American University of Central Asia

Agricultural Policy and International Trade

Content

Agricultural Policy Background

Agriculture: current situation

- Global level
- European Union
- USA
- Developing and Transition countries

Agricultural Policy Background
Agriculture: current situation

- **Agriculture** is broadly conceived as the set of activities that use land and other natural resources to produce food, fiber and animal products that can be used for direct consumption (self consumption) or for sale, either as food or as input to the manufacturing industry.

Forestry, fishing and hunting are usually included in the agricultural sector.

Agricultural Policy Background
Agriculture: current situation

- **Agricultural production** refers to **vegetable** and **animal** production that is made available for human consumption and animal feed.

- **Agricultural activity** includes **harvesting**, **milking**, **breeding** animals and keeping animals for farming purposes.

- **Agricultural area** is any area taken up by arable land, permanent grassland or permanent crops.

https://ec.europa.eu/agriculture/glossary_en

Agricultural Policy Background
Agriculture: current situation

Crop production includes:
- cereals
- main crops (dried and and protein crops, root crops, industrial crops, plants harvested green)
- vegetables, melons and strawberries
- permanent crops (fruits, olive trees and vineyards)

Animal production includes:
- livestock (bovine animals; sheep; goats; pigs; poultry)
- slaughtering
- milk and dairy production
- production of eggs for hatching

http://ec.europa.eu/eurostat/web/agriculture/agricultural-production

1. Agricultural Policy Background
Agriculture: current situation

Drivers

- The **main driver** over the next decade will be **population growth** in developing countries (from 7.4 bln in 2016 to 8.1 bln in 2025).

- A **second driver** is **per capita income growth**, which adds to the consumption of each person (consumption growth mainly in developing countries).

- **Third driver** is changing consumer habits: a "nutrition transition" - higher incomes translate first into a **demand for more calories**, and then into a **demand for more protein** (typically from animal sources) as well as for other nutrients coming from fruit and vegetables. This trend is accompanied **by more consumption** of **sugar, oils** and **fats**, and greater consumption of **processed foods**.

OECD-FAO Agricultural, Outlook 2016-2025

Agricultural Policy Background
Agriculture: current situation

- The relative weight of the agricultural sector in the economy varies from country to country and in general is between **3 and 40 %** of the total value of production, and may count for as much as **70% of total labor**.

- **78% of the world's poor** live in rural areas and depend largely on farming to make a living.

- Growth in **world demand for agricultural products** is expected to fall **from** an average **2.2% a year** over the past 30 years **to 1.5% a year** for the next 30.

- In **developing countries** the slowdown will be from **3.7% to 2%**, partly as a result of **China** having passed the phase of rapid growth in its demand for food.

- **Global shortages** are **unlikely**, but **serious problems already exist** at national and local levels and may worsen unless focused efforts are made.

World agriculture: towards 2015/2030, FAO

Agricultural Policy Background

Agriculture:

Table 1. Relative weight of the three main sectors in the economy

Measure	*Bangladesh*	*Low-Income Economies*	*Lower Middle-Income Economies*	*Upper Middle-Income Economies*	*High Income Industrial Market Economies*
Average GNP per capita (1982 dollars)	140	280	840	2,490	11,070
Proportion of GDP by sector					
- *agriculture*	47	37	23	11	3
- *industry*	14	32	35	41	36
- *services*	39	31	42	48	61
Proportion of labor force by sector					
- *agriculture*	74	72	56	30	6
- *industry*	11	13	16	28	38
- *services*	15	15	28	42	56

Source: Stevens and Jabara, tables 3.5 and 3.6 pages 50-51. Data from the World Bank's World Development report 1984.

Agricultural Policy Background
Agriculture: current situation
Global Demand and Supply

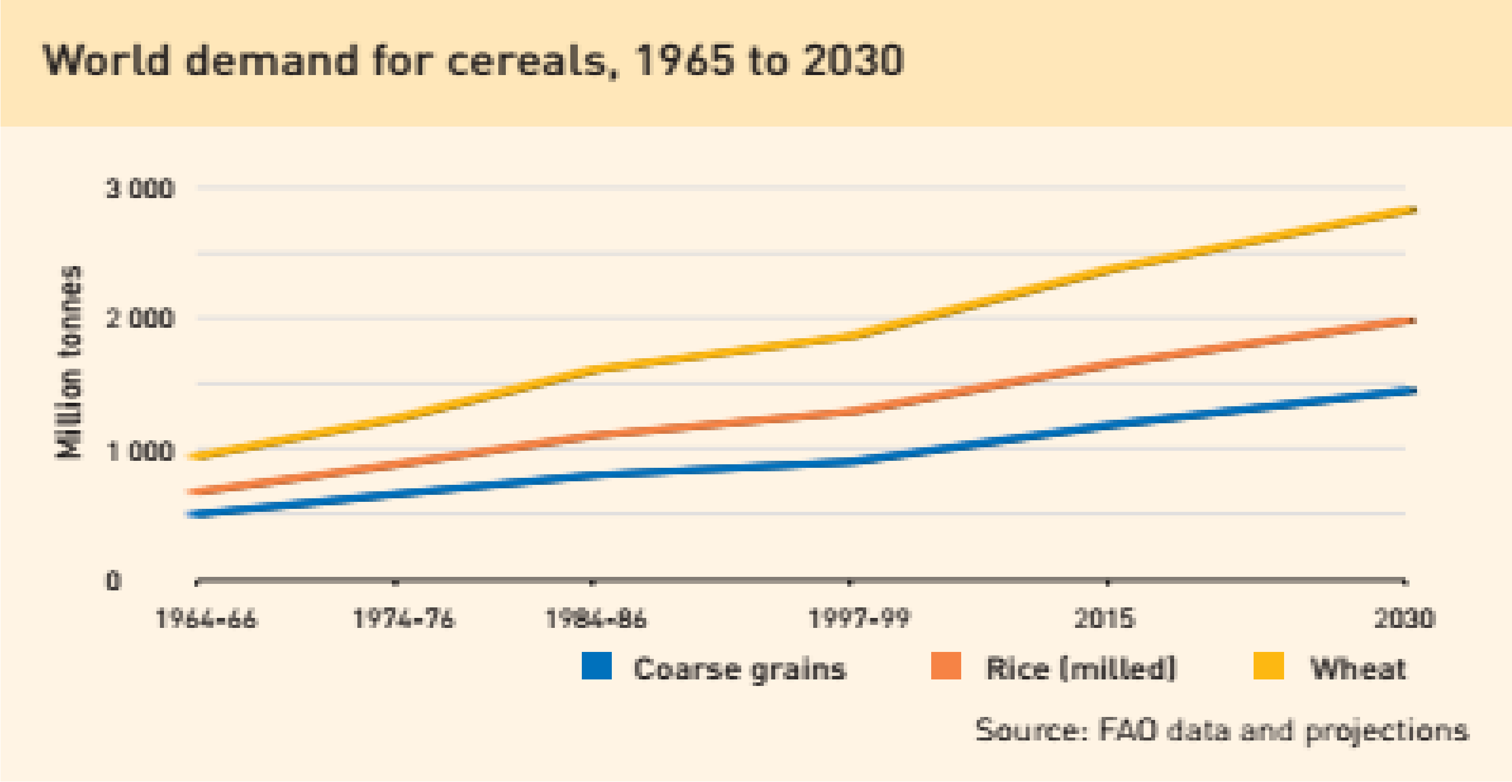
Growth in demand for agricultural products (% per annum)	1969 to 1999	1979 to 1999	1989 to 1999	1997-99 to 2015	2015 to 2030
World	2.2	2.1	2.0	1.6	1.4
Developing countries	3.7	3.7	4.0	2.2	1.7
Industrial countries	1.1	1.0	1.0	0.7	0.6
Transition countries	- 0.2	- 1.7	- 4.4	0.5	0.4

