

Global Agricultural Trade: United States, China and Emerging Markets

Jim Hansen¹, Mary Marchant², Francis Tuan³ and Agapi Somwaru⁴

¹USDA, Economic Research Service, jhansen@ers.usda.gov

²Virginia Tech, mary.marchant@vt.edu

³Renmin University of China ftuan@Comcast.net

⁴Economic Consulting, agapi.somwaru@gmail.com

2018 China Agricultural Outlook Conference,
Beijing, China, April 20 - 21, 2018.

¹Acknowledgements: Funding for this work was provided by the National Institute of Food and Agriculture, U.S. Department of Agriculture (USDA-NIFA) and the Agriculture and Food Research Initiative (AFRI), USDA-NIFA-AFRI Grant Number 2014-67023-21946, “Expanding U.S. Market Access in China’s Evolving Agricultural and Trade Policy Environment.”

Disclaimer: The views expressed are those of the authors’ and do not represent those of the USDA Economic Research Service or the United States Department of Agriculture.

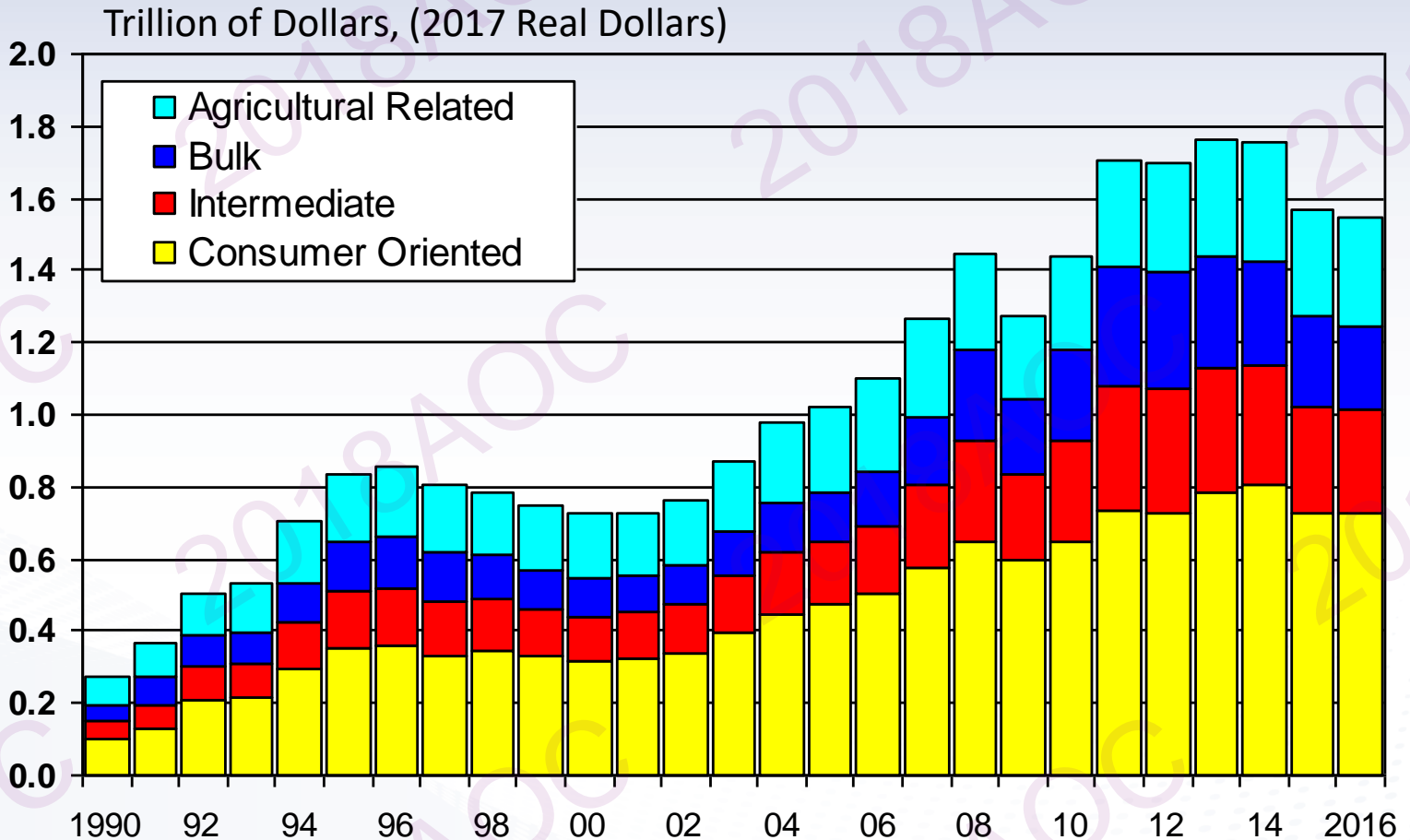


Outline

- World Agriculture Trade – A Growth Story
- China's and United States agricultural trade
- US Exports of bulk, Intermediate commodities, specialty products and niche markets,
- Emerging markets and growing agricultural imports



World Agricultural Trade



Source: U.N. Trade Data, WTO definition, April 2018.

United States Department of Agriculture, Economic Research Service

The Largest Agricultural Trading Countries in Billion US\$ 2016-2017 average

Imports

• EU 28	456.3
• United States	125.9
• China	109.7
• Japan	55.3
• Canada	34.7
• Mexico	27.1
• India	26.1
• Russia	26.0
• South Korea	24.9
• Hong Kong	24.9
• Indonesia	18.3
• Malaysia	14.9
• Turkey	13.6

Exports

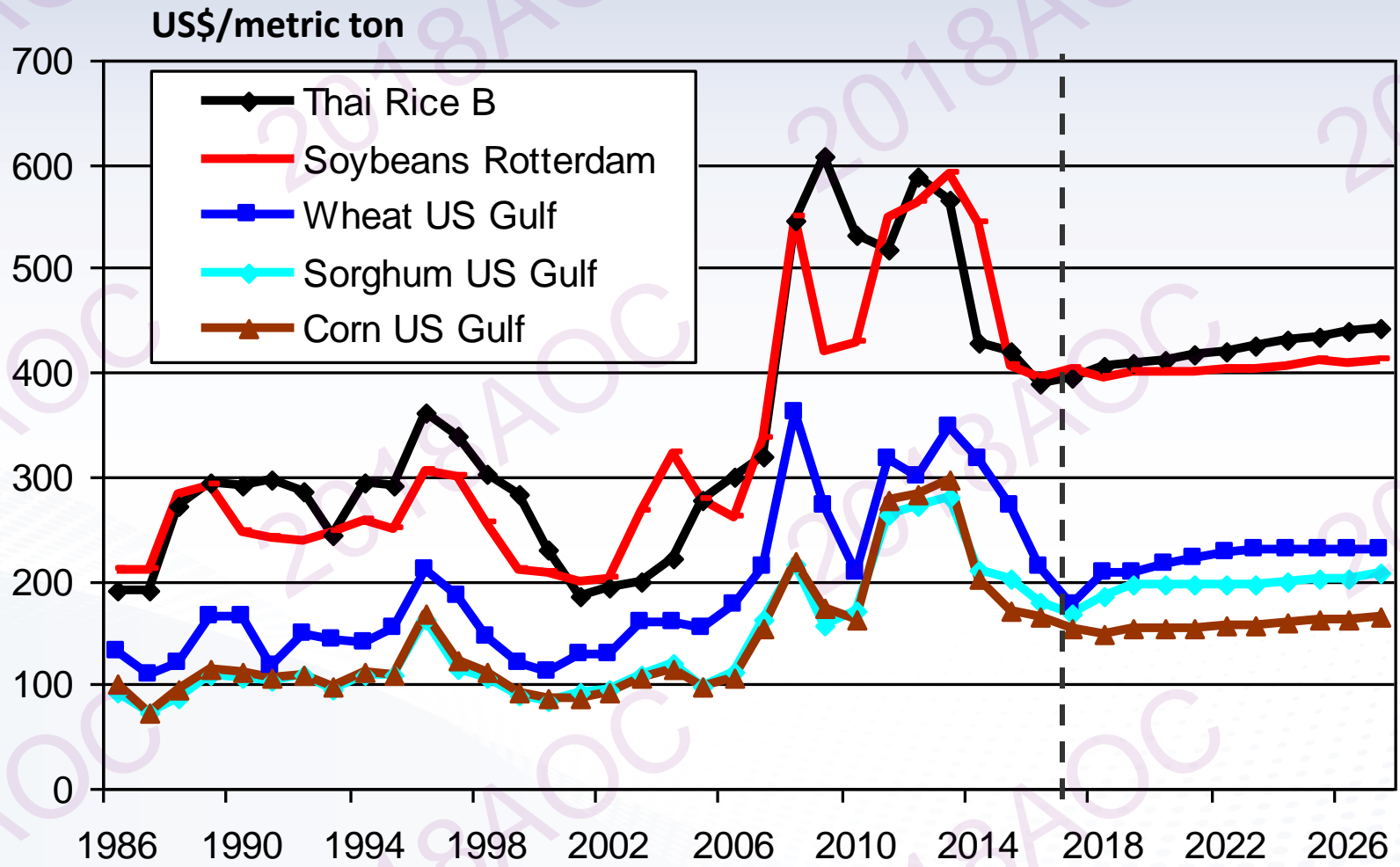
• EU 28	456.2
• United States	141.1
• Brazil	76.3
• China	54.1
• Canada	44.3
• Argentina	34.6
• Australia	34.5
• Indonesia	32.9
• India	30.1
• Mexico	29.9
• Thailand	26.7
• Malaysia	23.2
• New Zealand	22.0



Source: Global Trade Atlas, WTO AG Group 2012, World & Partners, April 2018.

United States Department of Agriculture, Economic Research Service

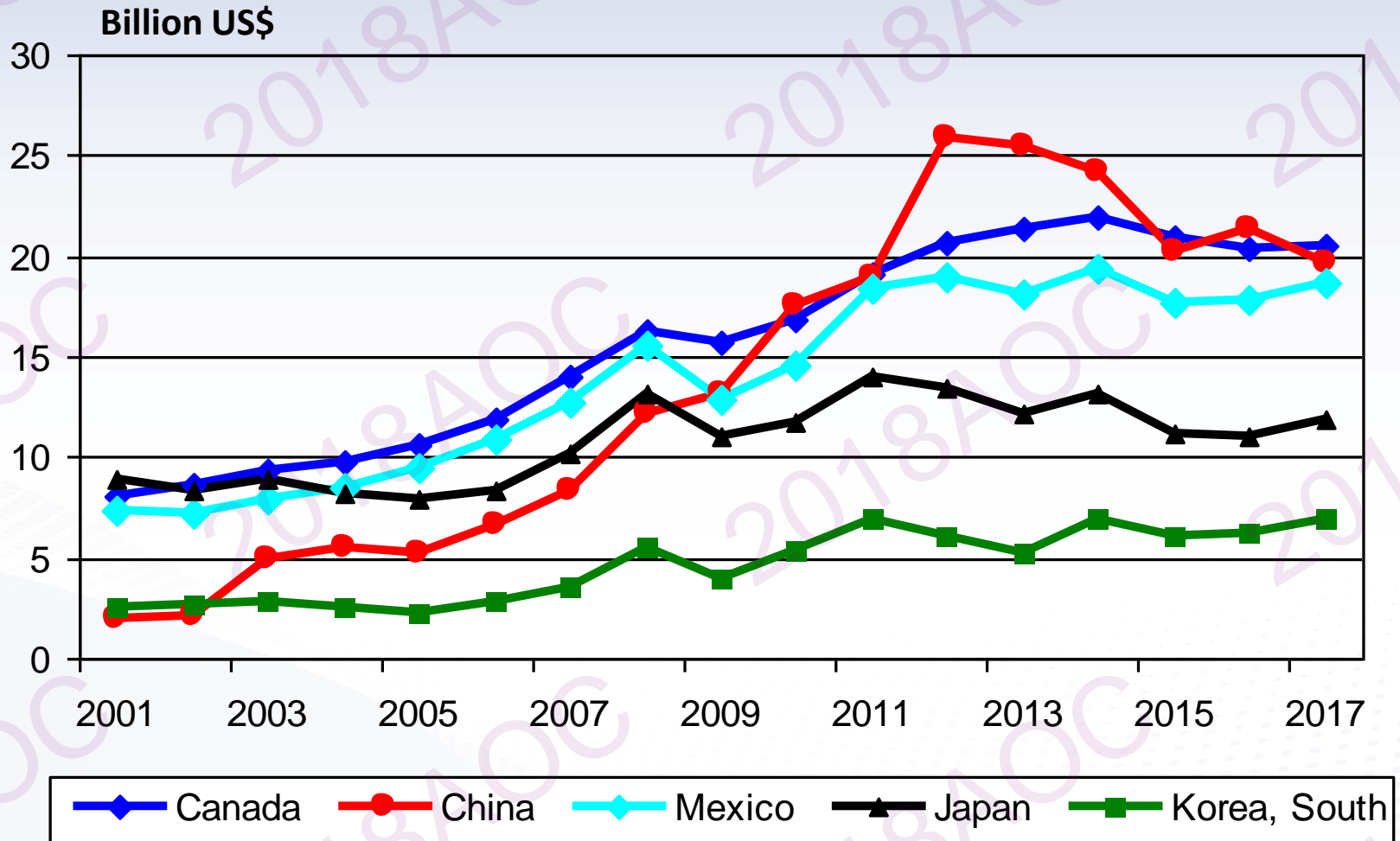
International Commodity Price USDA's Projections 2018-2027 (US\$/mt nominal)



Source: *USDA Agricultural Baseline Projections to 2027*, February 2018, based on November 2017 data.

United States Department of Agriculture, Economic Research Service

United States Agricultural Exports: Top Five Countries (US\$ Billion)



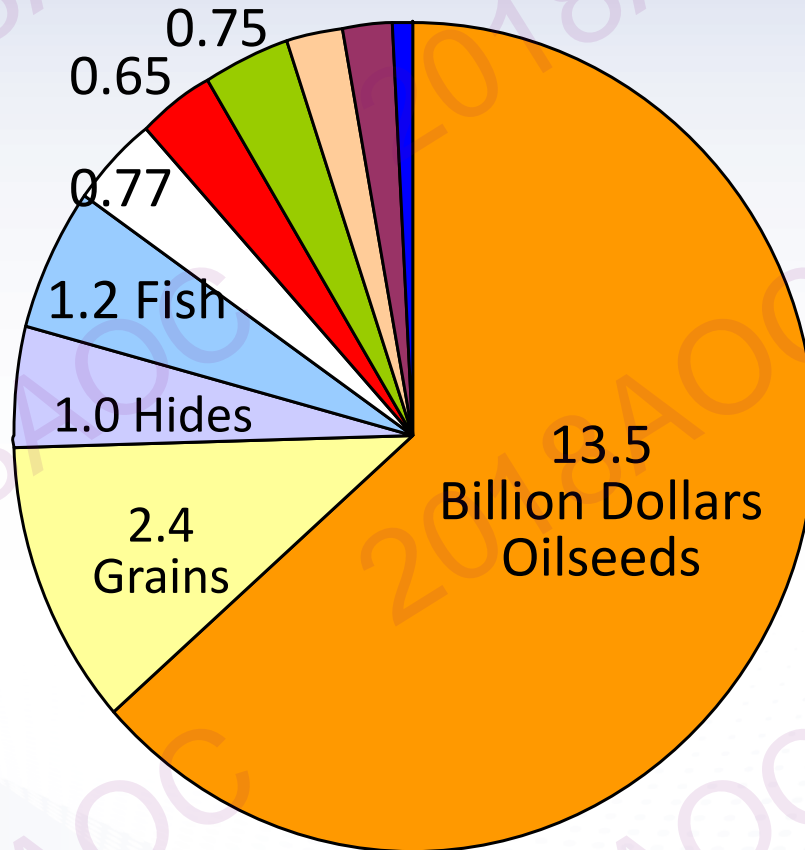
Source: *USDA Agricultural Baseline Projections to 2027*, February 2018, based on November 2017 data.

