

Recent OECD-FAO Agricultural Outlook reports have focused on high and volatile agricultural commodity prices, stressing that prices would come down as markets respond but would remain on a higher plateau underpinned by continuing strong demand and rising costs for some inputs. As anticipated, prices have started to ease but remain at relatively high levels. Food price inflation at the retail level has fallen significantly from its peak in 2008 and its contribution to overall inflation has moderated. Nevertheless, food price inflation remains high in many developing countries and is still outpacing overall inflation in the majority of countries examined.

Price volatility remains a concern, with weather-related yield variability the main threat as long as stocks remain low. With a rebound in crop production, stocks have improved somewhat and markets in 2012 appear less turbulent. The key issue facing global agriculture is how to increase productivity in a more sustainable way to meet the rising demand for food, feed, fuel and fibre.

Nominal prices of the commodities covered in this Outlook are expected to trend upwards over the next ten years (see Figure 1) and are projected to average 10%-30% above those of the previous decade. Prices in real terms (adjusted for inflation) will remain flat or decline from current levels.

Global agriculture is increasingly linked to energy markets (see Figure 5). Oil price projections contained in the macroeconomic assumptions are on average about USD 25 above those used last year (ranging from USD 110 to USD 140 per barrel over the outlook period). These higher oil prices are a fundamental factor behind the higher agricultural commodity price projections, affecting not only oil-related costs of production but also increasing the demand for biofuels and the agricultural feedstocks used in their production.

Despite strong prices, slower production growth is anticipated. Growth in global agricultural production has been above 2% p.a. over the past several decades, but is projected to slow to 1.7% p.a. over the next decade (see Figure 2). Growing resource constraints, environmental pressures, and higher costs for some inputs are anticipated to inhibit supply response in virtually all regions. In this context, this Outlook suggests that more attention be paid to increasing sustainable agricultural productivity growth.

Prices have come off recent peaks, but food price inflation remains a concern in developing countries

Sustainable productivity improvement is key to meeting rising demand

Agricultural prices to remain on a higher plateau

Energy price levels and volatility highly condition the outlook

Resource constraints and high costs limit production growth, despite upward trending prices

Figure 1. Price trends of agricultural commodities to 2021 (nominal)

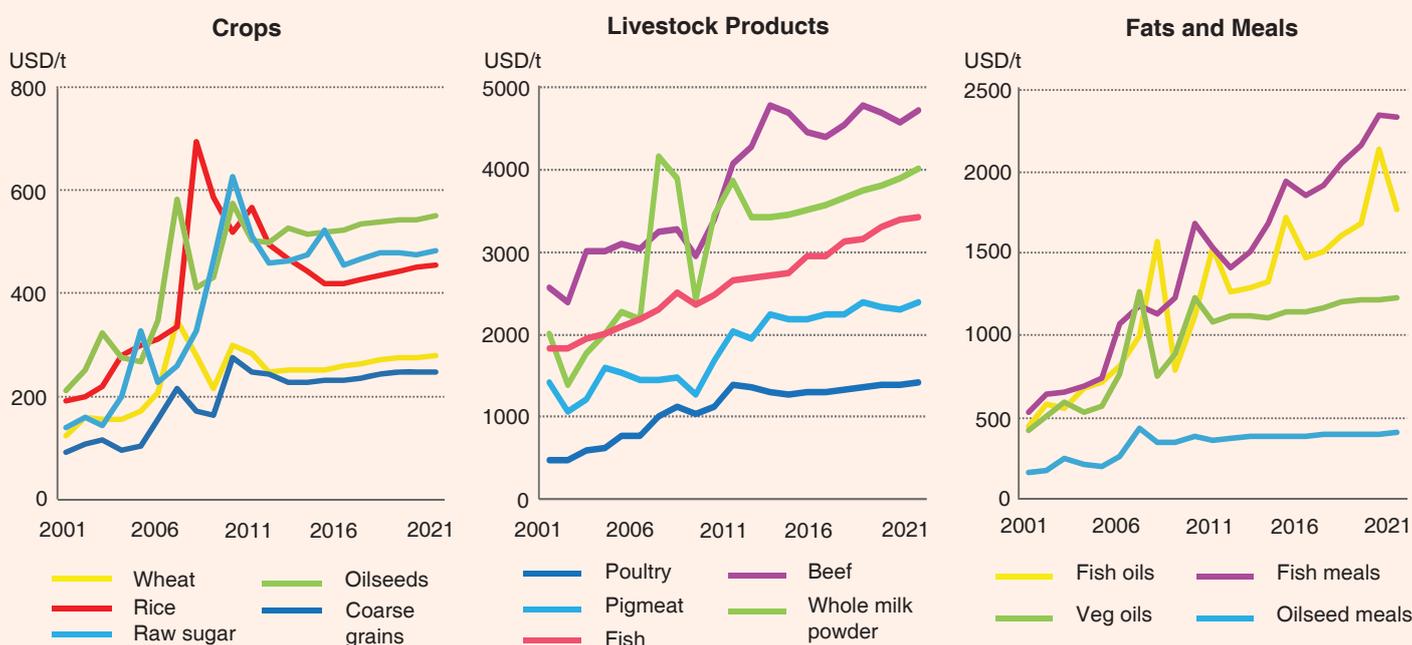
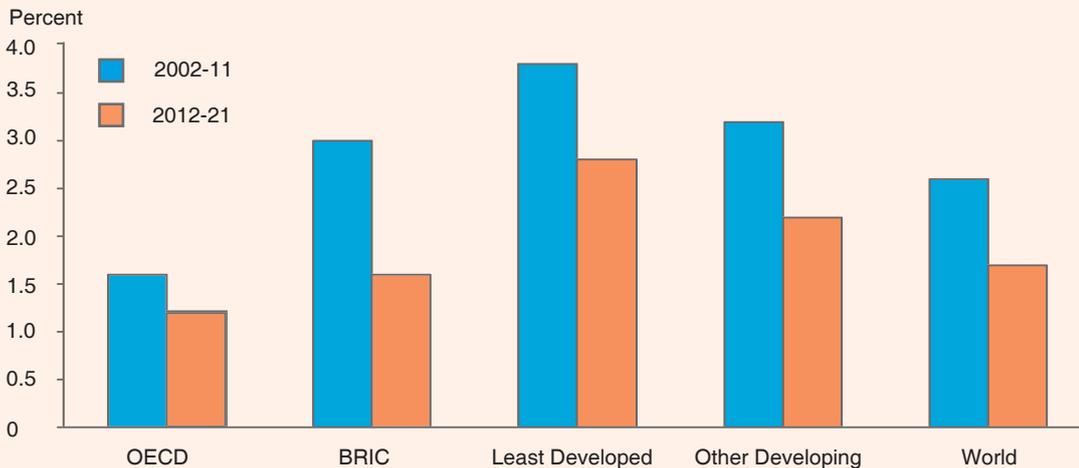