Growth in agricultural production (% per annum)	1969 to 1999	1979 to 1999	1989 to 1999	1997-99 to 2015	2015 to 2030
World	2.2	2.1	2.0	1.6	1.3
Developing countries	3.5	3.7	3.9	2.0	1.7
Industrial countries	1.3	1.0	1.4	0.8	0.6
Transition countries	- 0.4	- 1.7	- 4.7	0.6	0.6

Calorie consumption (kcal/capita/day)	1961-63	1979-81	1997-99	2015	2030
World	2 283	2 552	2 803	2 940	3 050
Developing countries	1 960	2 312	2 681	2 850	2 980
Industrial countries	2 891	3 135	3 380	3 440	3 500
Transition countries	3 154	3 389	2 906	3 060	3 180

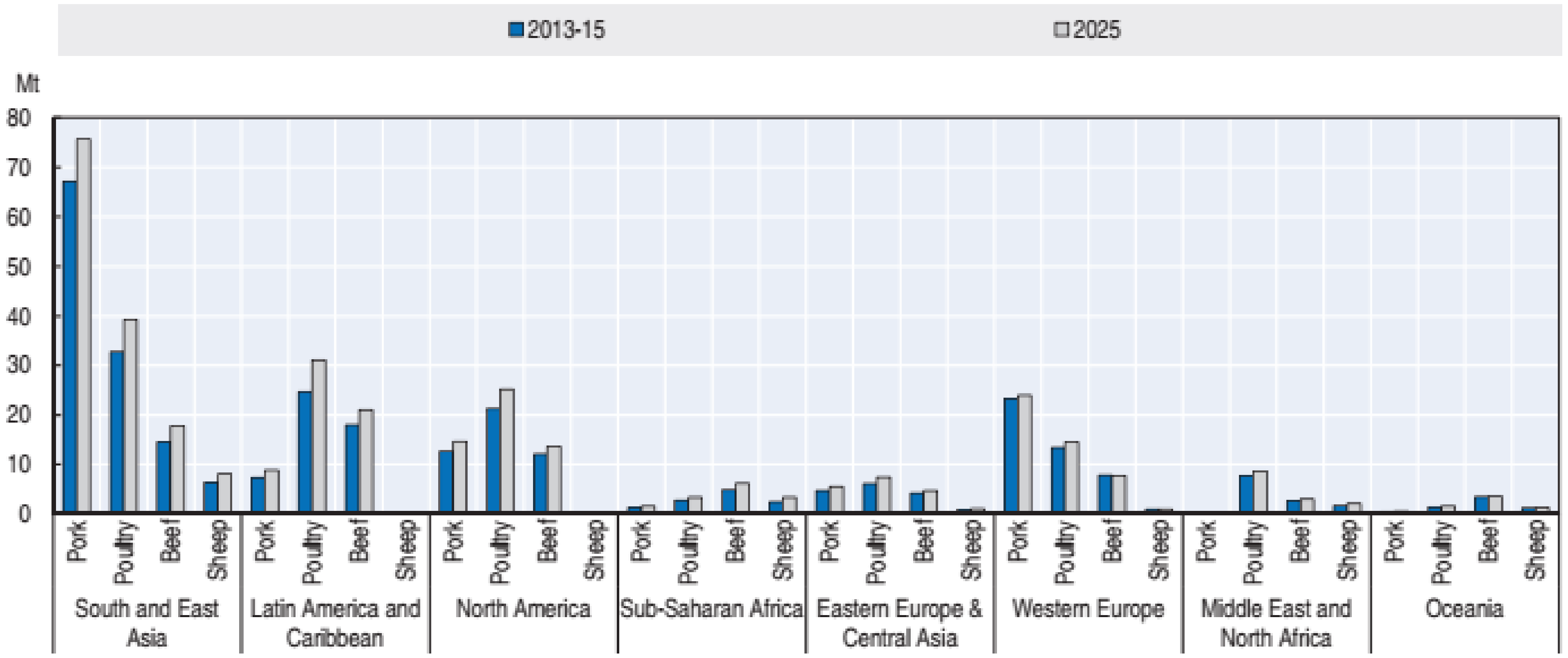
World agriculture: towards 2015/2030, FAO