United States Department of Agriculture, Economic Research Service

United States Agriculture Exports to China In Billion Dollars (2016-2017 average)

Billion dollars (annual)

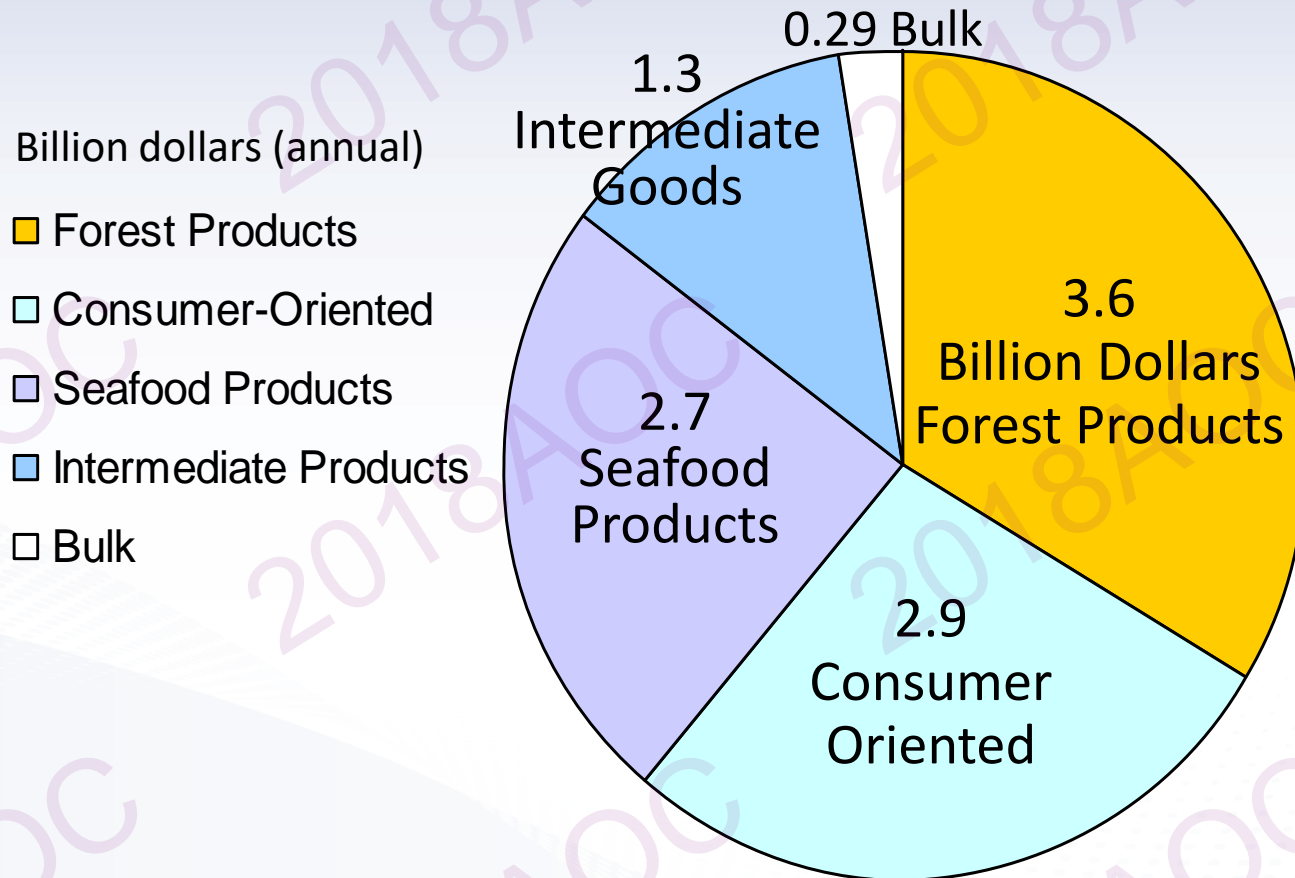
- Oilseeds & Prods
- Grains & Feeds
- Hides & Skins
- Fish & Shellfish
- Cotton
- Meats & Products
- Fruits & Veg
- Dairy Products
- Farm Mach & Chem
- Other



Source: USDA, Foreign Agricultural Service, Global Agricultural Trade System database, FATUS, April 2018.

United States Department of Agriculture, Economic Research Service

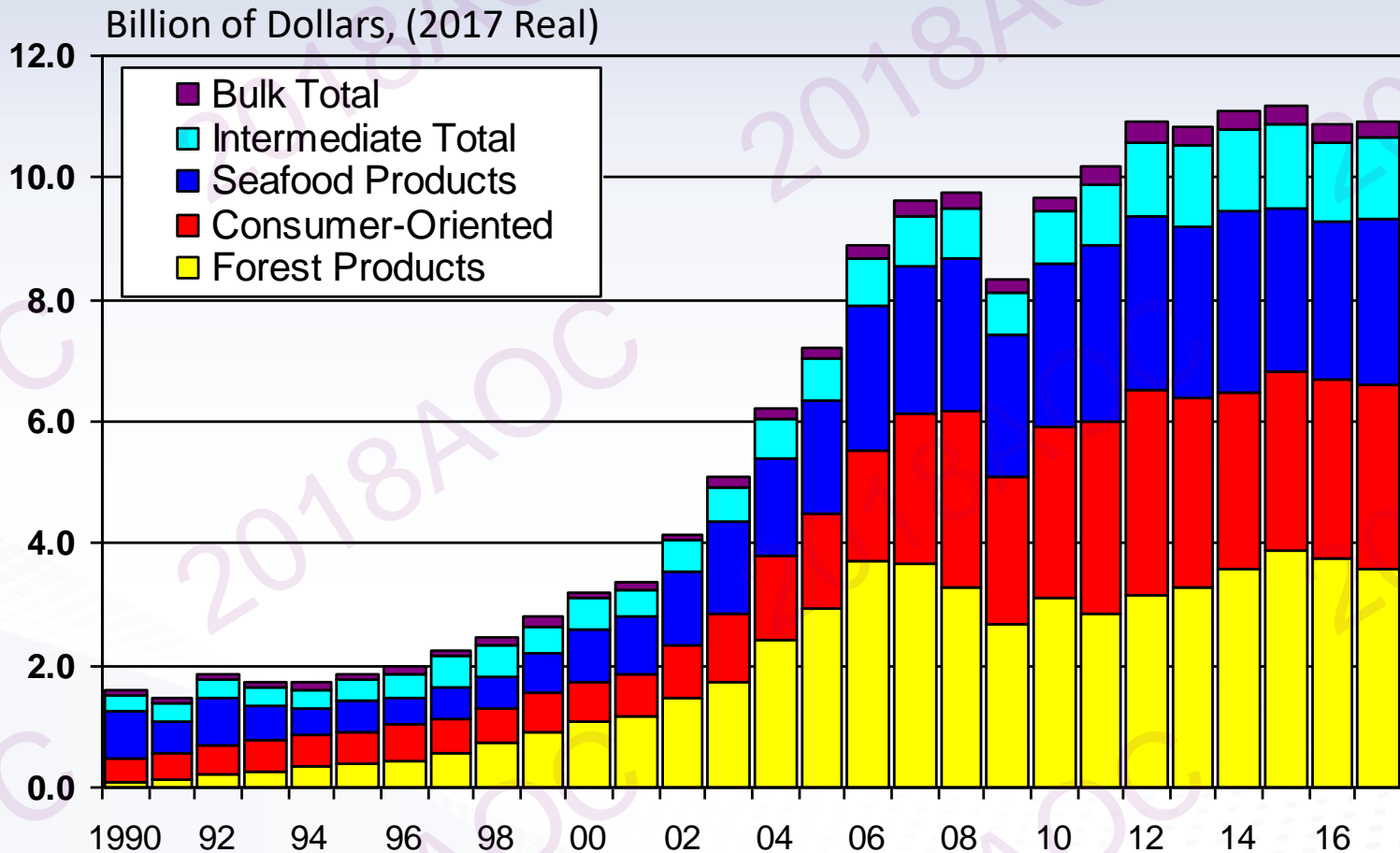
China Agriculture Exports to United States In Billion Dollars (2016-2017 average)



Source: USDA, Foreign Agricultural Service, Global Agricultural Trade System database, FATUS, April 2018.

United States Department of Agriculture, Economic Research Service

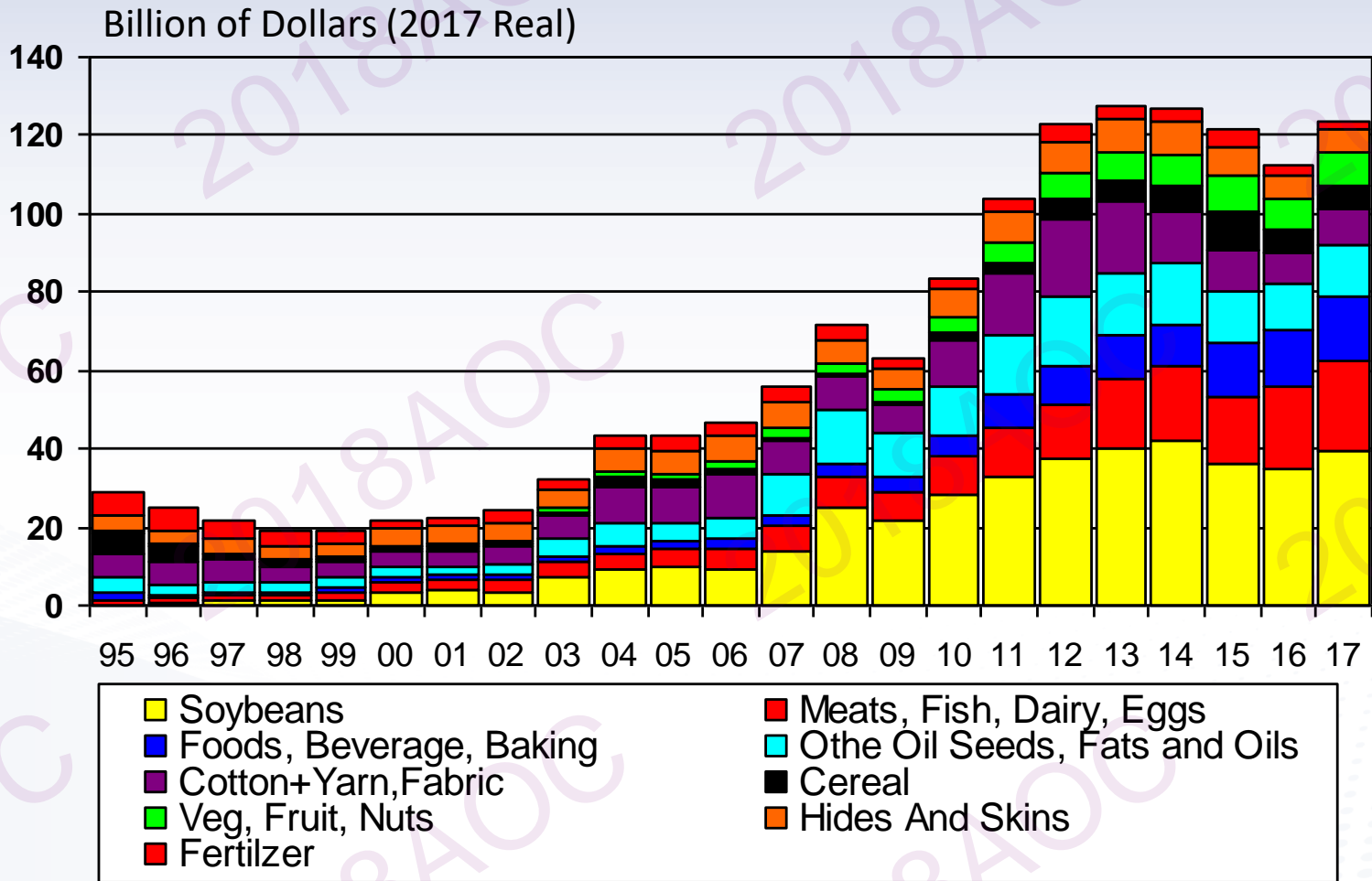
China's Annual Agriculture Exports to the U.S.



Source: USDA, Foreign Agricultural Service, Global Agricultural Trade System database, BICO, April 2018.

United States Department of Agriculture, Economic Research Service

China's Annual Agriculture Imports from the World

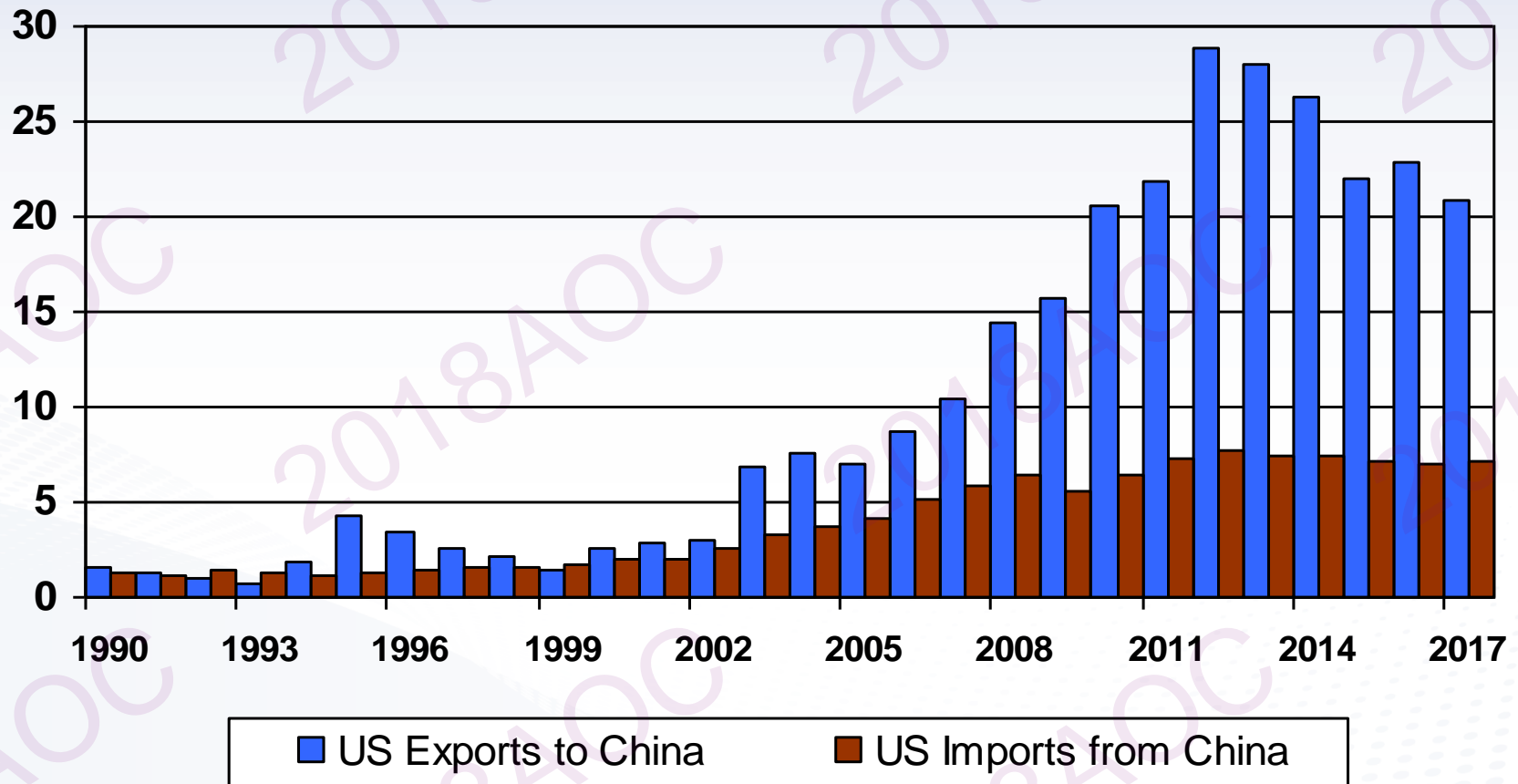


Source: World Trade Atlas International, China Customs Data, April 2018.

United States Department of Agriculture, Economic Research Service

U.S. Agriculture Exports to China and U.S. Imports of China's Agriculture (billion dollars)

Billion dollars (annual) Includes Fish, Excludes Forestry



Source: USDA, Foreign Agricultural Service, Global Agricultural Trade System database, BICO April 2018.