Figure 2. Average annual growth of net agricultural output



BRIC: Brazil, Russian Federation, India, China

Note: Net output is measured as production less seed and feed and valued at 2004-2006 prices for production of primary commodities in this Outlook.

Global agricultural output growth slows down, but remains positive on a per-capita basis

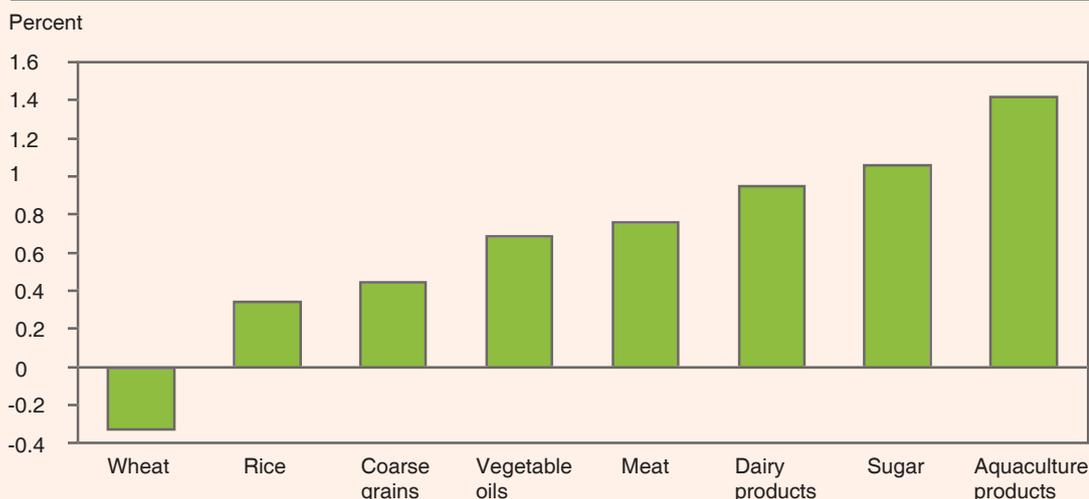
Based on their greater potential to increase land devoted to agriculture and to improve productivity, developing countries will provide the main source of global production growth to 2021. Annual production growth in developing countries is projected to average 1.9% p.a. compared to 1.2% p.a. in developed countries. An additional 680 million people are expected to inhabit the planet by 2021 with the fastest population growth rates in Africa and India. Rising incomes and urbanisation will lead to changes in diets that shift consumption to more processed foods, fats and animal protein. This will favour higher value meats and dairy products, and drive the indirect demand for coarse grains and oilseeds for livestock feed (see Figure 3).