Agricultural Policy Background
Agriculture: current situation



Agricultural Policy Background
Agriculture: current situation

Global meat production



OECD-FAO, 2016

Agricultural Policy Background
Agriculture: current situation

Trade

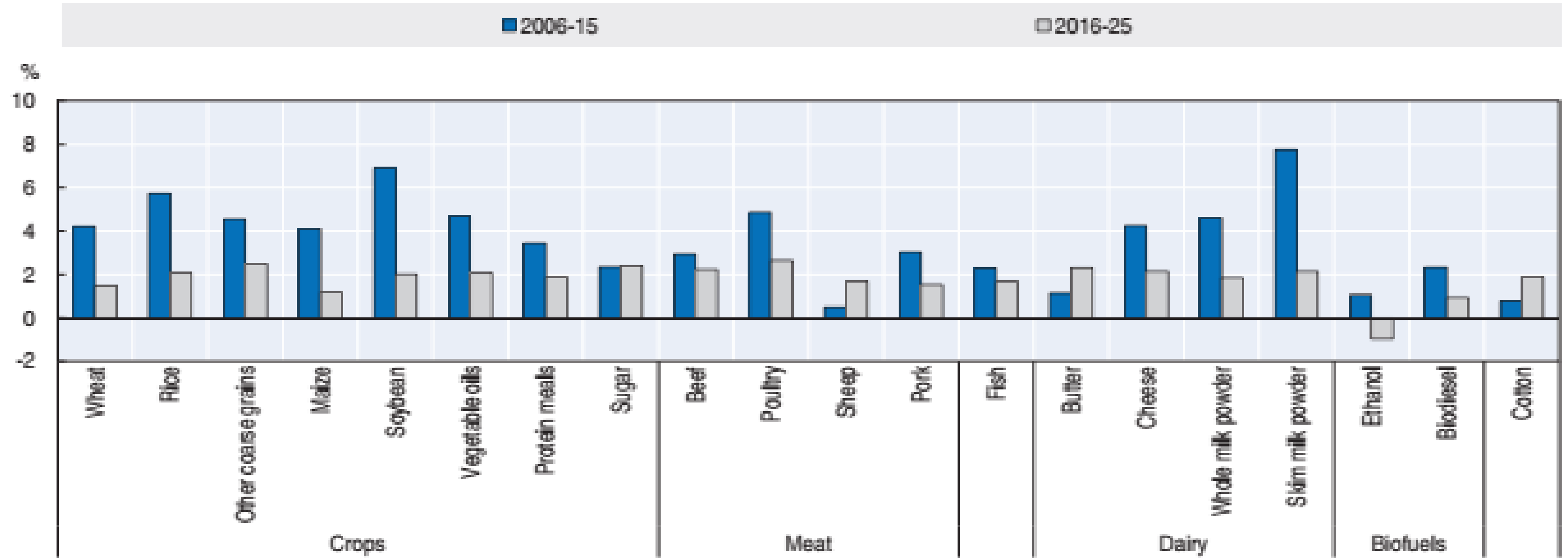
Agricultural trade to increase, but at slower rates than in the past

The declines are particularly acute for **cereals** and **dairy products**, but also for **meats (with the exception of sheep meat**) and **fish**. Among non-food products, trade in **ethanol** and **biodiesel** is expected to contract, while trade in **cotton** is projected to recover following sharp declines between 2005 and 2008.

OVERVIEW OF THE OECD-FAO AGRICULTURAL OUTLOOK 2016-2025

Agricultural Policy Background
Agriculture: current situation

Figure 1.9. **Growth in trade by commodity**
Annual percentage growth in volume terms



Source: OECD/FAO (2016), "OECD-FAO Agricultural Outlook", *OECD Agriculture statistics* (database), *http://dx.doi.org/10.1787/agr-data-en.*
StatLink http://dx.doi.org/10.1787/888933381231

Agricultural Policy Background

Agriculture:

Trade

- The **main reason** for this slowdown is **lower growth rates in emerging economies**, which have relatively high income elasticities of demand for most food commodities.

The importance of **China** as a major importer of several commodities means that the slowdown in China's growth will have a particularly significant impact.

- A **further reason** for the slowdown is the **adoption of more protectionist policies in some of the larger importing countries**. Whereas agricultural trade protection has been declining in most OECD countries, several emerging economies (including **China, India and Indonesia**) have pursued **self-sufficiency objectives and associated import protection**.

(Only ratified trade agreements are included in the projections. Hence specific provisions of the WTO Nairobi agreement are included, but the Trans-Pacific Partnership agreement is not.)

OVERVIEW OF THE OECD-FAO AGRICULTURAL OUTLOOK 2016-2025

Agricultural Policy Background
Agriculture:

Trade

- The ranking of the commodities is not projected to change considerably during the next decade. **Whole milk powder (WMP) and skimmed milk powder (SMP)** will remain the **most traded agricultural commodities** and **fresh dairy products** (not depicted in the figure) will continue to be **the least traded**. The very low trade in fresh dairy products, with less than 1% of production traded, is directly related to the difficulties in transporting and storing fresh products.
- **Vegetable oils and soybean** are also **highly traded**, with **over 40%** of their production entering international markets.
- About **31% of total fishery production** is expected to be traded in 2025.
- Among the different types of **meat, beef and poultry** will remain the **most traded** and are projected to account for **80%** of the additional meat traded in 2025.