United States Department of Agriculture, Economic Research Service

U.S. Agriculture Exports to China (No Soybeans) and US Imports of China's Agriculture (billion dollars)

Billion dollars (annual) Includes Fish, Excludes Forestry and Soybeans

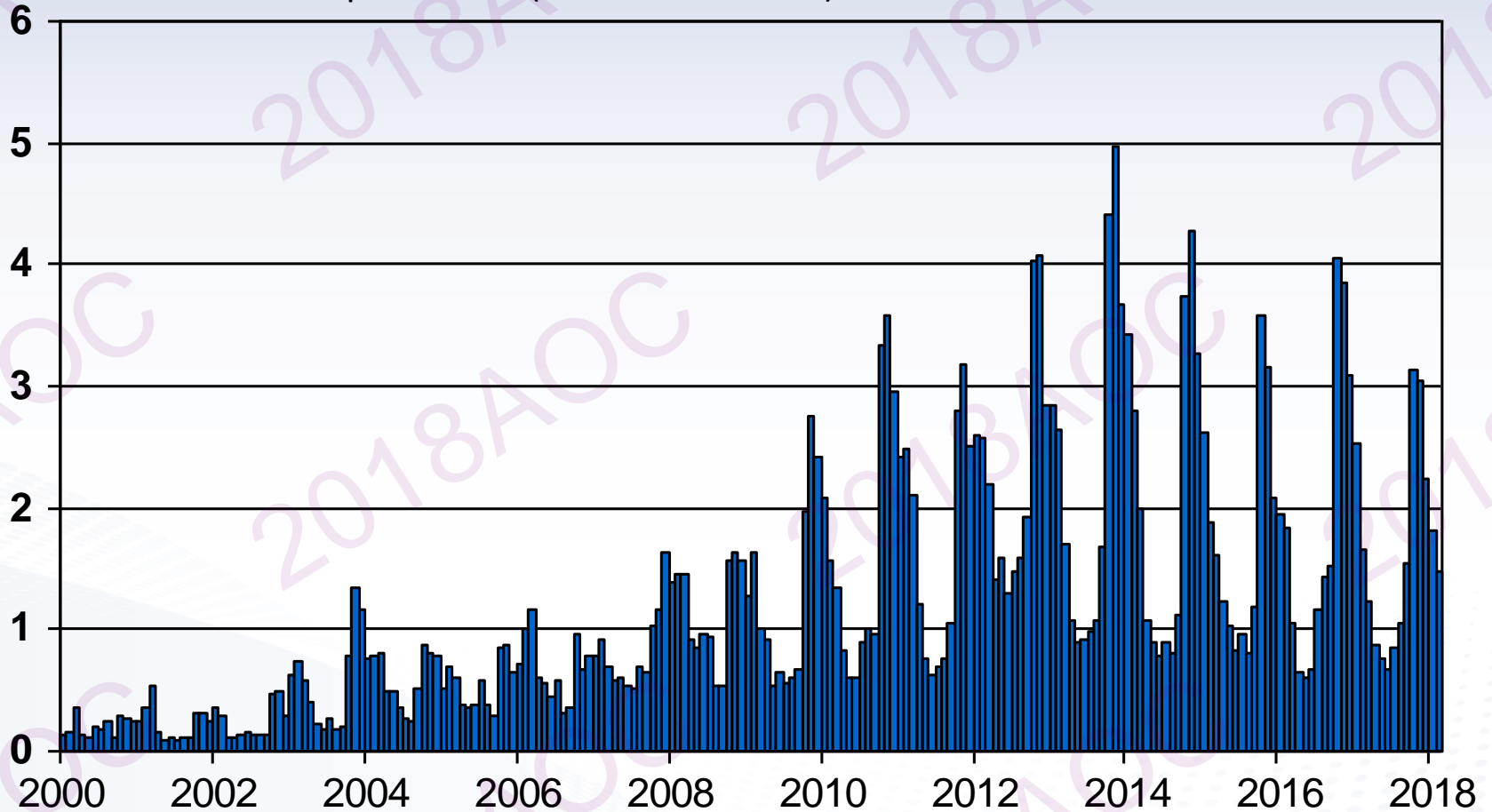


Source: USDA, Foreign Agricultural Service, Global Agricultural Trade System database, BICO April 2018.

United States Department of Agriculture, Economic Research Service

United States Monthly Agriculture Exports to China

Billions of dollars per month (2017 Real Dollars)



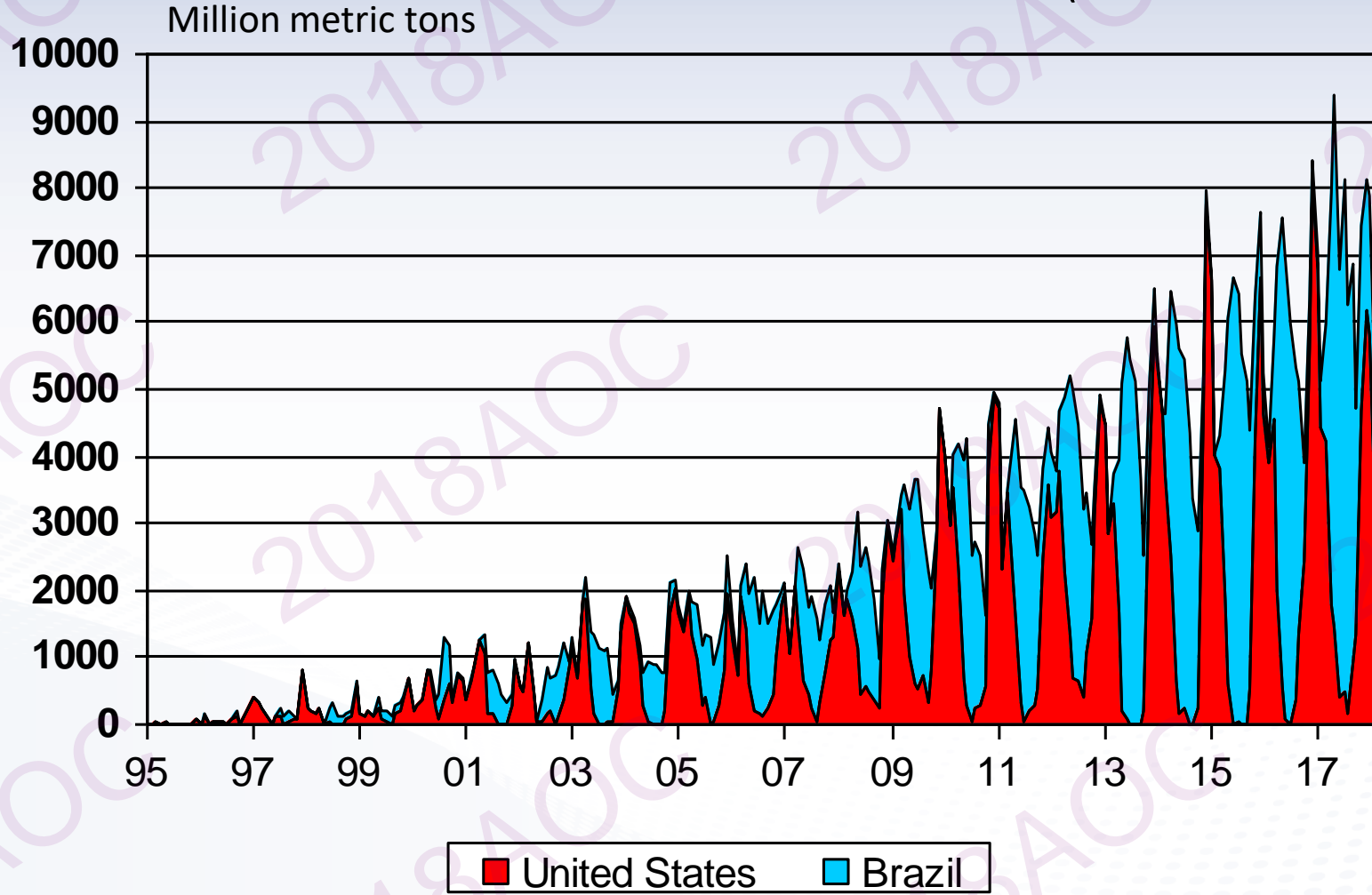
Source: USDA, Foreign Agricultural Service, Global Agricultural Trade System database, BICO, April 2018.



United States Department of Agriculture, Economic Research Service

China's Monthly Soybean Imports

from the United States and Brazil (million metric tons)



Source: World Trade Atlas International, China Customs Data, April 2018.

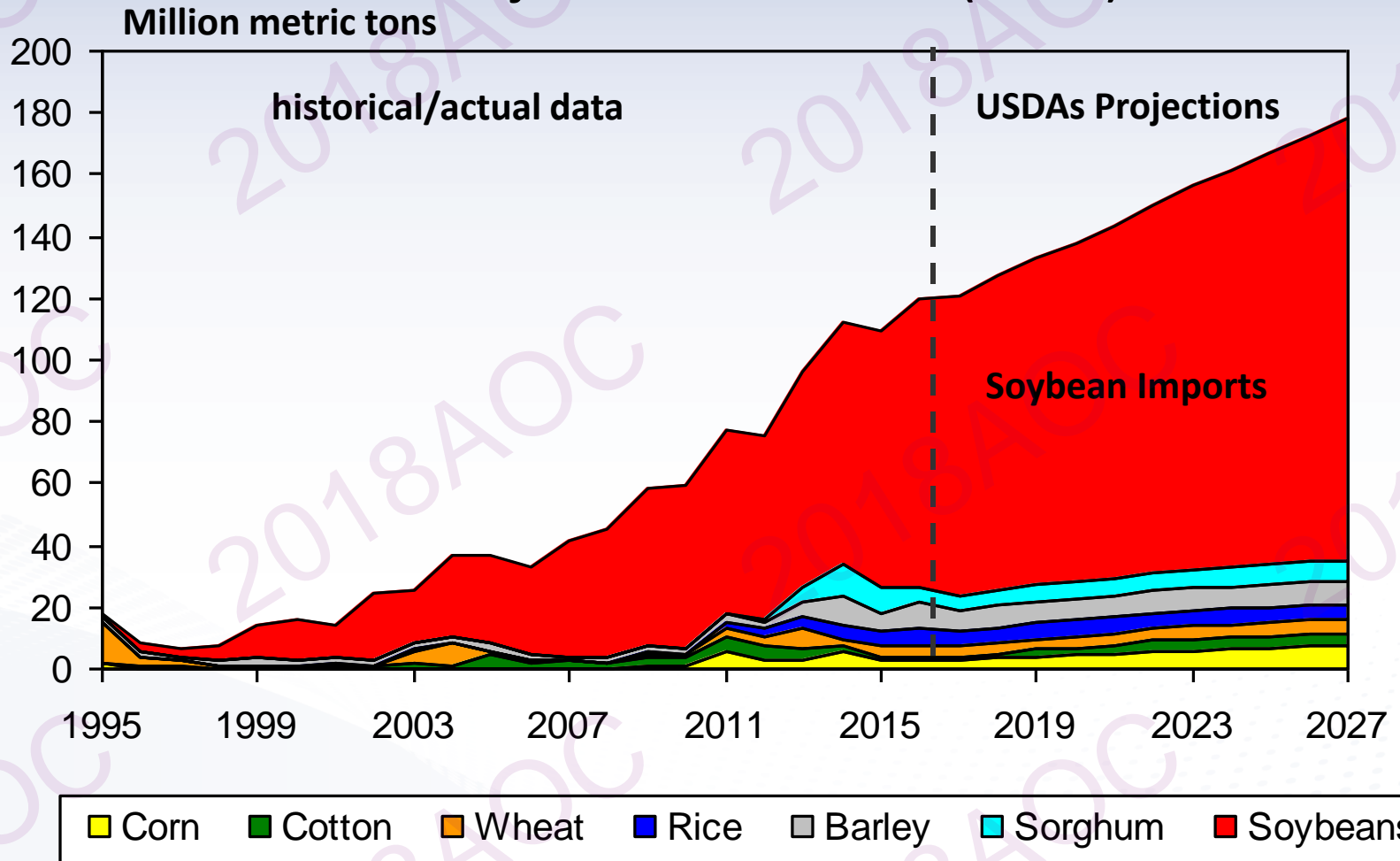
United States Department of Agriculture, Economic Research Service

Strong Import Demand by China for some Bulk and Intermediate Commodities

- Soybeans - China's domestic demand for meal and oil is greater than domestic production, leading to large imports. Historically soybeans have been less profitable than alternative crops, like corn.
- Alfalfa – Strong demand, increasing dairy demand, and difficulties to produce large quantities of alfalfa in China.
- Hide and Skins, low cost for processing (labor costs), modern technology and less stringent environmental laws leads to strong import demand. 50 percent of U.S. hides to China
- Palm oil and coconut oil, strong demand for use in many products, and China has limited production. Imports from Indonesia, Malaysia and Philippines.



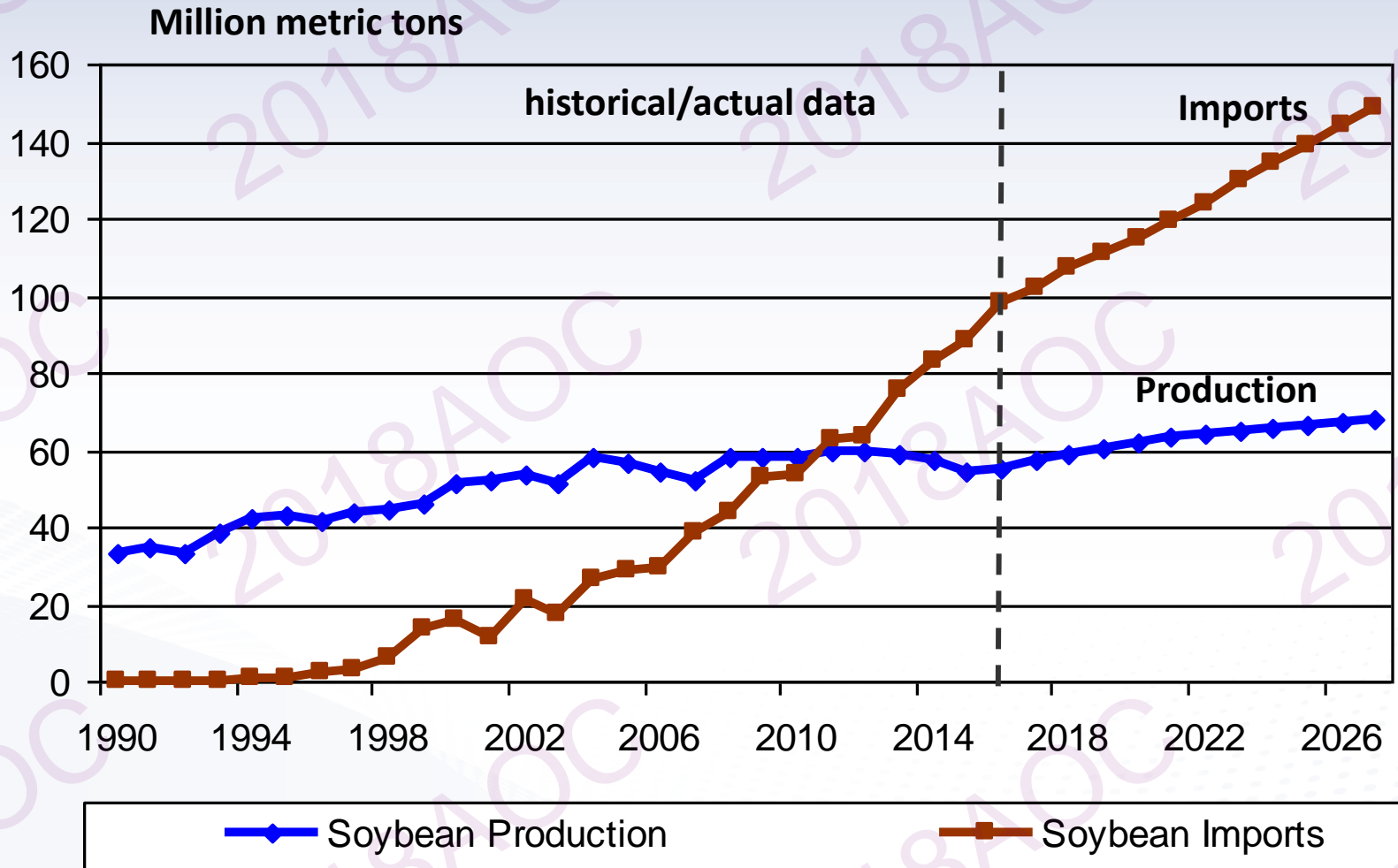
China's Soybean and Grain Imports from the World and Projections to 2027 (mmt)



Source: *USDA Agricultural Baseline Projections to 2027*, February 2018, based on November 2017 data.

