



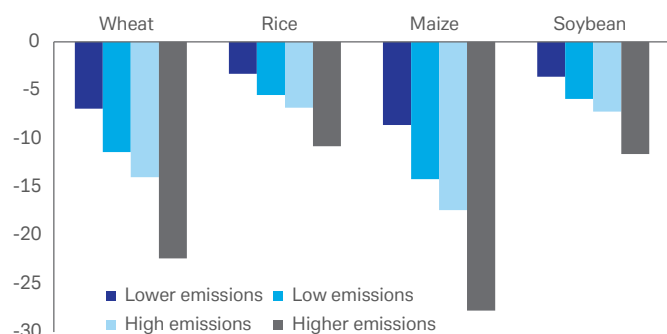
COP27: Adapting to food inflation Part I

#PositiveImpact

Amidst the backdrop of rampant food inflation, this year's COP27 in the Egyptian city of Sharm El-Sheikh (November 6-18) will be critical. That is because food inflation has been stronger than overall inflation. In fact, in March the US hit an inflection point when food and beverages CPI outpaced broader CPI. This is not just a US issue. The food inflation problem is a global phenomenon. While almost all low- and middle-income countries – 93 per cent and 91 per cent respectively - have seen strong food inflation, the share of high-income countries with strong food price growth has swelled to nearly 86 per cent.¹

To help solve the food problem, the world needs to adapt to climate change. There have been signs how the change in climate is affecting food security through increasing temperatures, changing precipitation patterns, and greater frequency of extreme weather events. Adapting to the change in climate means using technologies and finance to arrest the projected decline in corporate yields. Below are some projections on how different intensities of emissions may affect certain key crops.²

Projected changes (%) in yield due to temperature changes by the end of the 21st century



Source: PNAS, Deutsche Bank

COP27 has the opportunity to be a great facilitator to dramatically accelerate changes within the food system. The presence of food innovation groups at

Olga Cotaga
Thematic Research Analyst

Samira Kalla
Economist

Luke Templeman, CPA
Thematic Research Analyst

Christian Wietoska
Strategist

the first ever Food System Pavilion is a strong sign that alternative ways of approaching food are finding solid ground. On top of that, discussions will examine progress on the delivery of the annual \$100bn in climate finance to developing nations. This means increased funding to engage companies, many from developed countries. That in turn will spearhead the advancement of new ways to approach food.

New approaches include alternative proteins that contribute to both enhancing food security and mitigating climate change. That is because the amount of land (and other resources, like water) an animal-based food category uses tends to be much larger than that used by plant-based categories. Its emissions tend to be higher too. Another approach is through AI. The technology's most advantageous use is waste management, by predicting food demand, and mapping of food ingredients.

Vertical farming is another FoodTech industry that can potentially be part of the solution to the food problem. As water scarcity and the availability of land poses real threats to the global food system, vegetables and fruits from a well-controlled environment that uses very little water and soil are very valuable. Some of the sessions at the COP will discuss the findings of scientific research on drought and heat-resistant crops. The adoption of early-maturing cereals, heat-tolerant and drought-tolerant legumes, or rice with submergence tolerance can help farmers to better cope with climate shocks.

Deutsche Bank Research clients can access the full report [here](#).

1 World Bank, "Food Security Update", September 2022

2 Chuang et. al. "Temperature increase reduces global yields of major crops in four independent estimates", PNAS, 2017