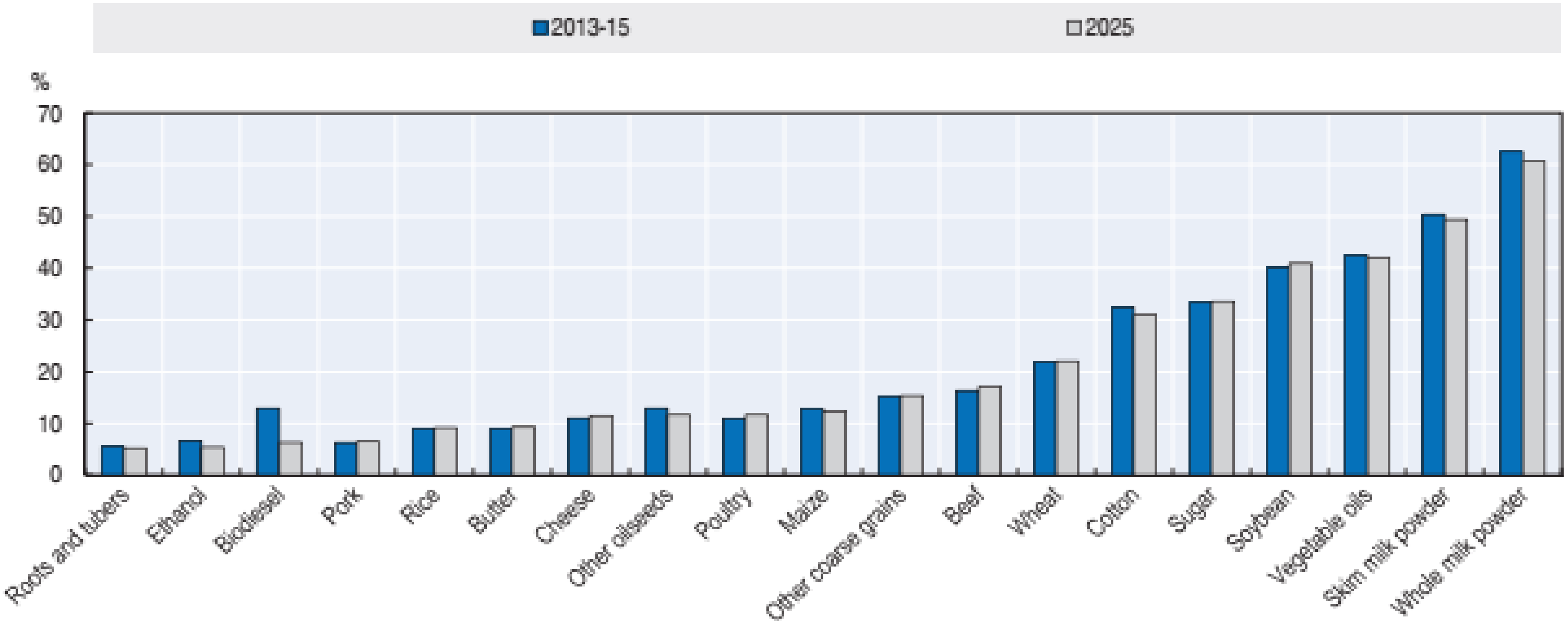
OVERVIEW OF THE OECD-FAO AGRICULTURAL OUTLOOK 2016-2025

Agricultural Policy Background

Agriculture:

Figure 1.10. **Share of production traded**

Share of exports in total production



Source: OECD/FAO (2016), "OECD-FAO Agricultural Outlook", *OECD Agriculture statistics* (database), *http://dx.doi.org/10.1787/agr-data-en.*

StatLink http://dx.doi.org/10.1787/888933381249

Agricultural Policy Background

Agriculture:

Agricultural exports to remain concentrated among a few key suppliers

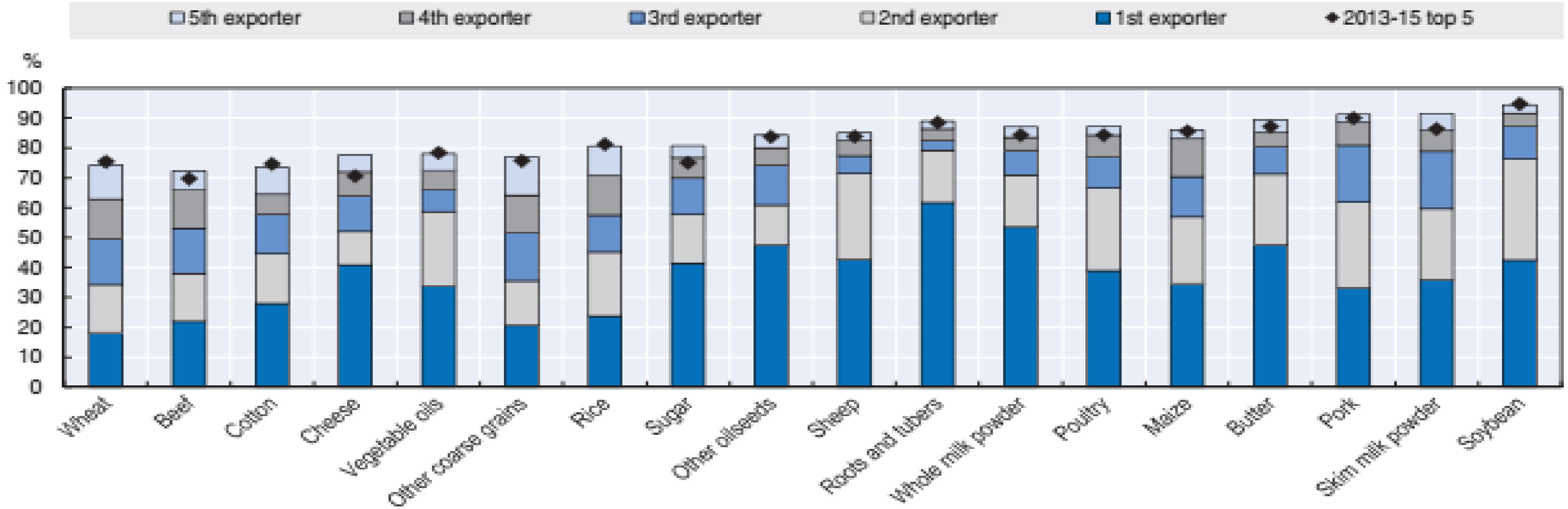
Agricultural exports are concentrated in those few countries that possess the natural endowments necessary for production and have the infrastructure in place to produce and export at competitive prices. During the next decade, that concentration will remain, but there will also be some commodity-specific shifts.

- **Base period (2013-15**). In 2025, at least **70% of total exports** will originate from only **five countries** for each commodity.
- The highest concentration of exports in 2025 is projected to remain in **soybean trade**, where the top five exporters account for almost **95%** of total exports.
- For most products the cumulative shares of the five biggest exporters are similar to those in the base period, with some **slight declines (e.g. wheat and cotton**) and **some increases (e.g. cheese, sugar and SMP)**

Agricultural Policy Background
Agriculture:

Just one country is projected to account for **more than 40%** of world exports of **roots and tubers (Thailand**), **WMP (New Zealand), butter (New Zealand), other oil seeds (Canada), sheep meat (Australia), and sugar and soybeans (Brazil).**

Export shares of top 5 exporters by commodity



ource: OECD/FAO (2016), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-data-en.
StatLink http://dx.doi.org/10.1787/888933381258

Agricultural Policy Background
Agriculture:

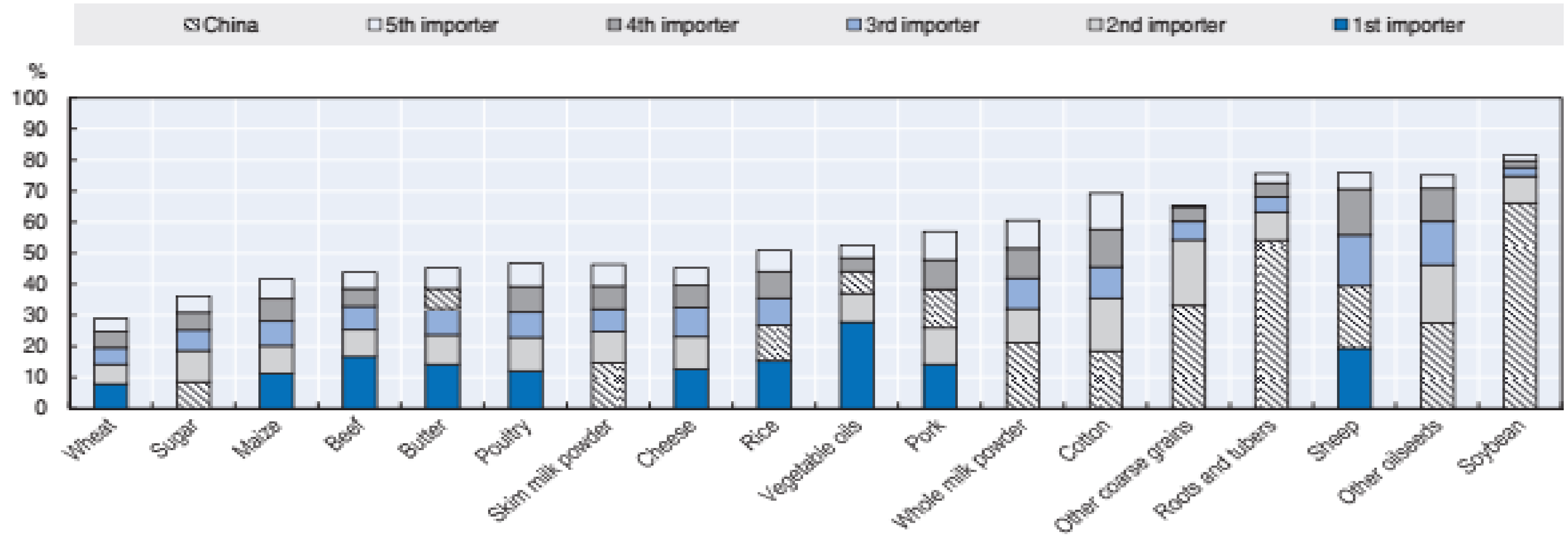
Agricultural exports to remain concentrated among a few key suppliers

- The **United States** will remain the **main exporter of maize**, but will **lose** some market share to **Brazil.**
- The **top three exporters of rice** during the base period – **India, Thailand and Viet Nam** – were responsible for over **65% of total exports**. By 2025, **Viet Nam and India** will have swapped places, making **Viet Nam the largest exporter**, and the export share of the top three exporters will become **less than 60%.** This is a result of the emergence of **Cambodia and Myanmar** as **major rice exporters**.
- **Brazil** is projected to replace the United States as the principal **exporter of soybeans** and **India** as the **main beef exporter**. One of the reasons behind these shifts is the ongoing depreciation of the Brazilian real which makes its exports more competitive.

Agricultural Policy Background
Agriculture:

Agricultural imports to be more dispersed, but with China a key market for several commodities

Import shares of top 5 importers by commodity



Note: Shading for China is super-imposed depending upon its position among leading importers.
Source: OECD/FAO (2016), "OECD-FAO Agricultural Outlook", *OECD Agriculture statistics* (database), *http://dx.doi.org/10.1787/agr-data-en.*
StatLink http://dx.doi.org/10.1787/888933381265

Agricultural Policy Background
Agriculture:

- **China** is a **major importer** of several commodities, and accounts for a large share of the markets for **soybeans and other oilseeds, roots and tubers, other coarse grains, cotton and milk powders**.

- **Soybean** imports to China are projected to account for **more than 65% of world imports** by 2025.

- The **largest demand for cotton** imports will also come from China in 2025, even though **Bangladesh** is projected to be a close second, followed by **Viet Nam** and **Indonesia**.

OVERVIEW OF THE OECD-FAO AGRICULTURAL OUTLOOK 2016-2025

Agricultural Policy Background
Agriculture:

- **China** is the **largest producer of sheep meat and pig meat** in the world, yet **also imports** large amounts of **both types of meat**. In the case of **beef** and **sheep**, which are the meat types that require the most feed, China’s imports will even exceed its domestic production.

- **China** will remain the largest importer of **SMP and WMP** in 2025, however its import shares of WMP are projected to decrease from **25% in 2013-15** to 21% in 2025.

- **Viet Nam**, **Algeria and Nigeria** are projected to emerge as **major importers of WMP**.

OVERVIEW OF THE OECD-FAO AGRICULTURAL OUTLOOK 2016-2025

Agricultural Policy Background
Agriculture: current situation

European Union (EU)

- The **EU agriculture sector** has roughly **11 million farms**, which provide work for roughly **44 million** including agri-workers, workers in the food processing, food retail and food services.
- The agri-food sector accounted for **6% of EU GDP**.
- The **EU** has become a **net exporter** of food and drink, with an average annual **8% growth** in the value of exports over the past 10 years, reaching **€129 billion in 2015**.
- CAP has an annual budget of roughly **€59 billion**.

Agricultural Policy Background
Agriculture: current situation

Western Europe: Stable production structures

The industrialised countries hold **significant shares of global dairy production (36%), biofuels (30%), meat (15%) and cereals (13%).**

After years of strong expansion in response to high prices, the projected slowing in crop production results from flat or decreasing biofuel feedstock demand, stagnating domestic feed and food demand and stiffer competition in the world market for cereals, especially from Eastern Europe and Central Asia.

- Total **harvested area** will be reduced by 3% in 2025.
- **Yields** are the highest in the world for most crops with only small margins for improvement (4% on average).

OECD-FAO Agricultural
Outlook 2016-2025

Agricultural Policy Background
Agriculture: current situation

Western Europe: Stable production structures

- By 2025, the production is projected to further **concentrate on cereals**.
- Individual crop projections are mixed; **maize and sugar beet** production will expand, while harvests of other coarse grains, other oilseeds, and roots and tubers (mainly potatoes) are expected to decline.