United States Department of Agriculture, Economic Research Service

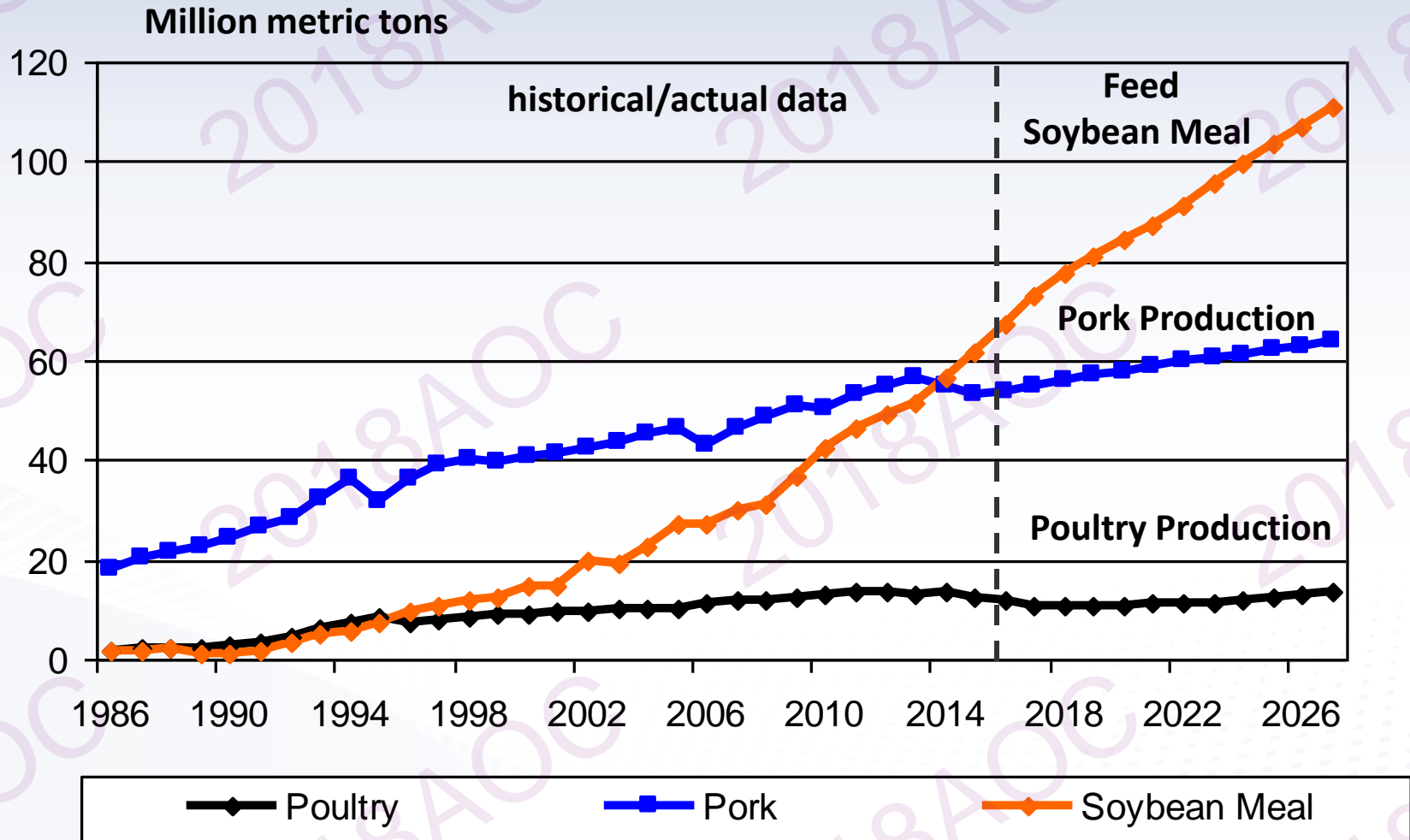
China's Soybean Production and Imports to 2027 (mmt)



Source: *USDA Agricultural Baseline Projections to 2027*, February 2018, based on November 2017 data.

United States Department of Agriculture, Economic Research Service

China's Pork and Poultry Production & Soybean Meal Feed Demand to 2027 (mmt)

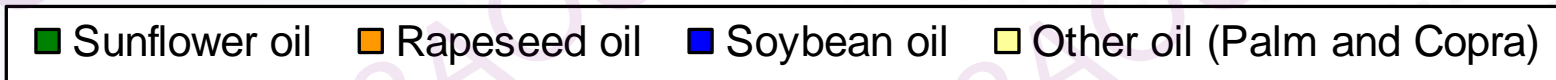
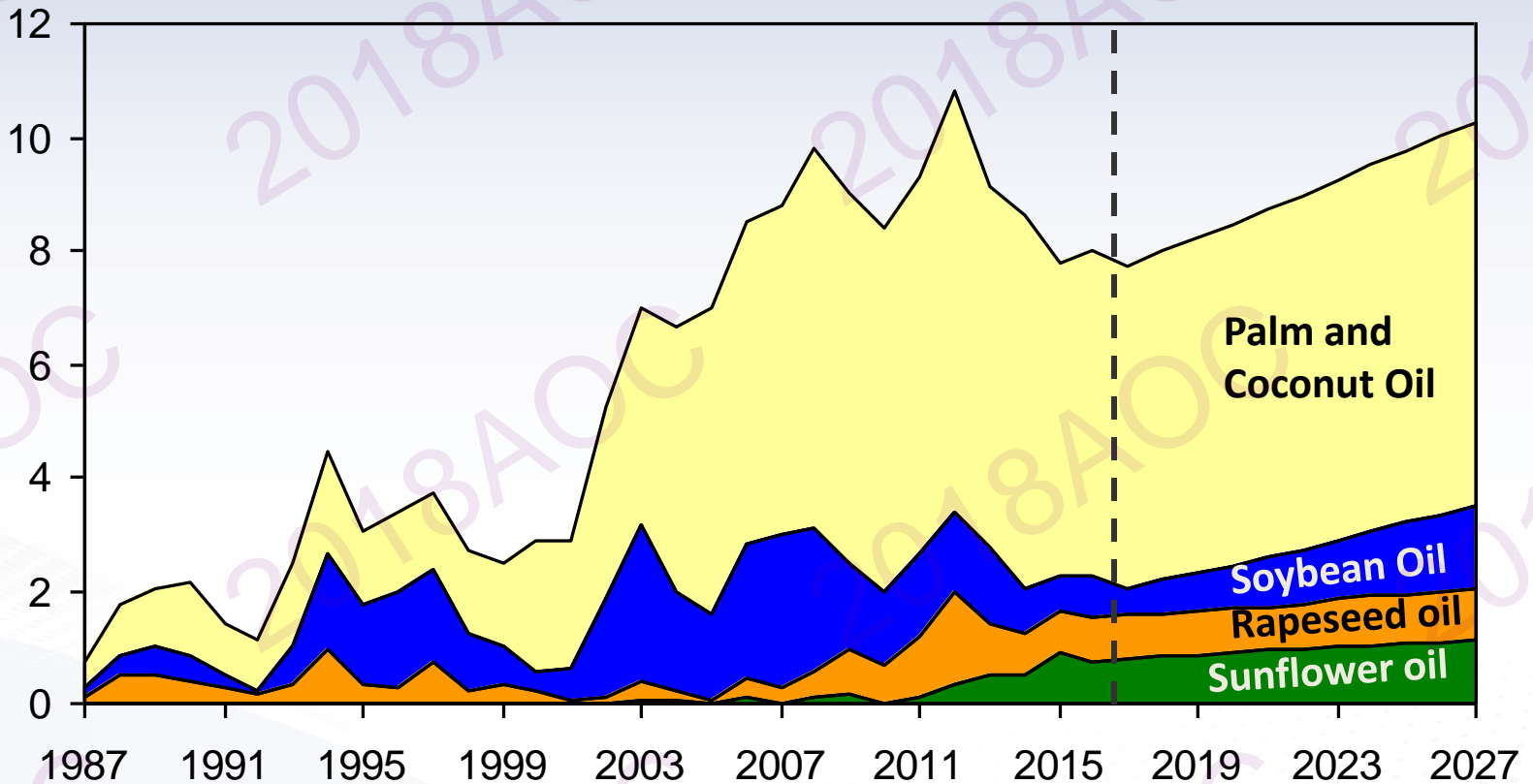


Source: *USDA Agricultural Baseline Projections to 2027*, February 2018, based on November 2017 data.

United States Department of Agriculture, Economic Research Service

China's Crop Oil Imports from the World and Projections to 2027 (mmt)

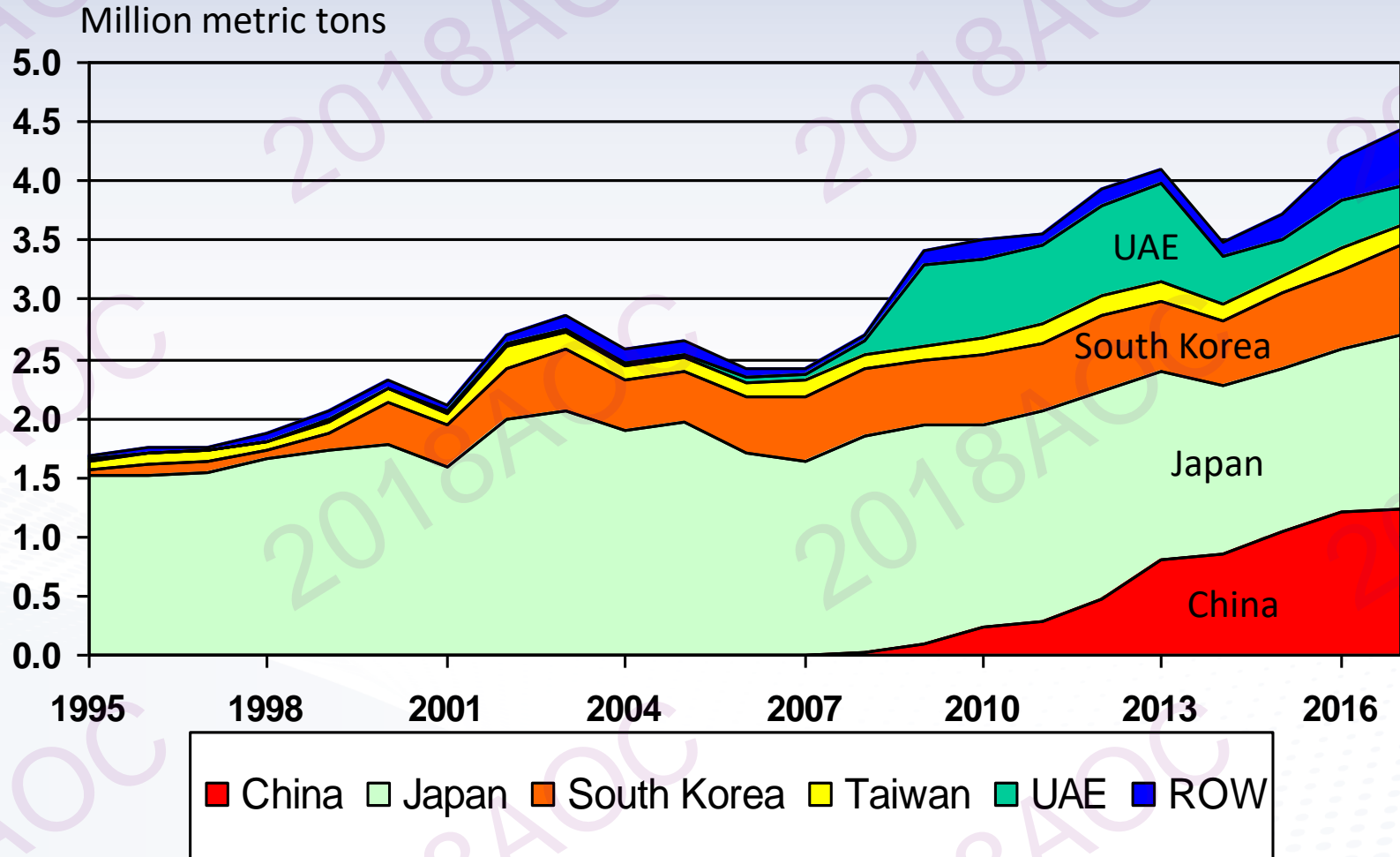
Million metric tons



Source: *USDA Agricultural Baseline Projections to 2027*, February 2018, based on November 2017 data.

United States Department of Agriculture, Economic Research Service

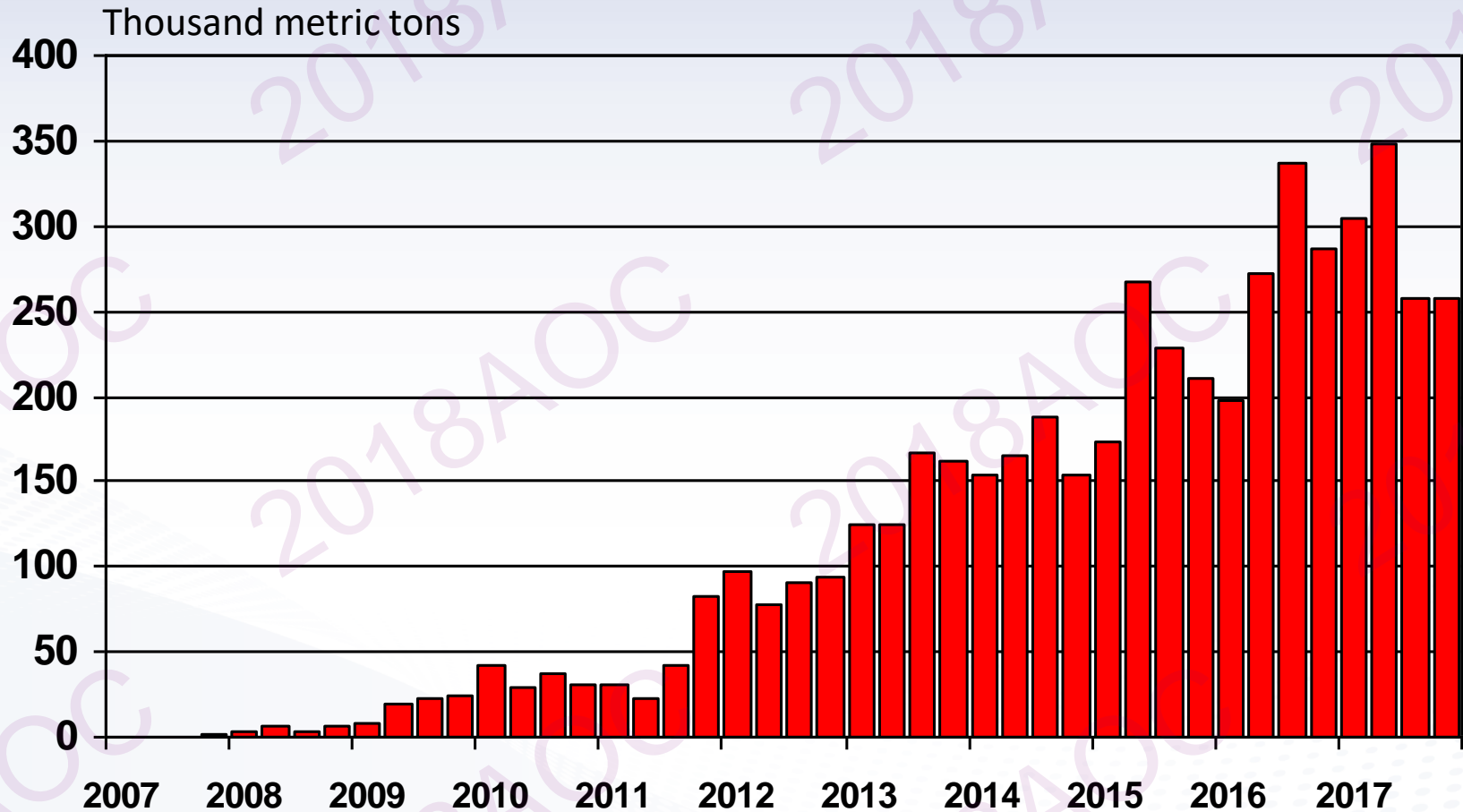
United States Alfalfa Hay Exports



Source: USDA, Foreign Agricultural Service, Global Agricultural Trade System, Harmonized HS10-12141, April 2018.

United States Department of Agriculture, Economic Research Service

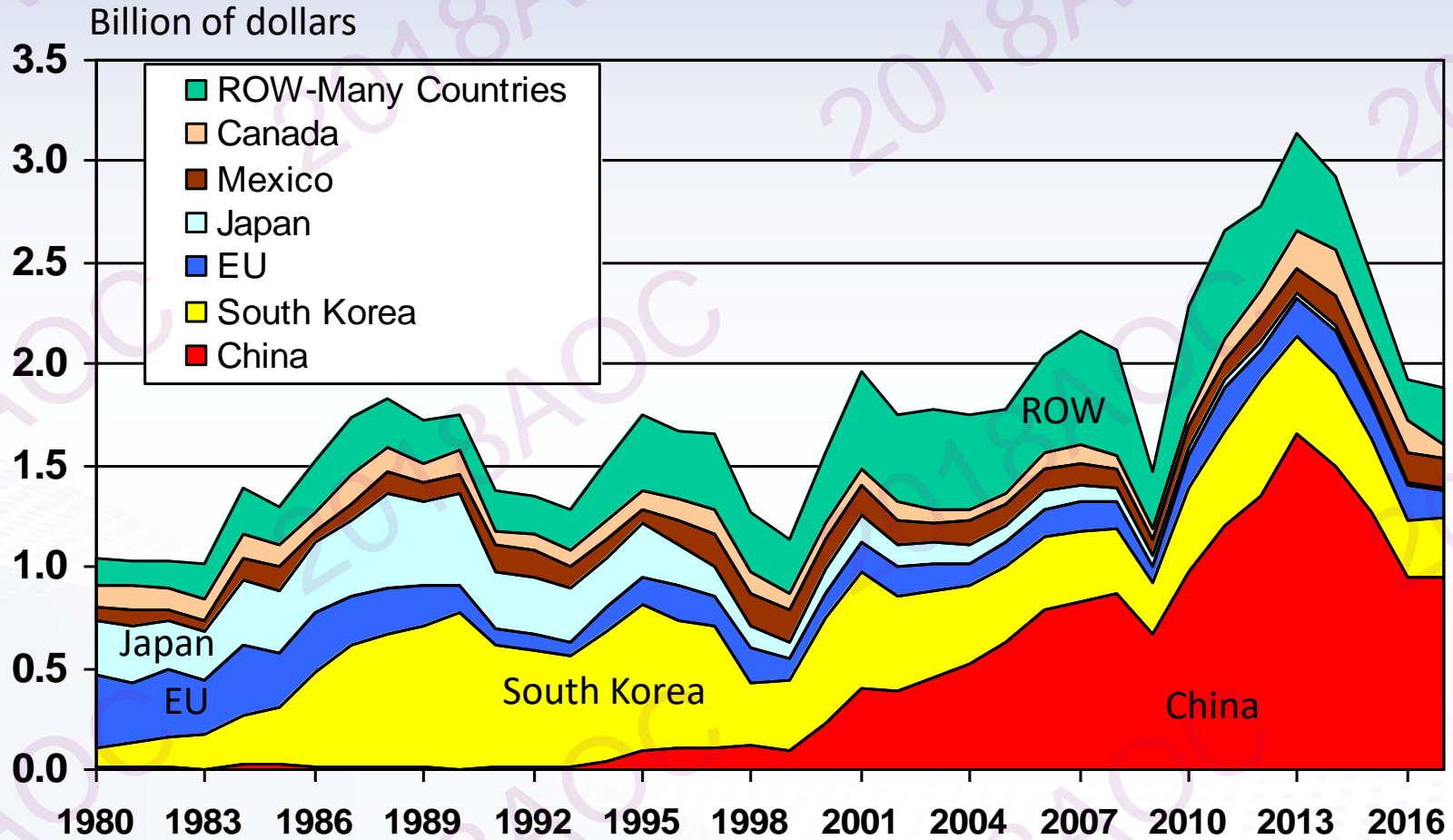
United States Alfalfa Hay Exports to China (per quarter)



Source: USDA, Foreign Agricultural Service, Global Agricultural Trade System database, FATUS, April 2018.