Developing countries continue to dominate market developments

Emerging economies will capture an increasing share of the expanding world trade in agriculture. Most prominent are countries like Brazil, China, Indonesia, Thailand, the Russian Federation and Ukraine that have made significant investments to boost agricultural production capacity. By 2021, developing countries will account for the majority of exports of rice, oilseeds, vegetable and palm oil, protein meals, sugar, beef, poultry meat, fish and fish products.

Emerging economies to play a larger role in expanding world trade in agriculture

Figure 3. Projected average annual growth in global per capita food consumption, 2012-21



Processed foods, proteins and fats show higher growth rates in consumption because of changing diets



Commodity highlights

Global production of bio-ethanol and bio-diesel is projected to almost double by 2021, heavily concentrated in Brazil, the United States, and the European Union. Biofuels are based mainly on agricultural feedstocks and are expected to consume a growing share of the global production of sugarcane (34%), vegetable oil (16%), and coarse grains (14%) by 2021 (see Figure 4).

In response to government mandates, biofuel trade between the United States and Brazil is expected to increase. This Outlook anticipates that the United States would import sugarcane-based ethanol mainly from Brazil to help meet domestic demand created by its mandate for advanced biofuels, while Brazil would import lower priced maize-based ethanol principally from the United States to satisfy the demand from its large fleet of flex-fuel vehicles. US low-blend ethanol demand is expected to be constrained by the blend-wall from 2016 onwards.

Cereal stock-to-use ratios will remain below historical averages, posing the risk of future price volatility. The Russian Federation, Ukraine and Kazakhstan are expected to become much more important sources of wheat exports by 2021, but high production variability in this region may have implications for global trade and world price volatility. Larger exports of rice are projected from Least Developed Countries in Asia, while rice imports are to increase in Africa.

Oilseeds production and exports continue to be dominated by the traditional players, but emerging exporters like Ukraine and Paraguay are expected to increasingly contribute to global export growth. China, the dominant importer, will account for more than half of total world imports. Brazil's oilseed production growth is expected to slow from 4.9% to less than 2% p.a. over the outlook period.

Food and ethanol demand for sugar crops will be sustained over the medium term, maintaining high sugar prices. Production cycles will continue to characterise sugar markets in Asia, leading to occasional large trade fluctuations and price volatility. Because of Brazil's dominant position in the sugar market, the allocation of its sugarcane crop between ethanol and sugar production remains a key market driver.

Increased demand for meats will mostly stem from large economies in Asia, crude oil exporting countries and Latin America, where income gains are expected to be significant. Poultry meat will lead this anticipated growth as the cheapest and most accessible source of meat protein, overtaking pigmeat as the largest meat sector by the end of the outlook period.

Fish production is one of the fastest growing sources of animal protein. World fisheries and aquaculture production are expected to grow by 15% over the projection period. However, with a 33% growth in aquaculture production, it will surpass capture fisheries as the primary source of fish for human consumption by 2018.

Expanding biofuel sector absorbs larger share of crop production

Mandate driven ethanol trade flows between the United States and Brazil are expected to increase

The Black Sea region to play larger role in international wheat trade

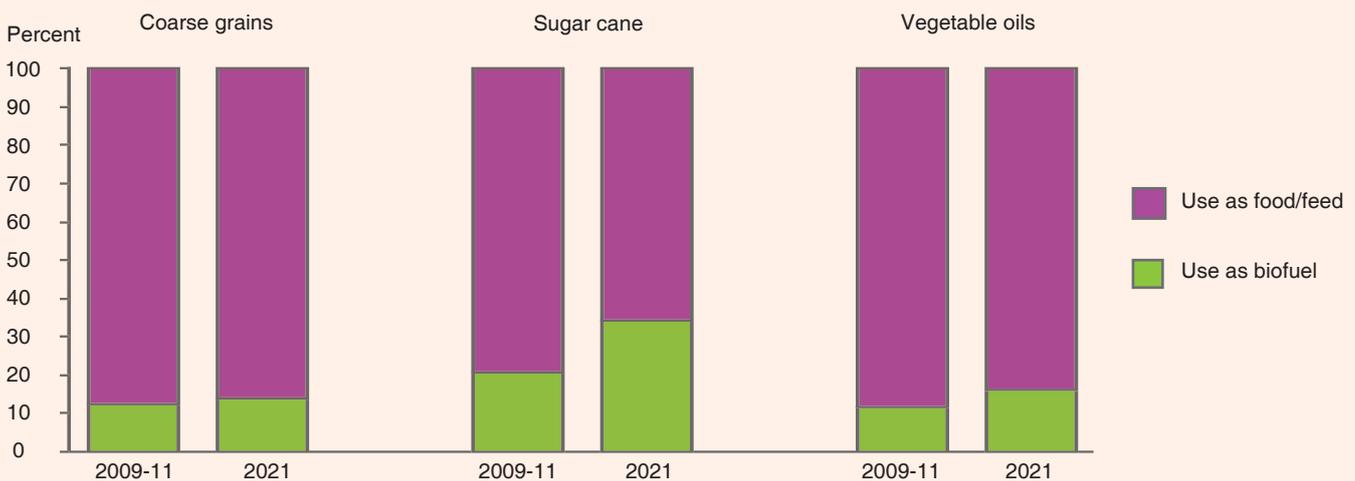
Emerging players in global oilseeds exports, China dominates imports