- **The meat sector** is projected to grow at twice the rate of crops, which will result in 1.7 Mt of additional meat production in 2025. **Poultry and pork** account for most of the gains. Intensification and restructuring of the dairy sector in the European Union will result in an overall **expansion of milk production**. The strong supply of raw milk backs a significant enlargement of the dairy processing sector.

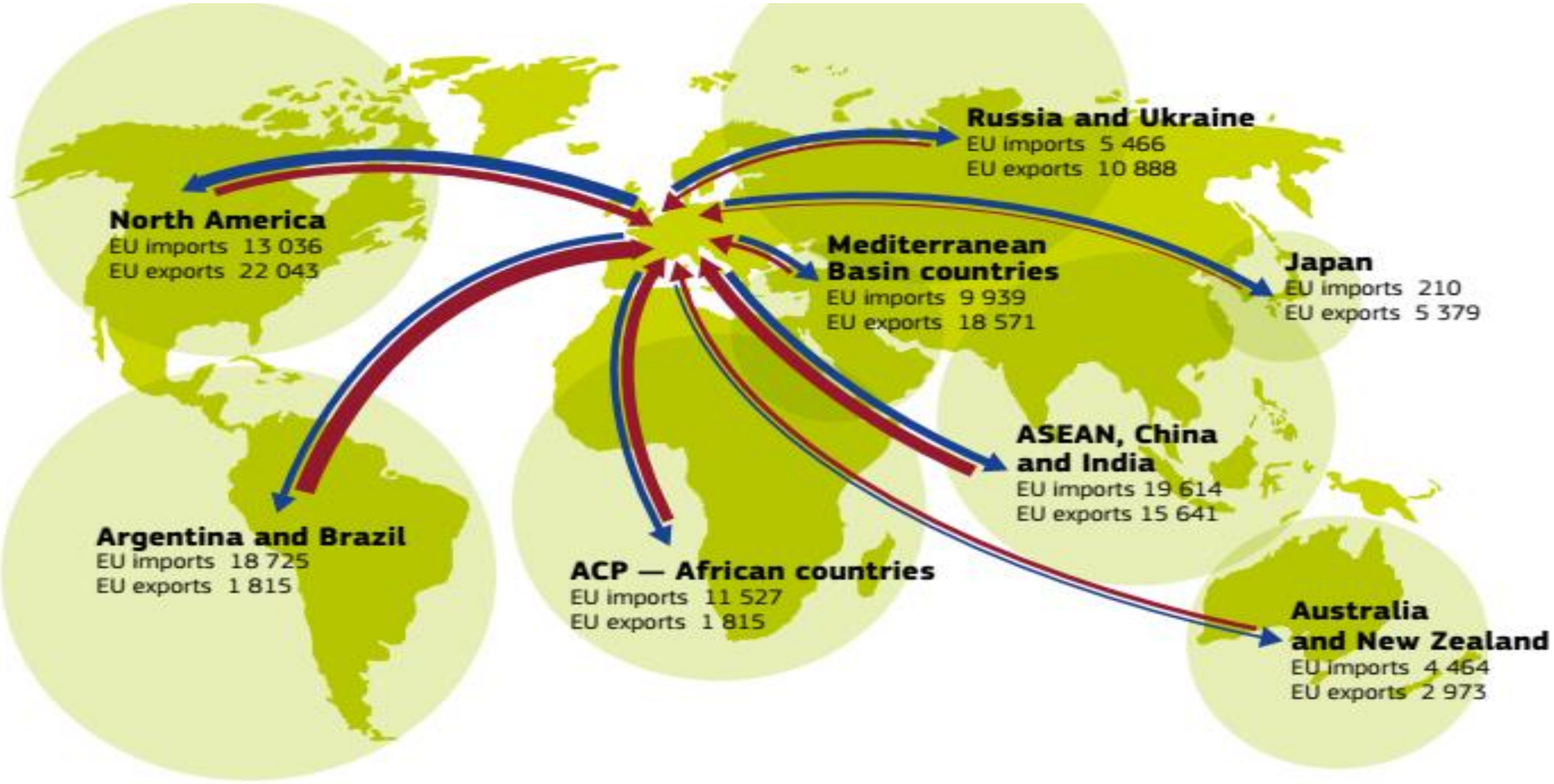
OECD-FAO Agricultural
Outlook 2016-2025

Agricultural Policy Background

Agriculture: current situation

European Union: Common agricultural policy (CAP)