United States Department of Agriculture, Economic Research Service

United States Exports of Hides and Skins to the World (China about 51% market share)



Source: USDA, Foreign Agricultural Service, Global Agricultural Trade System database, FATUS, July 2016.

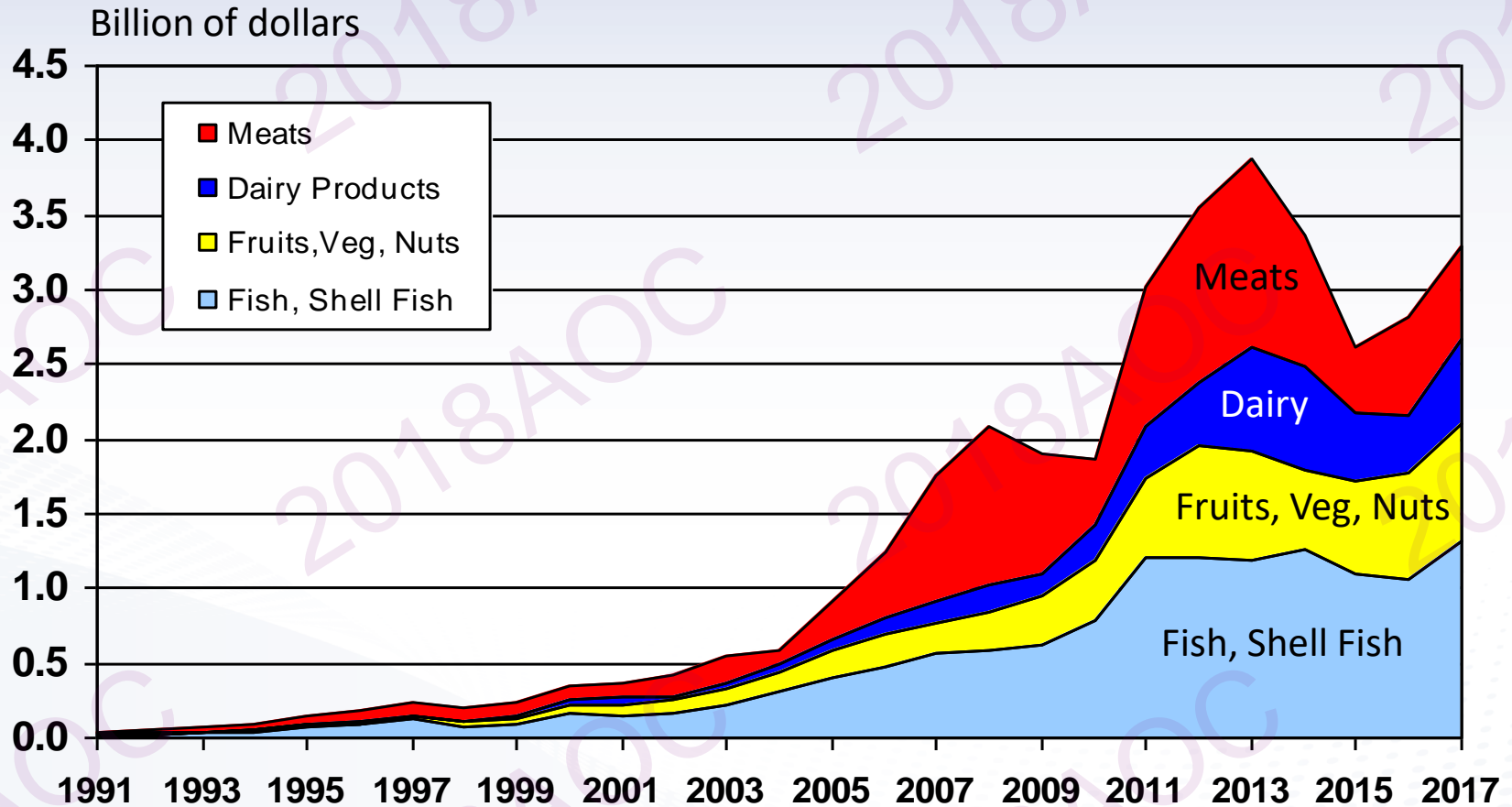
United States Department of Agriculture, Economic Research Service

Specialty and Niche Market: Success Stories

- Exporters to China can do well in Niche and Specialty markets
- Specialty markets are less likely to compete with national and domestic companies. Less risk of food security concerns.
- Strong demand by increasing income in urban areas and often younger consumers
- Many food imports are viewed as safe, where U.S. has strong regulations
- Food safety is very important in China and seems to be of increasing concern – especially among higher income households
- USDA – Agriculture Trade Offices supports and assists exporters to China in these markets.



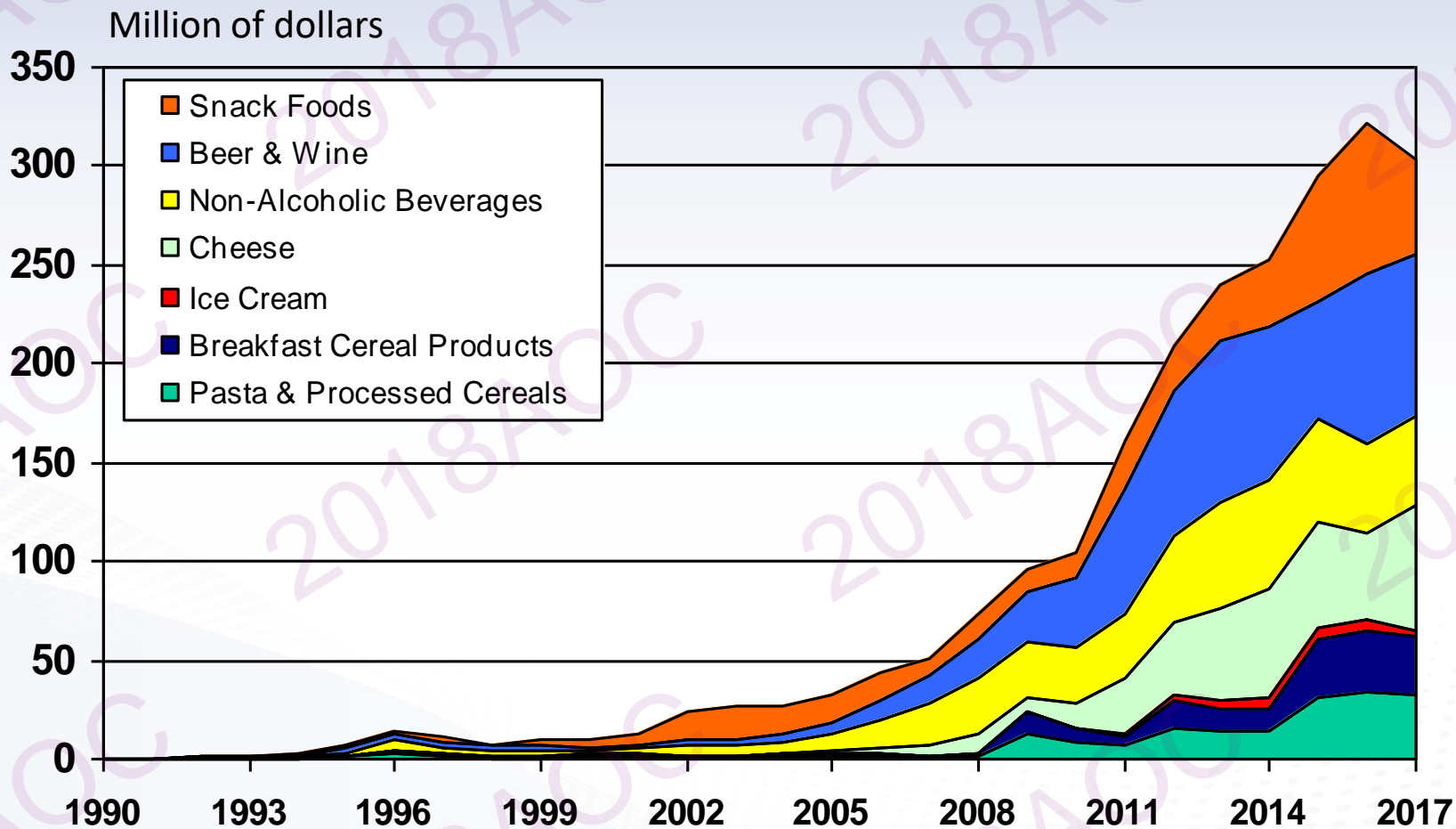
United States Exports to China: Food Products



Source: USDA, Foreign Agricultural Service, Global Agricultural Trade System database, FATUS, April 2018.

United States Department of Agriculture, Economic Research Service

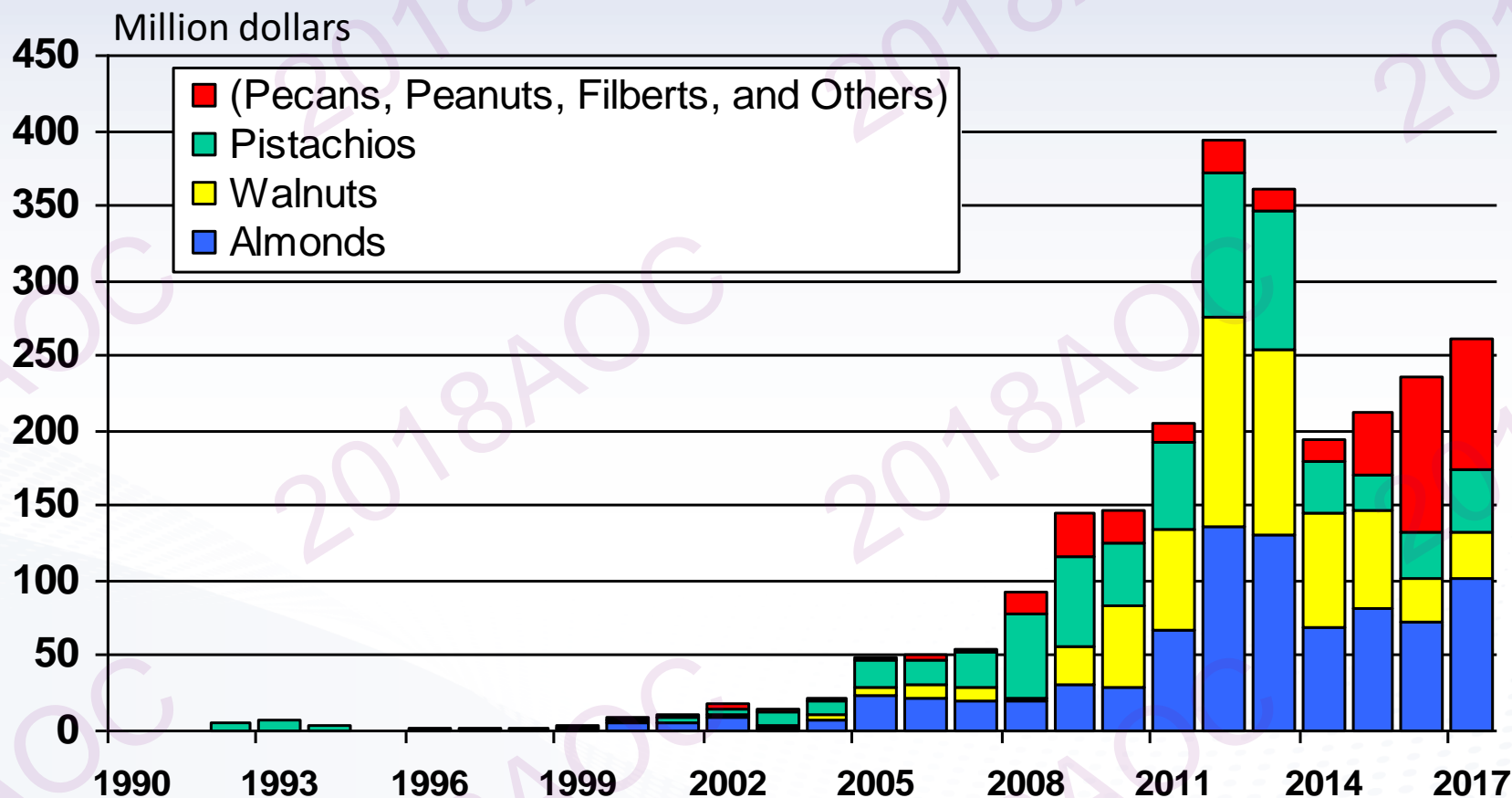
United States Exports of Selected Processed Foods to China



Source: USDA, Foreign Agricultural Service, Global Agricultural Trade System database, FATUS, April 2018.

United States Department of Agriculture, Economic Research Service

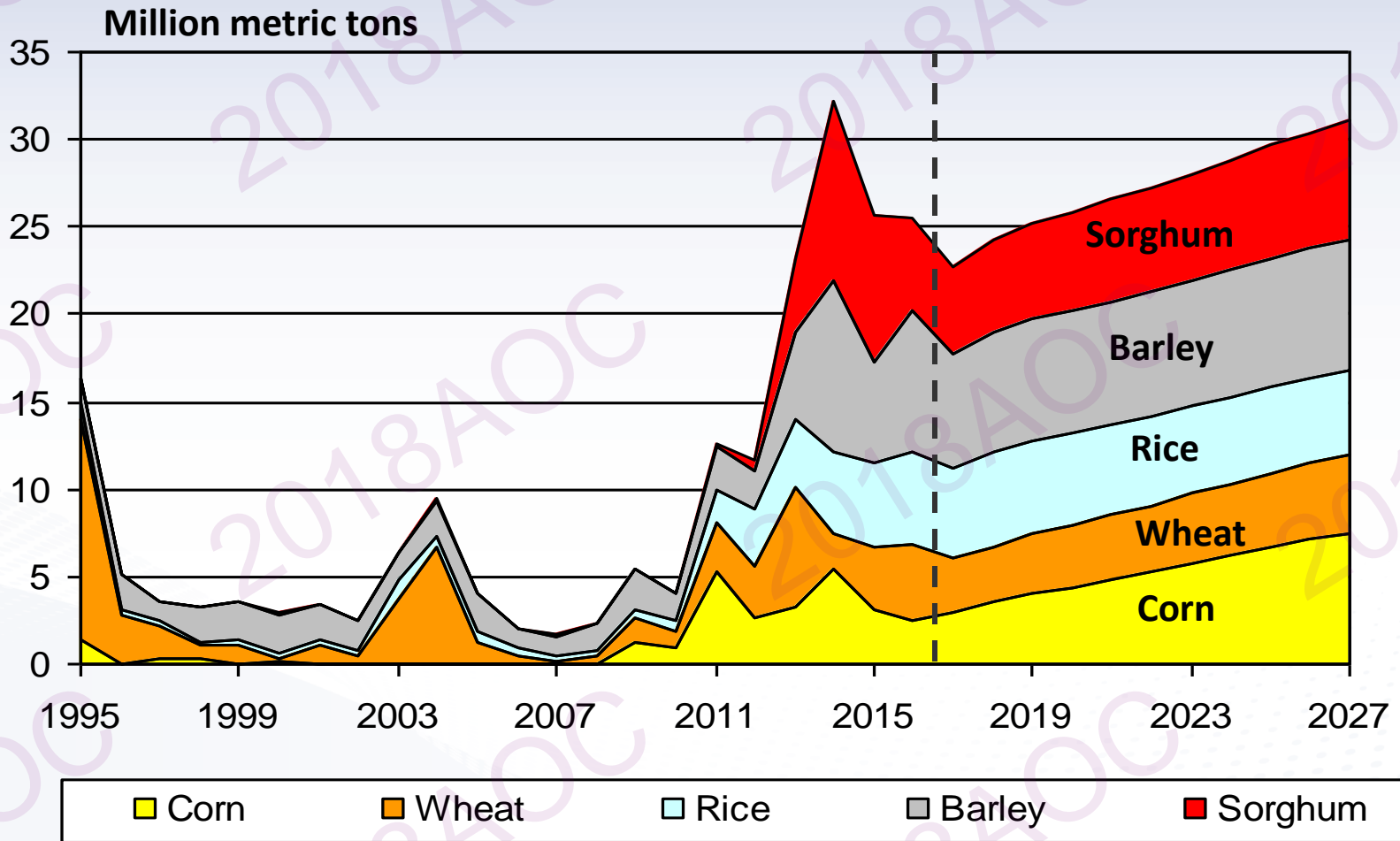
United States Exports of Nuts to China: Almonds, Walnuts, Pistachios and Others



Source: USDA, Foreign Agricultural Service, Global Agricultural Trade System database, FATUS, April 2018.

