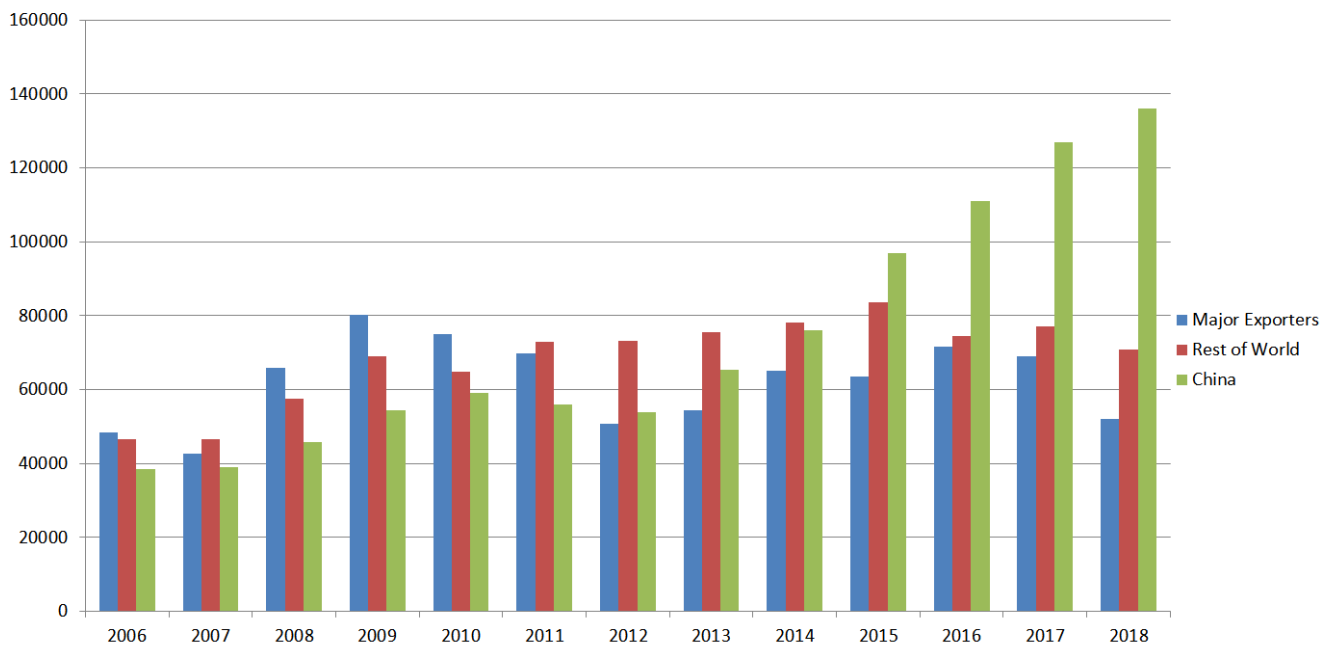


Wheat is grown on more land area than any other crop in the world, with approximately [700 million tonnes](#) produced each year. As it accounts for a large portion of the global diet, wheat is a suitable metric for measuring global food security, as annual changes in the global wheat yield has a large effect on the global food supply and food prices.

Global wheat production is expected to [decline](#) by five per cent to 721 million tonnes in 2018-19. [High temperatures and low rainfall](#) in Western Europe is expected to result in the second-lowest wheat harvest in the European Union in a decade. Production in Russia is also anticipated to decline for the first time in six years due to similar weather conditions. It is still expected to harvest its [third-largest](#) crop on record, but could curtail exports if it believes that its domestic food security is at risk. Australian wheat production is also expected to decline, due to drought in New South Wales and Queensland. It is still [expected](#) to produce more wheat than in the lead up to the global food price crisis in 2006-07, however.

Despite the decline in wheat production, global stockpiles of the commodity are expected to reach a record level of [273 million tonnes](#) in 2018-19. China, which consumes 16 per cent of the world's wheat, is estimated to hold 46 per cent of that stockpile. If that estimate is correct, it has enough wheat to supply 110 per cent of annual domestic consumption. [Some analysts](#) allege that the size of the reserve has become larger than Beijing wants it to be and that some of it is rotting. If that is true, there could be increased impetus for it to reduce the size of its stockpile which, if done at a large enough scale, would reduce pressure on global supplies. The reserves of several major wheat exporting countries are also reportedly at the lowest levels since 2007-08, when low food stocks contributed to unrest in parts of the Middle East and North Africa.

**Major Wheat Exporters' Share of Global Inventories ('000 tonnes)**



Source: US Department of Agriculture

The root causes of the 2007-2012 global food price crises are the subject of ongoing debate. Increased oil prices, rising agricultural input costs, biofuel subsidies, unfavourable growing conditions, trade restrictions, financial speculation in agricultural markets and declining food stockpiles are put forward as contributory factors. It is unlikely that lower food inventories alone contributed to the political unrest that accompanied increased food prices in some parts of the world, however.

Some media [reports](#) suggest that the global wheat supply has reached 'crisis levels', but are quick to point out that 'a repeat of the 2007/2008 [food] crisis, which forced many countries to limit or ban exports, is unlikely in the absence of other drivers at the time, including \$150-per-barrel crude oil.' Contemporaneous reports of the global food crises suggest that rising food prices led to "food riots" in multiple countries around the world. Those reports, however, generally failed to take other social, economic and political factors, aside from food prices, into account. That led to a media narrative, centred on a [simplistic thesis](#) that 'a hungry man is an angry man.' While rising food prices contributed to political protests in the Middle East and North Africa between 2008 and 2012, they were not the sole cause.