Trade: Import/Export



Agricultural Policy Background
Agriculture: current situation

USA

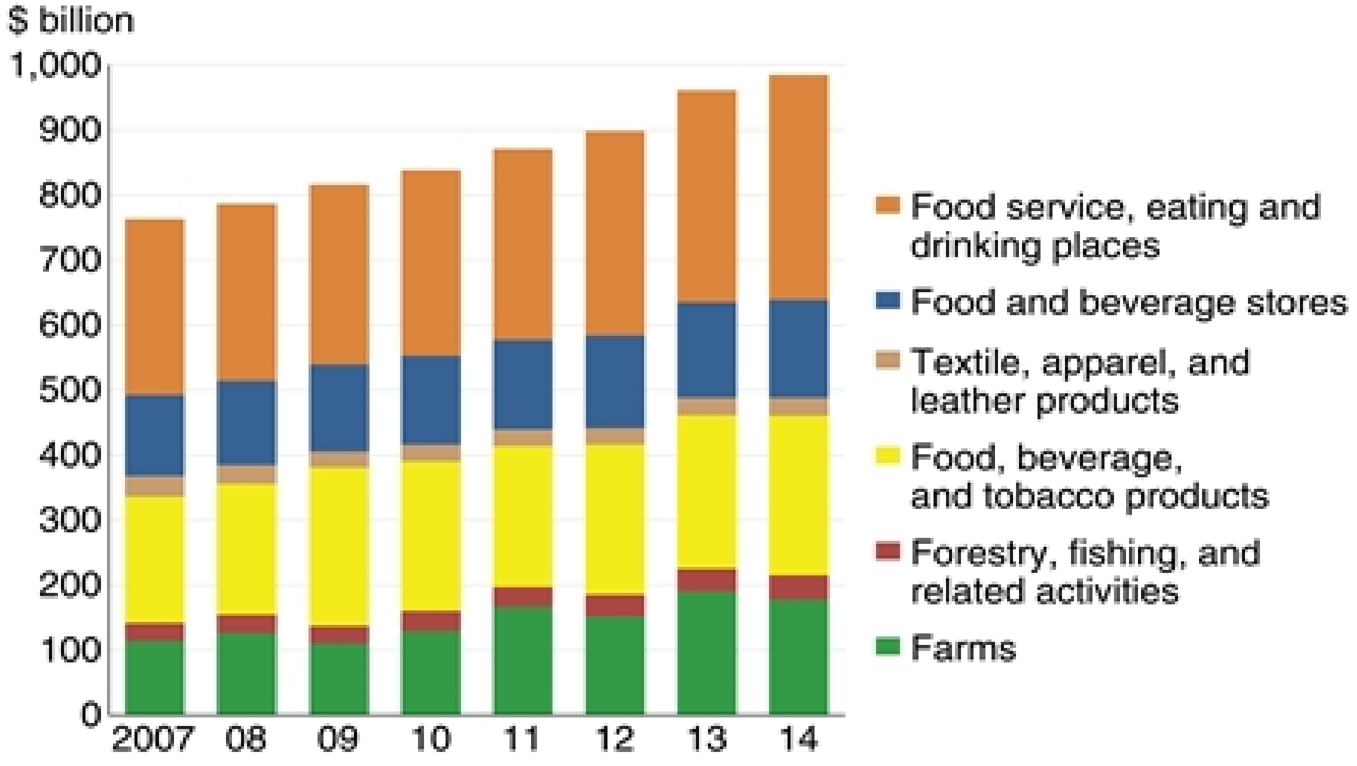
- Agriculture and agriculture-related industries contributed **$985 billion (5.7%)** to the U.S. gross domestic product (GDP) in 2014.

- The output of America's farms contributed $177.2 billion of this sum **(~ 1%) of GDP**.

Agricultural Policy Background

Agriculture: current situation

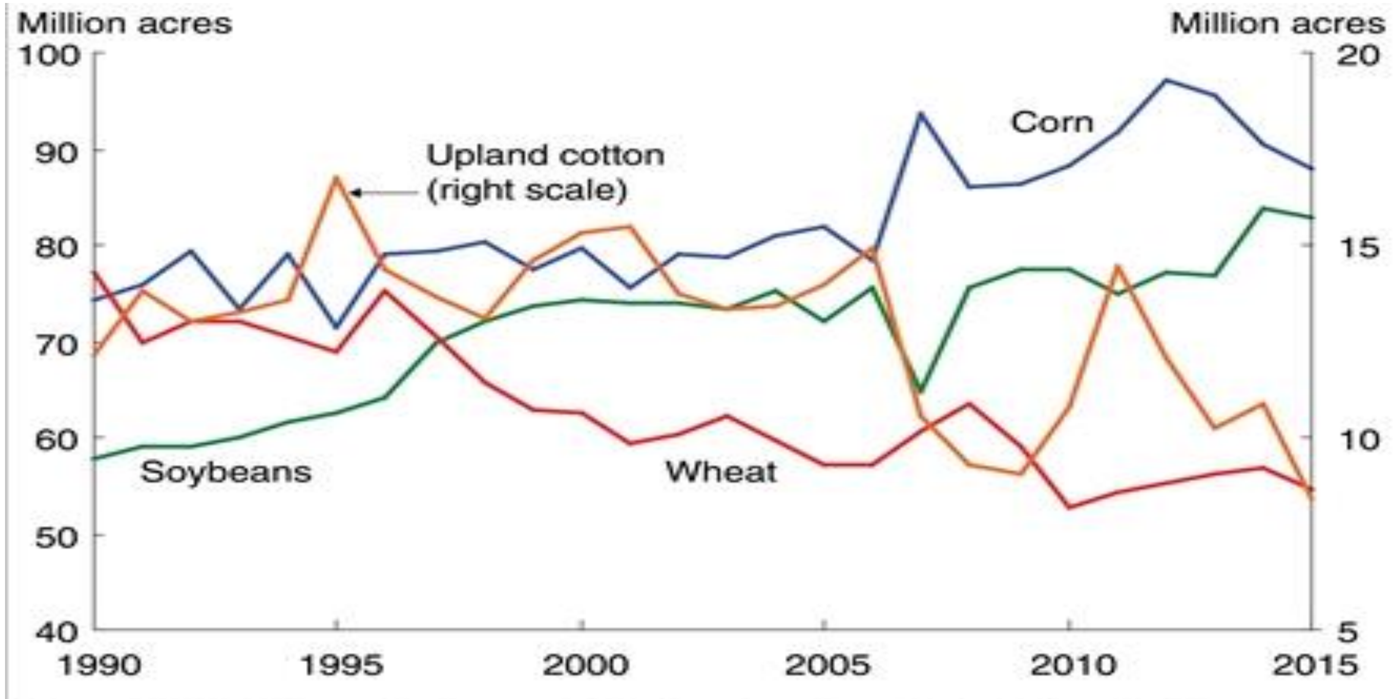
USA



Note: GDP refers to gross domestic product.
Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of Economic Analysis, Value Added by Industry series.