United States Department of Agriculture, Economic Research Service

China's Major Grain Imports from the World and Projections to 2027 (mmt)

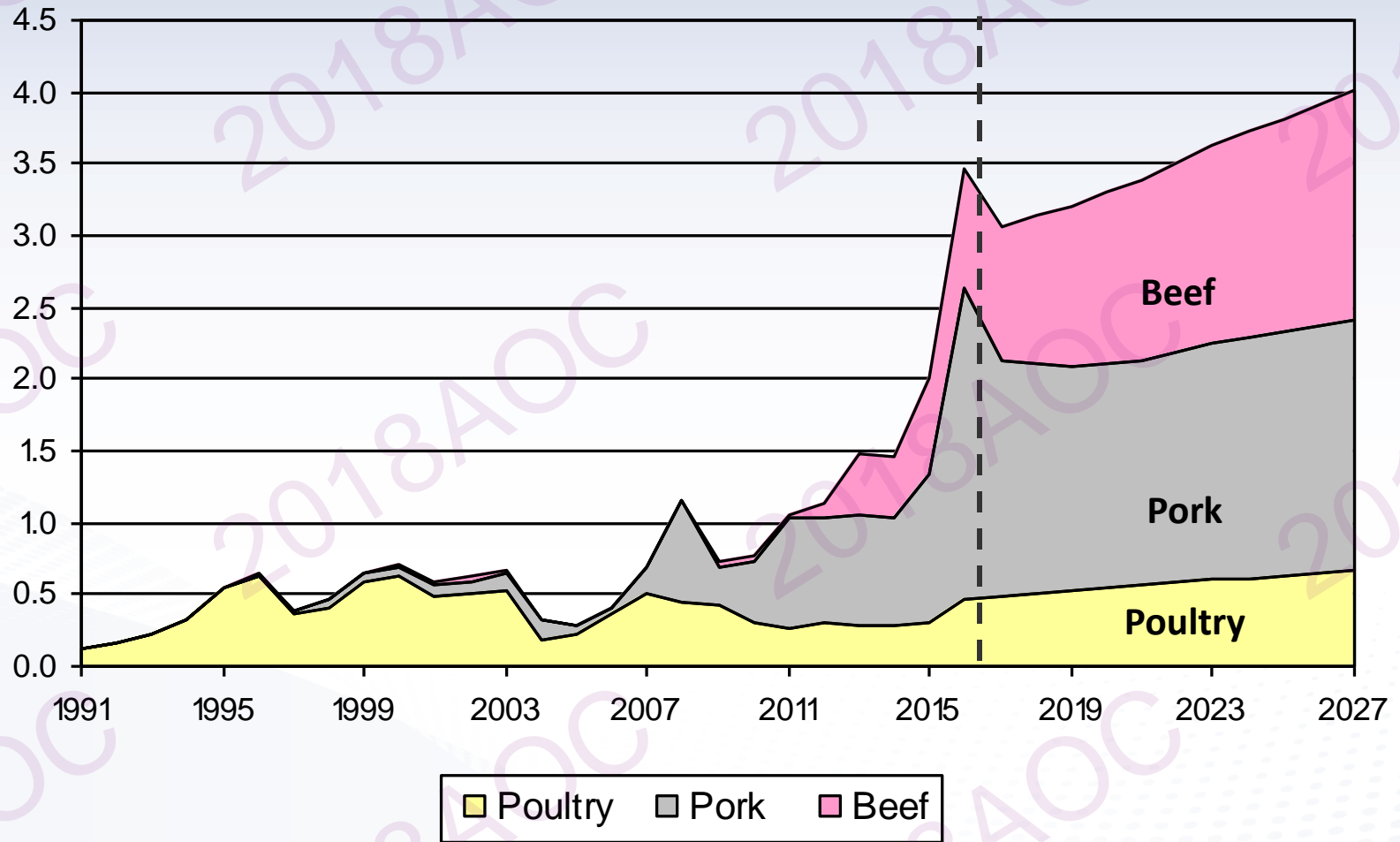


Source: *USDA Agricultural Baseline Projections to 2027*, February 2018, based on November 2017 data.

United States Department of Agriculture, Economic Research Service

China's Meat Imports from the World and Projections to 2027 (mmt)

Million metric tons



Source: USDA Agricultural Baseline Projections to 2027, February 2018, based on November 2017 data.

United States Department of Agriculture, Economic Research Service

World agriculture trade has expanded tremendously over the past two to three decades.

Both China and the United States have increased both agriculture exports and imports in the global market at very fast rates of growth.

China's imports are driven by increasing income and demand for higher quality products and food safety concerns in urban markets. Import niche markets can succeed quite well, which is more specialized and have less competition.

United States imports are driven by increasing demand for a wider variety of products from around the world especially as compared to 20 to 30 years ago.

But even as the world has a large focus on both China and the United States the emerging economies are growing.



Emerging Economies and Global Agriculture Markets



United States Department of Agriculture, Economic Research Service

Global Changes in Food Consumption:

- Greater consumption of:

- Fruits & Vegetables
- Vegetable Oils
- Processed Cereal Products
- Foods which are easy/quick prepare and cook (time effect)
- Meats & Dairy Products

Feed Demand Increases

↑ Import demand for Feed grains and Soybean meal

- Less consumption of:

- Staple grains - rice in Asia, corn in Indonesia and Mexico
- Low-quality grain varieties and switching to high-quality (high-quality varieties may lower yields)
- Roots & tubers, millet in Africa

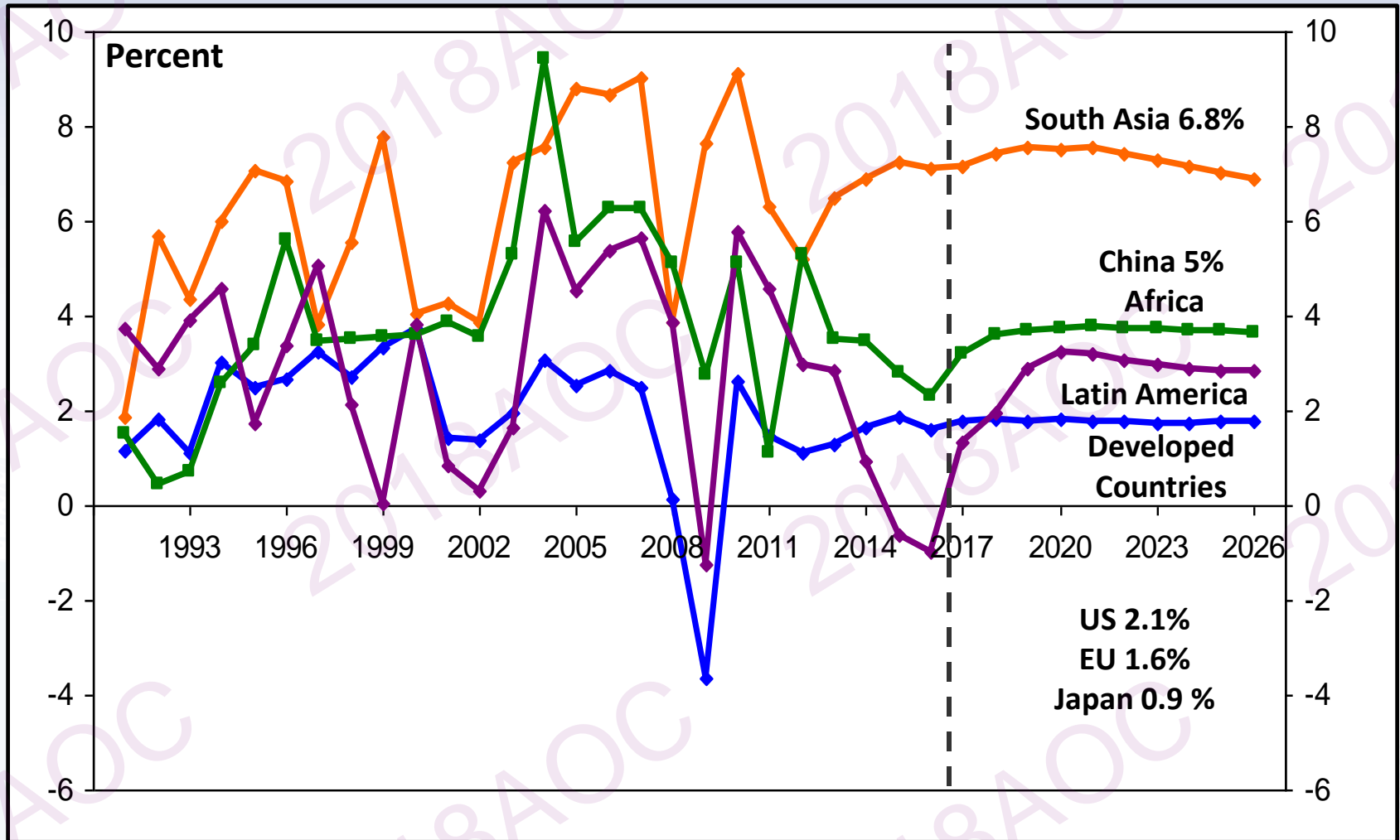


Global Structural Changes

- Shifting Economic Power – Emerging Markets
 - Increasing per capita incomes
- Evolving Demographics:
 - Declining population growth rates,
 - Urbanization,
 - Changing age structure, younger populations
- Infrastructure development in emerging markets
 - Transportation, roads, (also increasing congestion)
 - Market integration, modern food supply chains
- Food market development
 - Increased access to larger variety of food, retail outlets



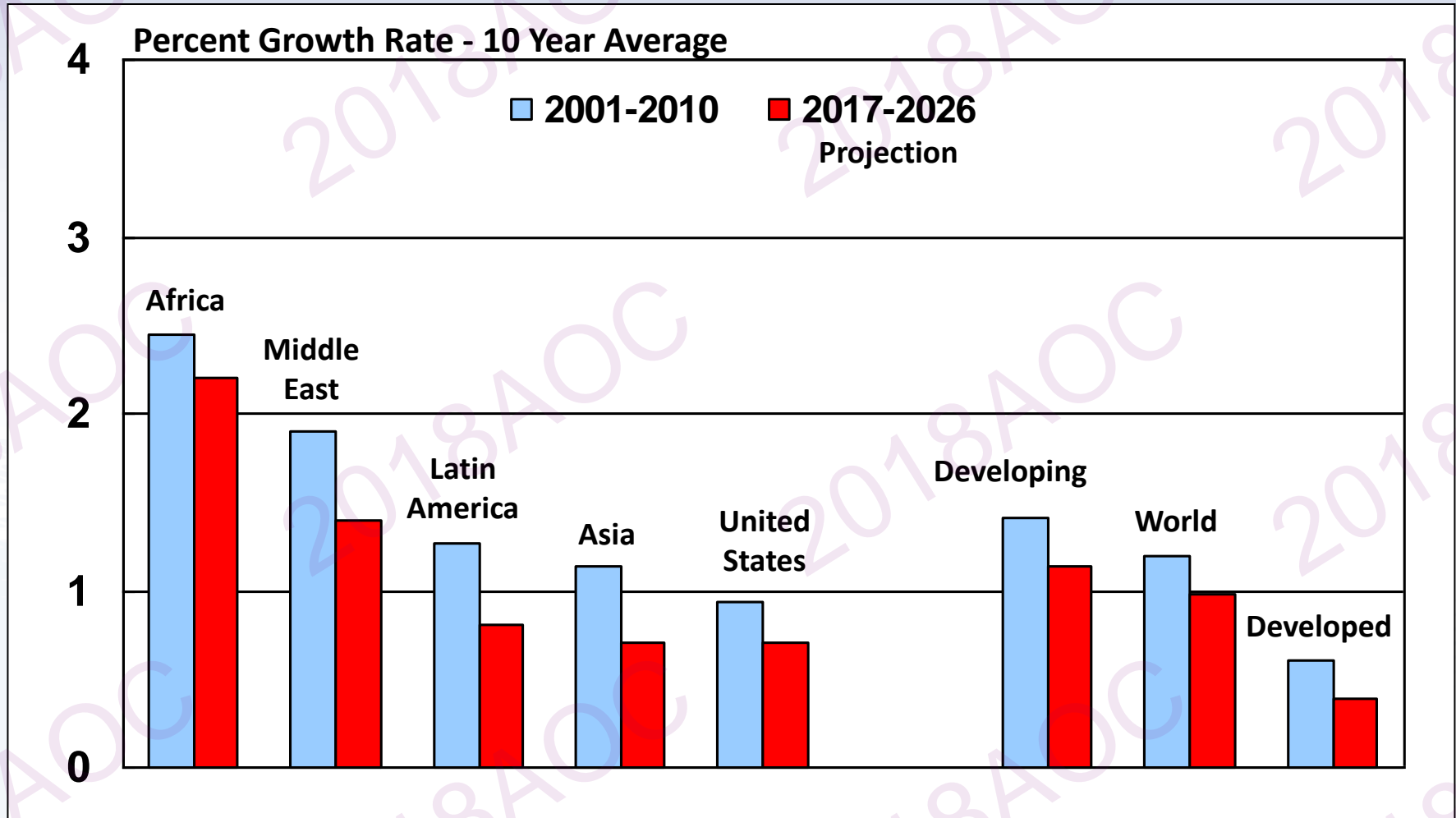
GDP Growth for Major Regions: Developing Economies Exhibit Strongest Growth



Source: *USDA Agricultural Baseline Projections to 2026*, February 2017.

United States Department of Agriculture, Economic Research Service

Population Growth Rates is Strongest in Emerging Economics but Less as Compared to Past Decades



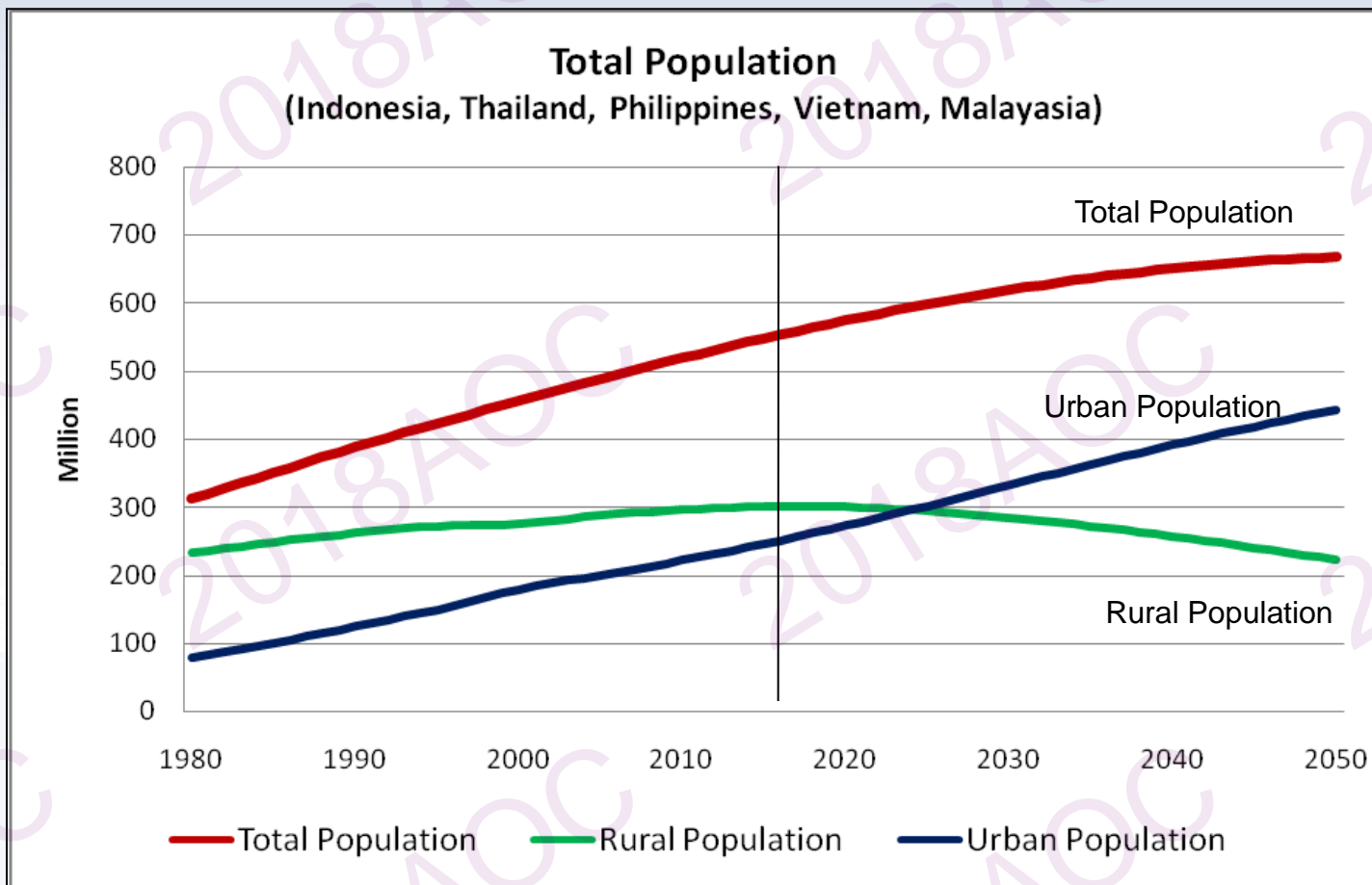
1/ Based on population projections from the Census Bureau, U.S. Dept. of Commerce.