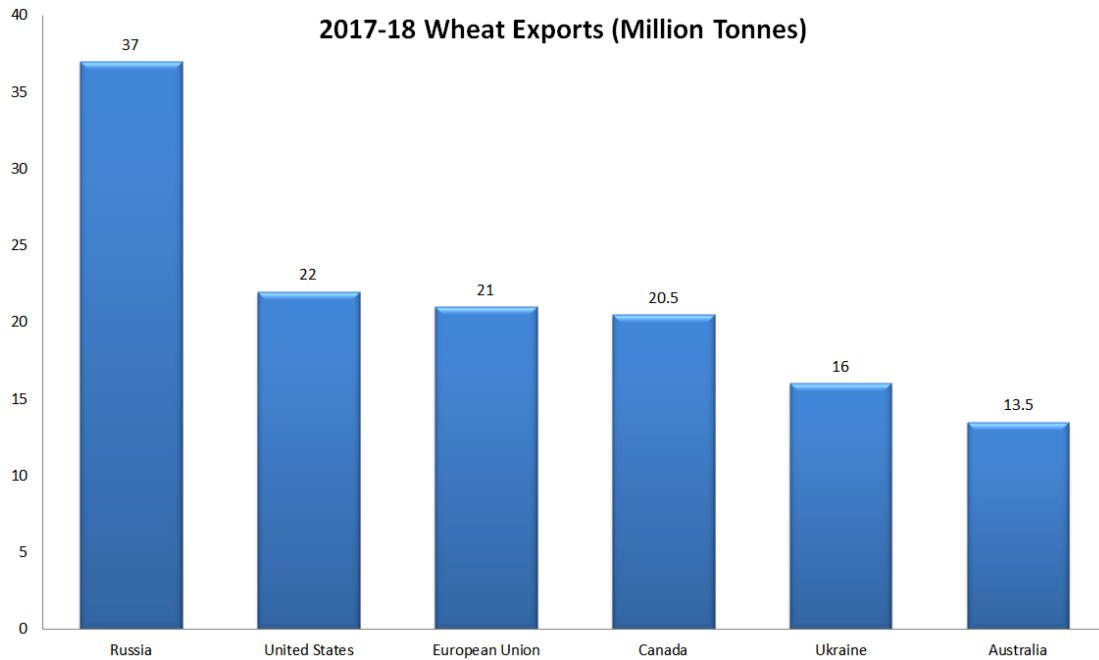
Individuals are rarely driven to rioting by a single cause; usually a combination of factors push people to take extreme action. Food insecurity is a “threat multiplier” rather than a determining factor. It has the potential to exacerbate other social, political and economic tensions to a point where political stability is undermined. Those conditions are not currently globally apparent, although that could change if a second consecutive year of challenging growing conditions affects major food exporters. If wheat prices increase, Indonesia and Egypt (the two largest importers of that commodity) are most likely to be affected. That does not necessarily mean that there will be an increased risk of unrest in those countries, however, as other factors will also play a part.

Global trade policies will also affect the price of agricultural commodities. There were fears that Russia and Ukraine could restrict the amount of wheat that they exported in 2018. Officials from both countries have stated that there are no plans to enact such policies, but the agricultural ministries of both countries are [reportedly](#) monitoring domestic prices and export quantities following a decline in production. If one or both of them enact wheat export restrictions, there is a stronger chance of rising food prices in some parts of the world. Indonesia and Egypt, which import most of their wheat from the Black Sea region, are again most likely to be effected.

The decrease in global food stocks could encourage an increase in global food production. After the global food price crisis of 2008 and the droughts in key food producing regions in 2011-12, farmers planted more cereals and oilseeds to take advantage of increased commodity prices. After 2014, global food stockpiles increased to [12-year highs](#). That, along with increased demand, led to a [record amount of trade](#) in those commodities in 2014-15. Supply outstripped demand, however, leading to a reduction in trade value of almost [ten per cent](#) compared to a year earlier.

While challenging growing conditions account for most of the decline in agricultural commodities, the oversupply and consequent low prices are also a disincentive to food production. The US once supplied the bulk of the world’s food supply, but since the 1970s its share of global corn, soybean and wheat exports declined by more than 50 per cent. That is partly due to a decline in the amount of farmland available there – since 1982, US farmland has declined by [12 per cent](#) – and an increase in agricultural production from other countries with lower farm operating costs. Russia, which was once the world’s leading wheat producer, became the largest wheat importer in the 1970s as the system of agricultural collectivisation broke down. After the introduction of government incentives in the 1990s, however, its wheat production has strongly rebounded; yields increased by [70 per cent](#) over the last five years. It has re-emerged as the world’s largest wheat exporter, and when Ukrainian exports are also taken into account, it is likely that growing conditions in the Black Sea region will have the largest effect on global wheat production.

Increased commodity prices are likely to be welcomed by American farmers. In 2017, they sowed the [smallest acreage of wheat since 1909](#). As the amount of stockpiled food declines, it is likely that prices will rise and give farmers a greater incentive to produce more food.



Source: United States Department of Agriculture

Global wheat stockpiles are likely to be sufficient to cover the reduced production in the short term. If a second consecutive year of poor growing conditions eventuates, however, there could be increased food insecurity in import-dependent countries, particularly Indonesia and Egypt. Increased production in the Black Sea region and a possible increase in wheat prices in the US, which will encourage an increase in production, will likely avert a food crisis.

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