Agricultural Policy Background
Agriculture: current situation

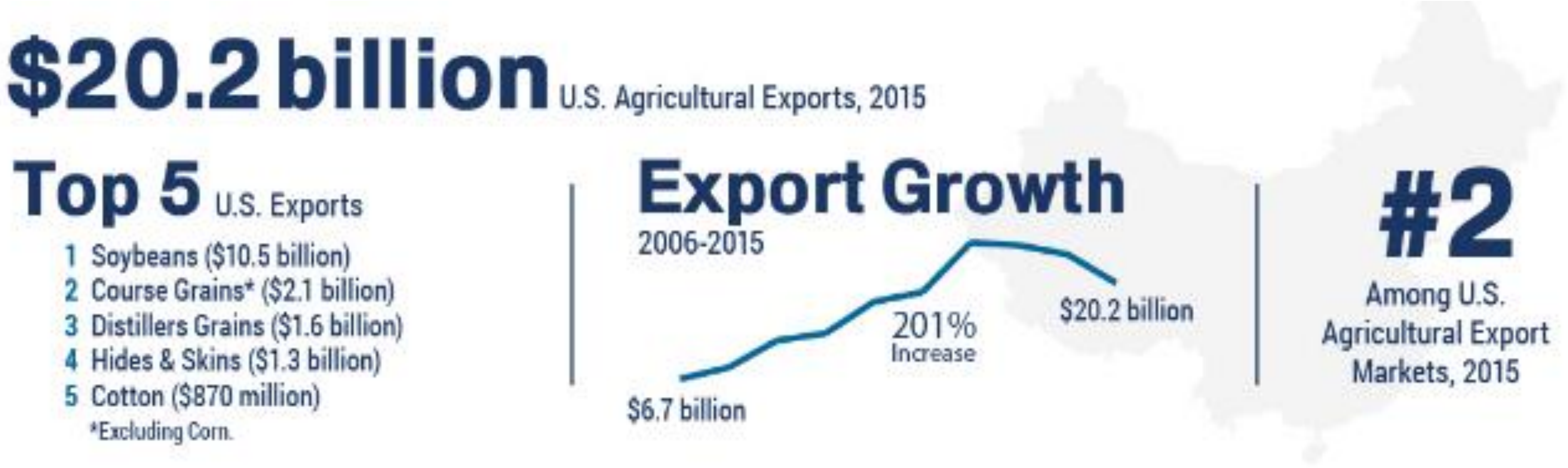
USA planted area: Corn, wheat, soybeans & upland cotton, 1990-2015



Source: USDA, Economic Research Service, Baseline Related Historical Data.

Agricultural Policy Background
Agriculture: current situation

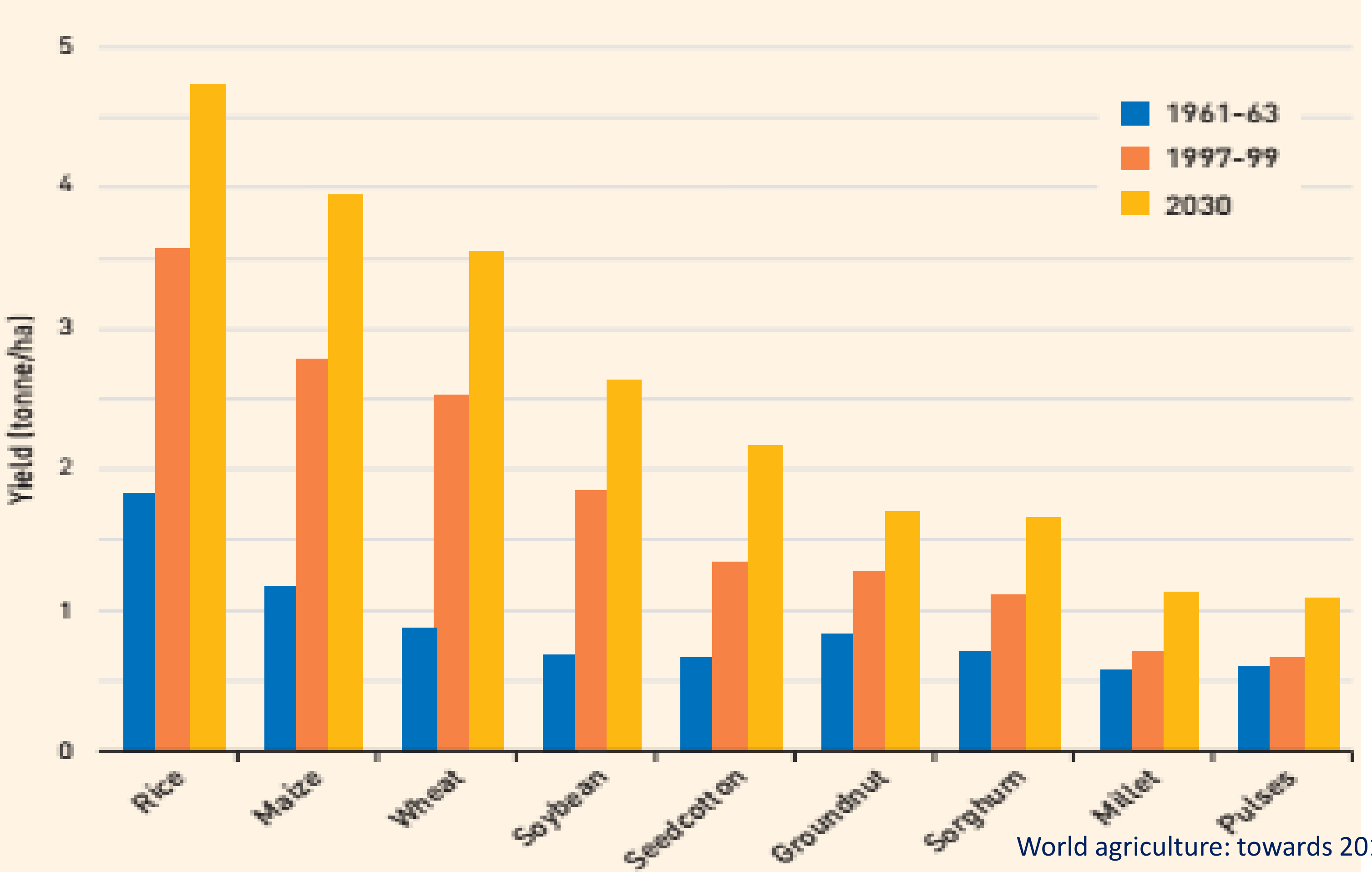
USA U.S. agricultural exports to China, 2015



Agricultural Policy Background

Agriculture:

Crop yields in developing countries, 1961 - 2030



World agriculture: towards 2015/2030, FAO

Agricultural Policy Background Agriculture:

Crop yields in developing countries, 1961 - 2030

- in the past four decades, rising yields accounted for about 70% of the increase in crop production
- 70% of growth in crop production by 2030
- 80% of future increases in crop production in developing countries will have to come from **intensification**: higher yields, increased multiple cropping and shorter fallow periods.

World agriculture: towards 2015/2030, FAO

Agricultural Policy Background
Agriculture: current situation

China

- feeds **20% of the world population** with less than 9% of the world arable land
- the **world's largest importer of agricultural products**
- the **world's top consumer** of meat and grain
- uses **more fertilizer** that any other country
- **40%** of China's crop land is **irrigated**, compared to **23% in India**

WTO, 2012