Source: *USDA Agricultural Baseline Projections to 2026*, February 2017.

United States Department of Agriculture, Economic Research Service



Population Growth And Urbanization In 5 Southeast Asian Countries Aggregate

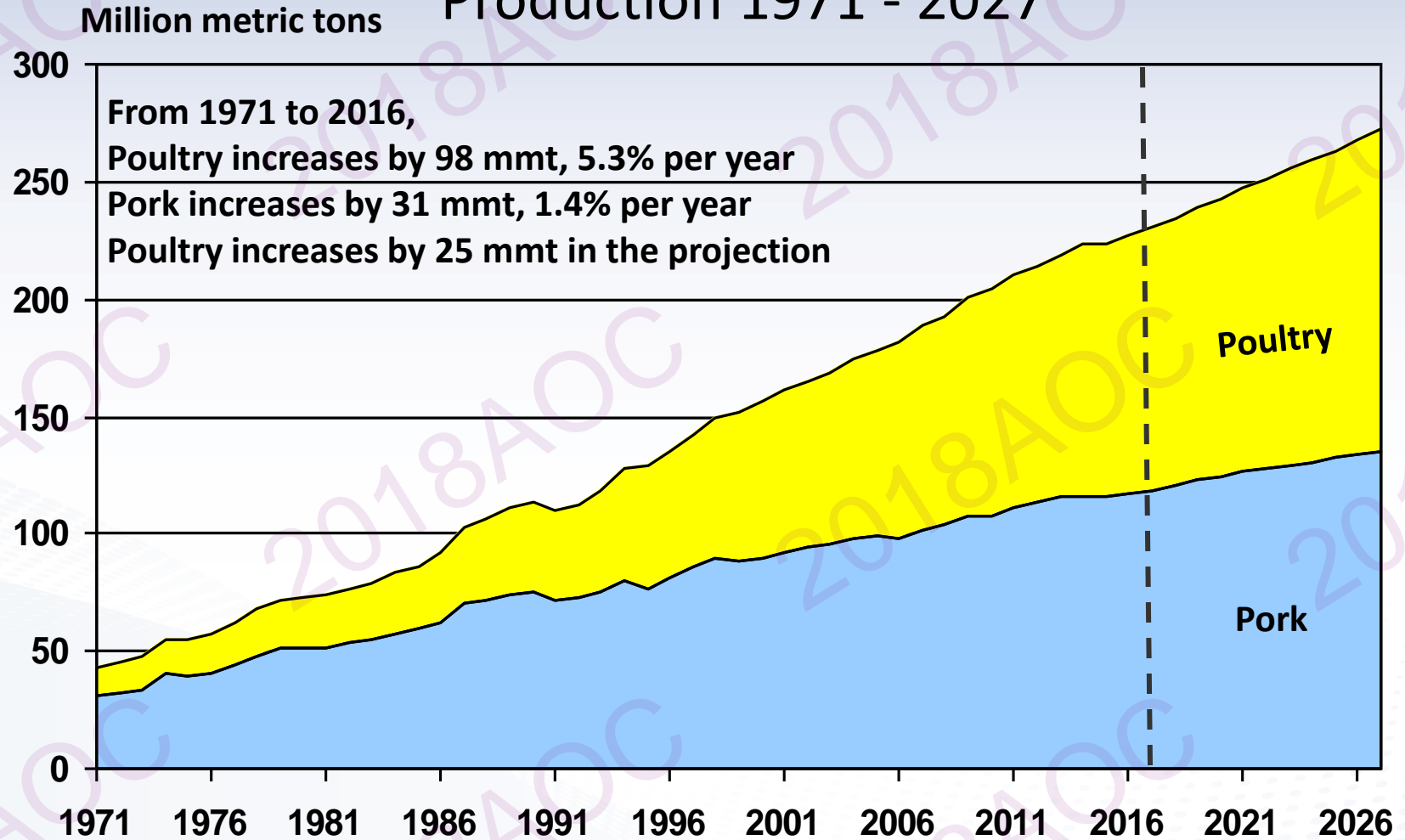


Source: UN-FAO, FAOSTAT, <http://faostat.fao.org>



United States Department of Agriculture, Economic Research Service

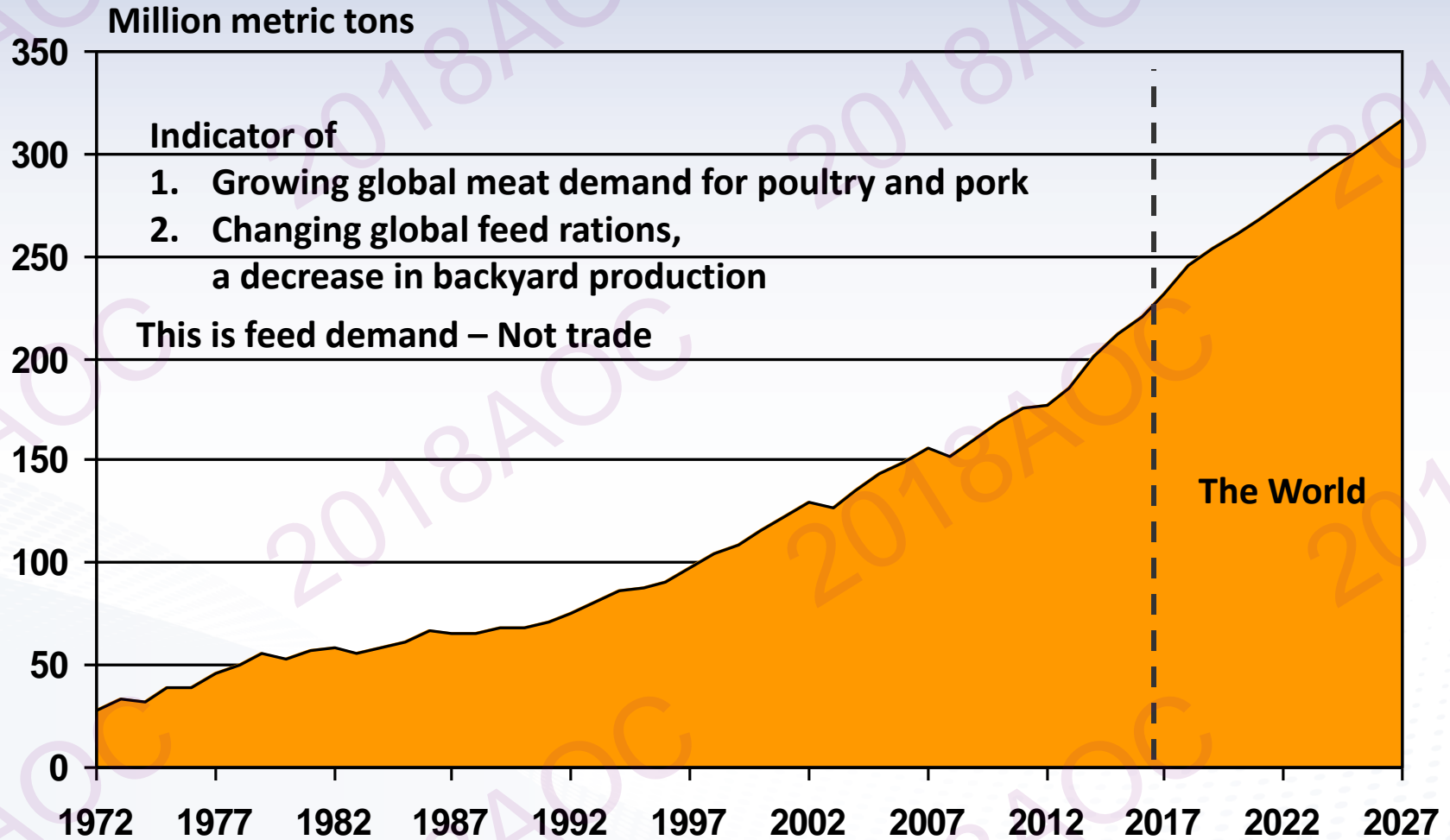
Global Pork and Poultry Production 1971 - 2027



Source: *USDA Agricultural Baseline Projections to 2027*, February 2018.

United States Department of Agriculture, Economic Research Service

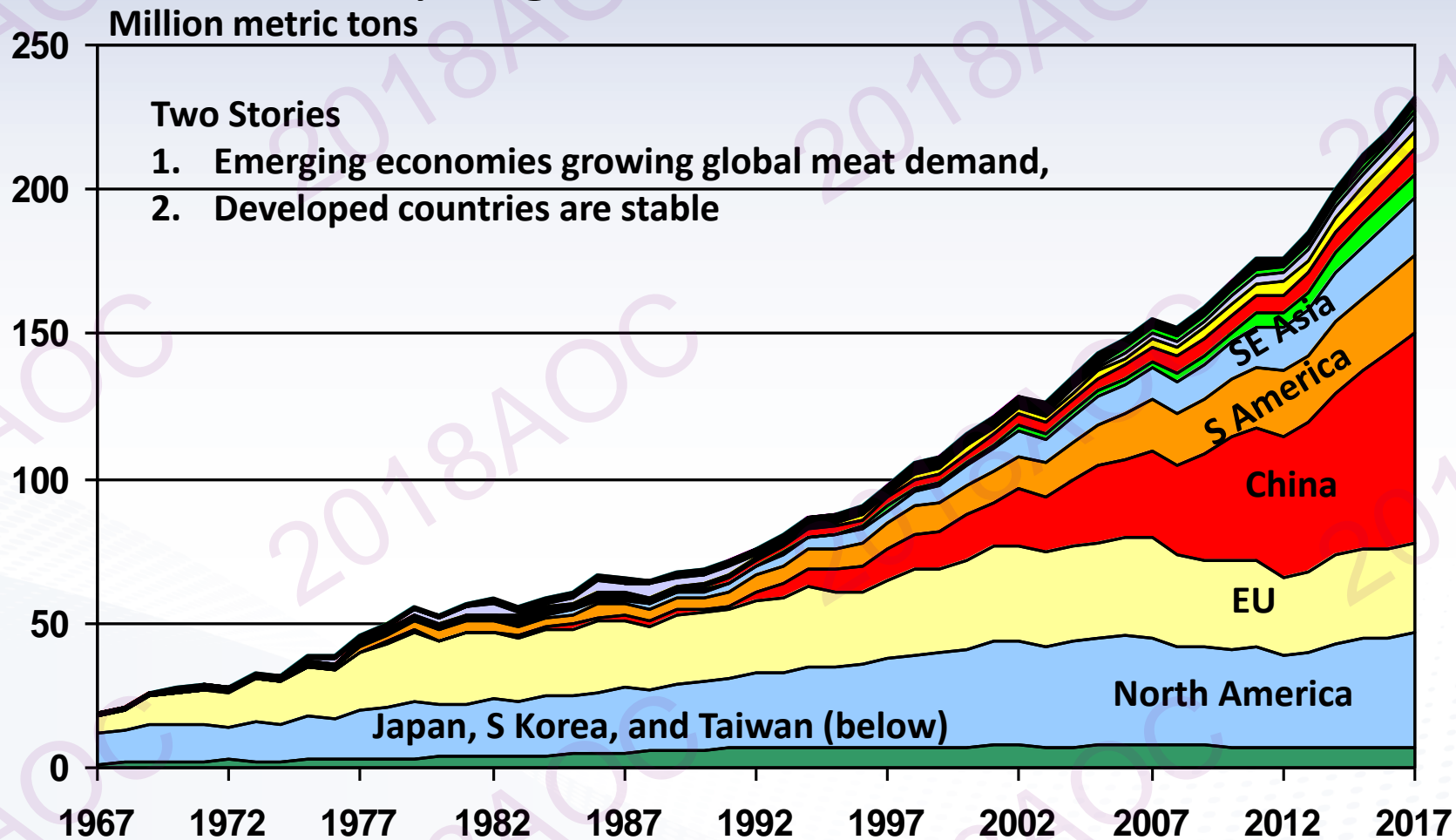
Global Soybean Meal Feed Demand: From 1972 and Projections 2018 to 2027



Source: *USDA FAS PS&D Data, November 2017.*

United States Department of Agriculture, Economic Research Service

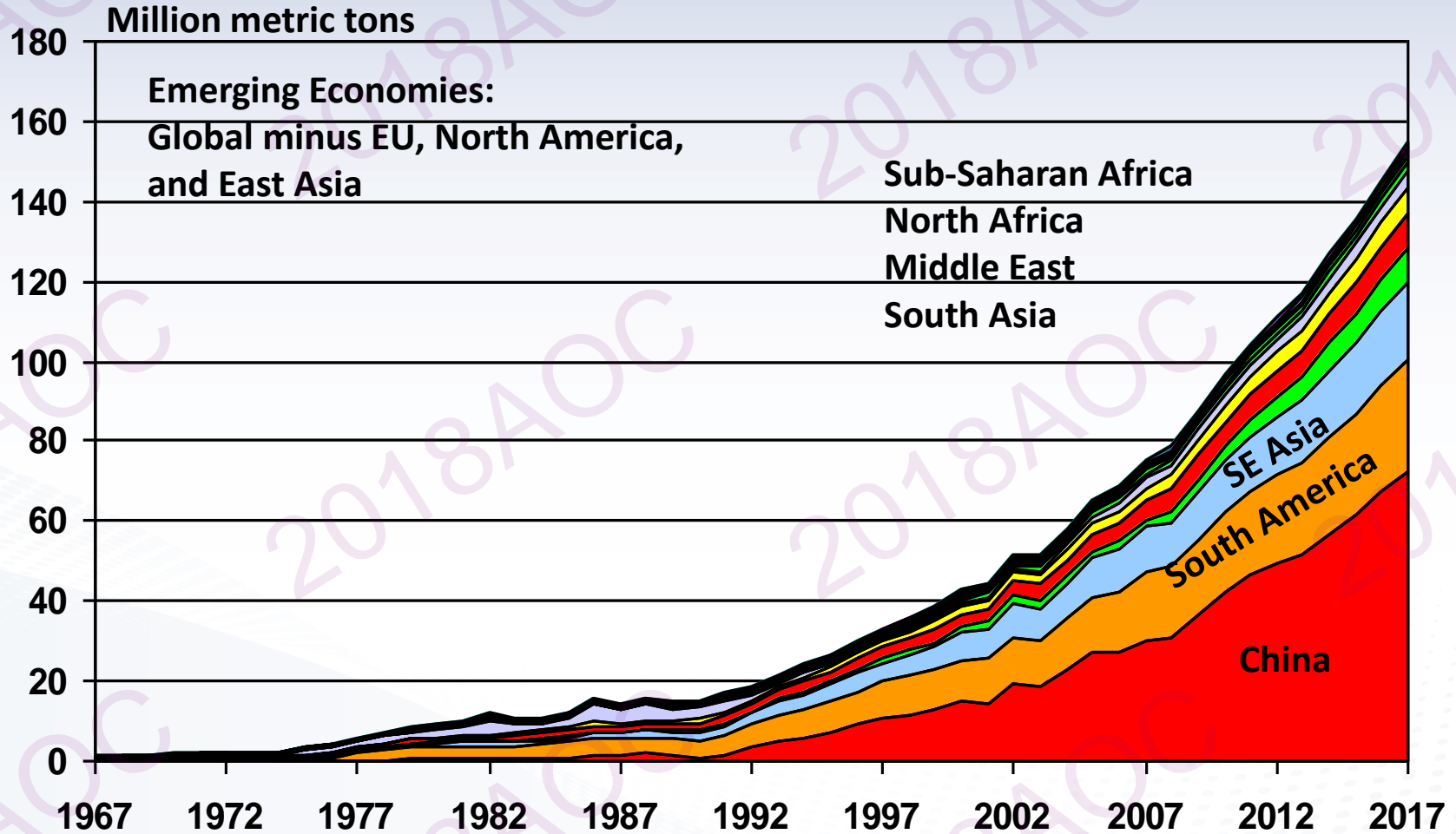
Global Soybean Meal Feed Demand: By Regions, 50 Years of Growth



Source: USDA FAS PS&D Data, November 2017.