Brazilian ethanol production influences world sugar markets

Meat consumption expands in developing countries

Aquaculture to surpass capture fisheries in food consumption

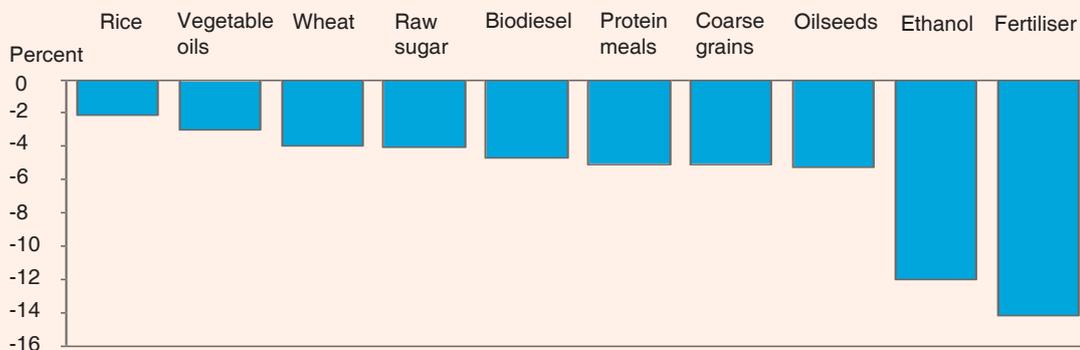
Figure 4. Share of global food/feed and biofuel use



A modest increase in consumption of dairy products is expected in developed countries with the exception of cheese and fresh dairy products, while in developing regions consumption of all products is expected to increase about 30% by 2021. Developing countries are projected to overtake developed countries in milk production by 2013, with large increases in China and India.

Developing countries to become most important milk producers

Figure 5. Impact of a 25% crude oil price reduction on commodity prices (average over projection period 2012-21)



Crude oil prices affect agricultural commodity and biofuel markets

A time for change - longer term perspectives

Agricultural production needs to increase by 60% over the next 40 years to meet the rising demand for food. This translates into an additional 1 Bnt of cereals and 200 Mt of meat a year by 2050 compared with 2005/07 levels. Additional production will also be necessary to provide feedstock for expanding biofuel production.

Significant agricultural production increase needed to satisfy future global food needs

Globally, the scope for area expansion is limited. Total arable land is projected to increase by only 69 Mha (less than 5%) by 2050. Additional production will need to come from increased productivity in the same way as it has for the past 50 years. Increasing productivity will be central to containing food prices in a context of rising resource constraints and will be a key factor in reducing global food insecurity. Productivity gains in the medium-term may come primarily from reducing the productivity gap in developing countries, but a stylised scenario suggests that a significant share of the increased output of crops, used as feedstocks, could be expected to go into biofuel production.

Productivity improvements will be a key factor in reducing global food insecurity

At the same time, there is a growing need to improve the sustainable use of available land, water, marine ecosystems, fish stocks, forests, and biodiversity. Some 25% of all agricultural land is highly degraded. Critical water scarcity in agriculture is a fact for many countries. Many fish stocks are over-exploited, or in risk of being over-exploited. There is a growing consensus that climate change and extreme weather events will increase.

Improved sustainability is critical

Encouraging better agronomic practices, creating the right commercial, technical and regulatory environment, and strengthening agricultural innovation systems (e.g. research, education, extension, infrastructure), including measures addressing the specific needs of smallholders, are essential policy challenges identified in this report. Measures to reduce food loss and waste are also key to meeting rising demand and improving productivity in the supply chain.

Governments need to assure an enabling environment

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