United States Department of Agriculture, Economic Research Service

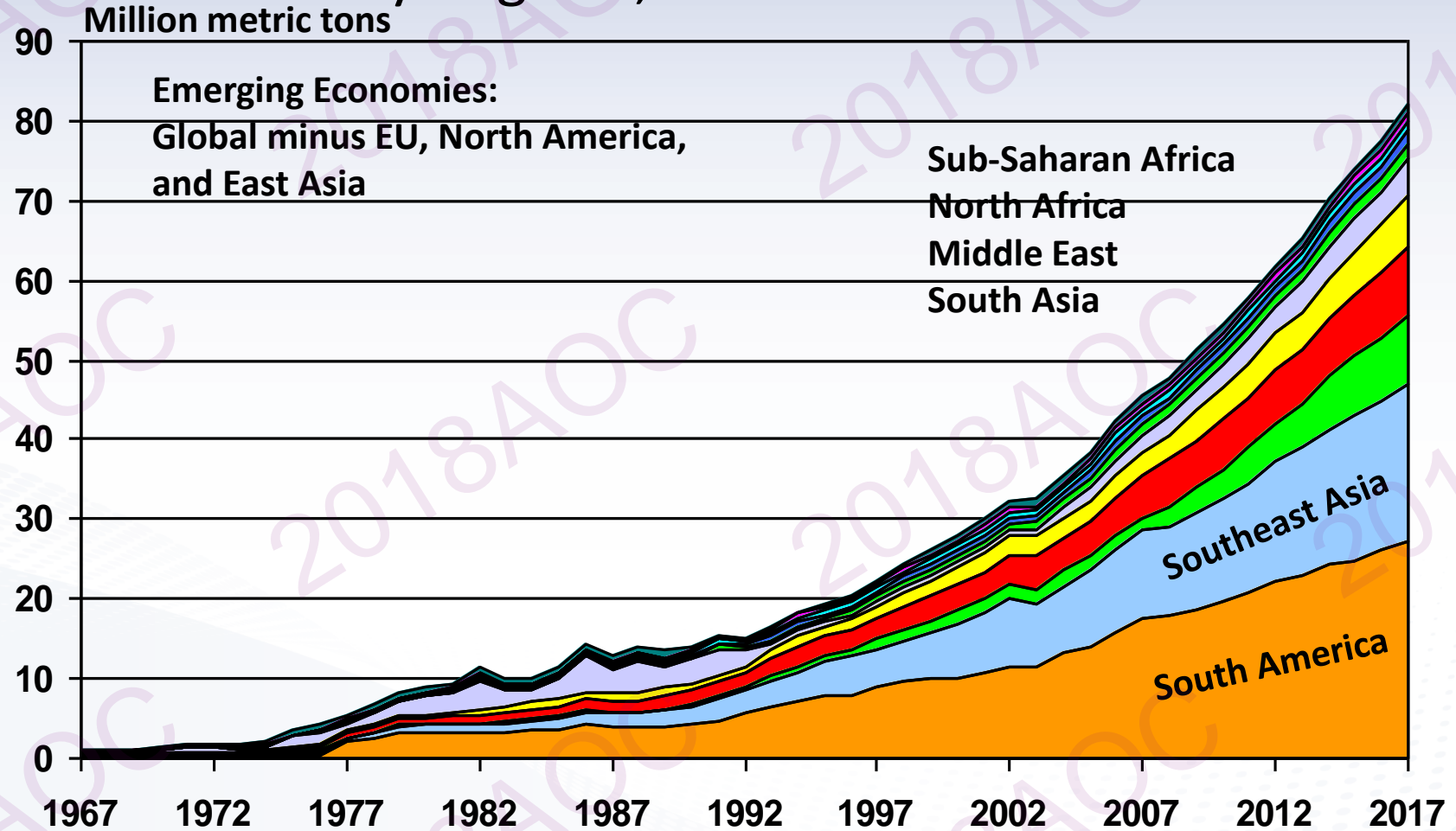
Greater Detail - Soybean Meal Feed Demand: By Regions, 50 Years of Growth



Source: USDA FAS PS&D Data, 2017.

United States Department of Agriculture, Economic Research Service

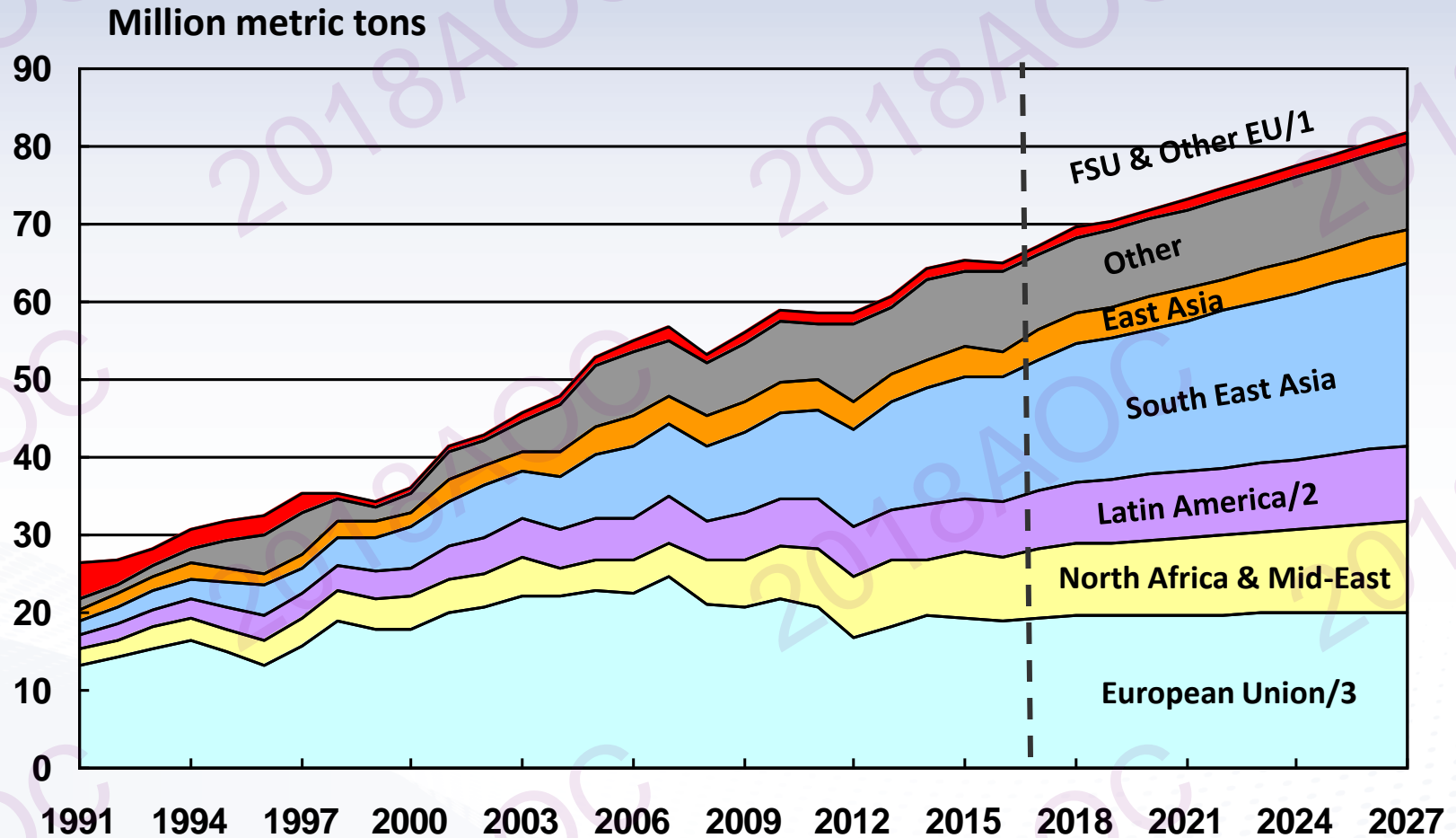
Greater Detail - Soybean Meal Feed Demand: By Regions, 50 Years of Growth



Source: USDA FAS PS&D Data, 2017.

United States Department of Agriculture, Economic Research Service

Global Soybean Meal Imports



1/ Former Soviet Union and Other Europe; prior to 1999. 2/ Includes Mexico.

3/ EU-28 excludes intra-trade after 2002, EU-15 intra-trade before 2003, Slovenia before 1992.

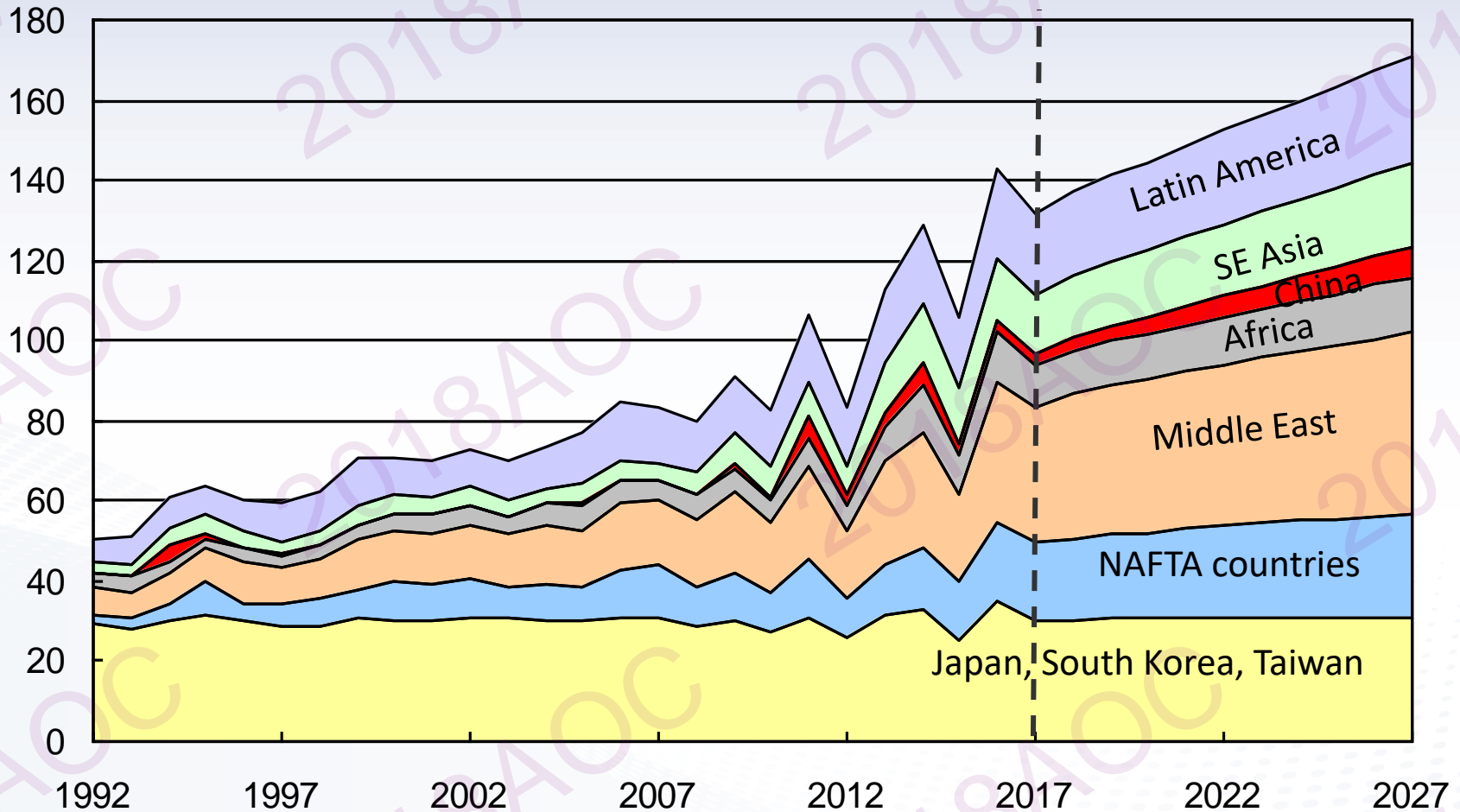
Source: *USDA Agricultural Baseline Projections to 2027*, February 2018.

United States Department of Agriculture, Economic Research Service



Global Corn Imports (mmt)

Million metric tons

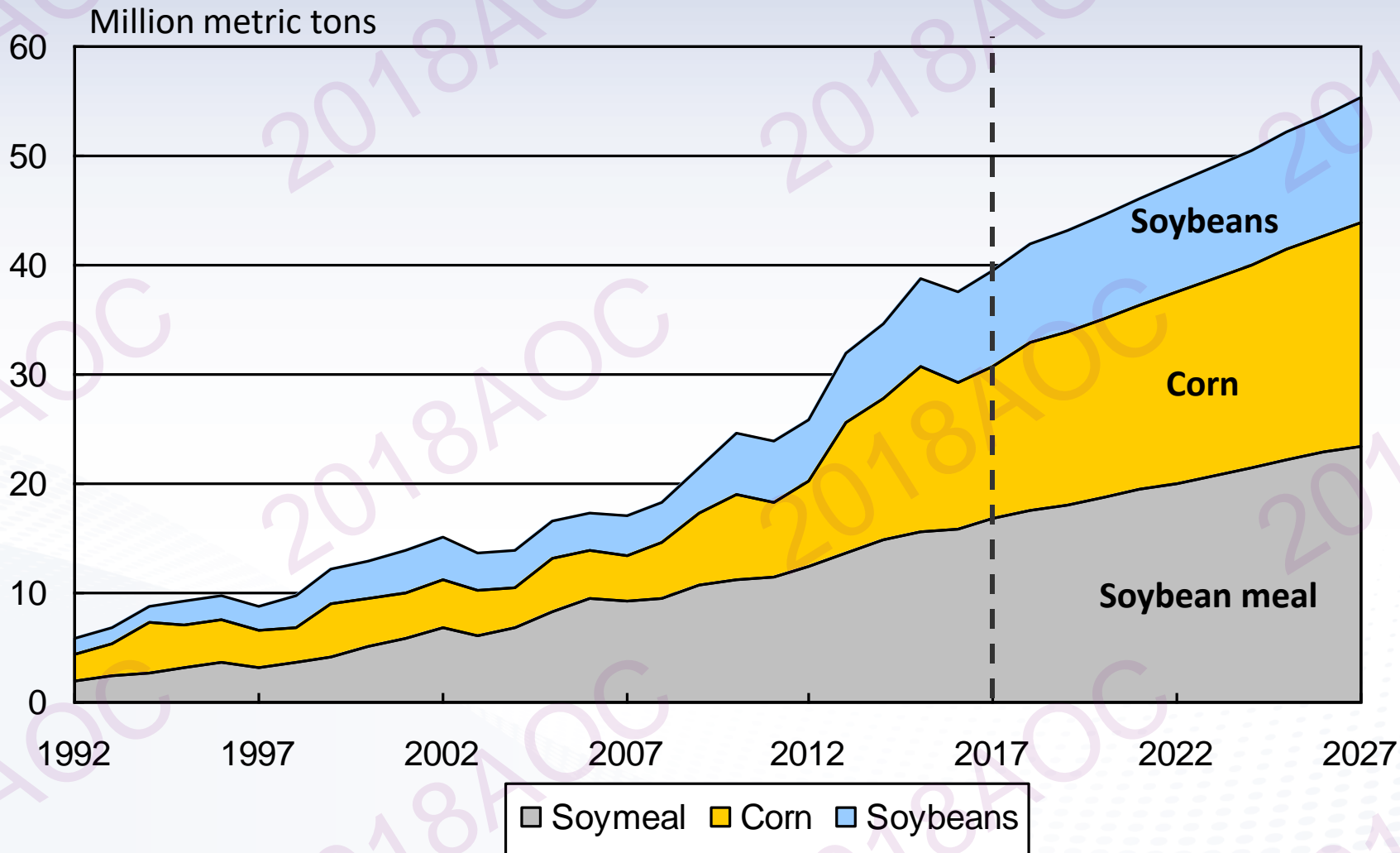


Source: *USDA Agricultural Baseline Projections to 2027*, February 2018.

United States Department of Agriculture, Economic Research Service

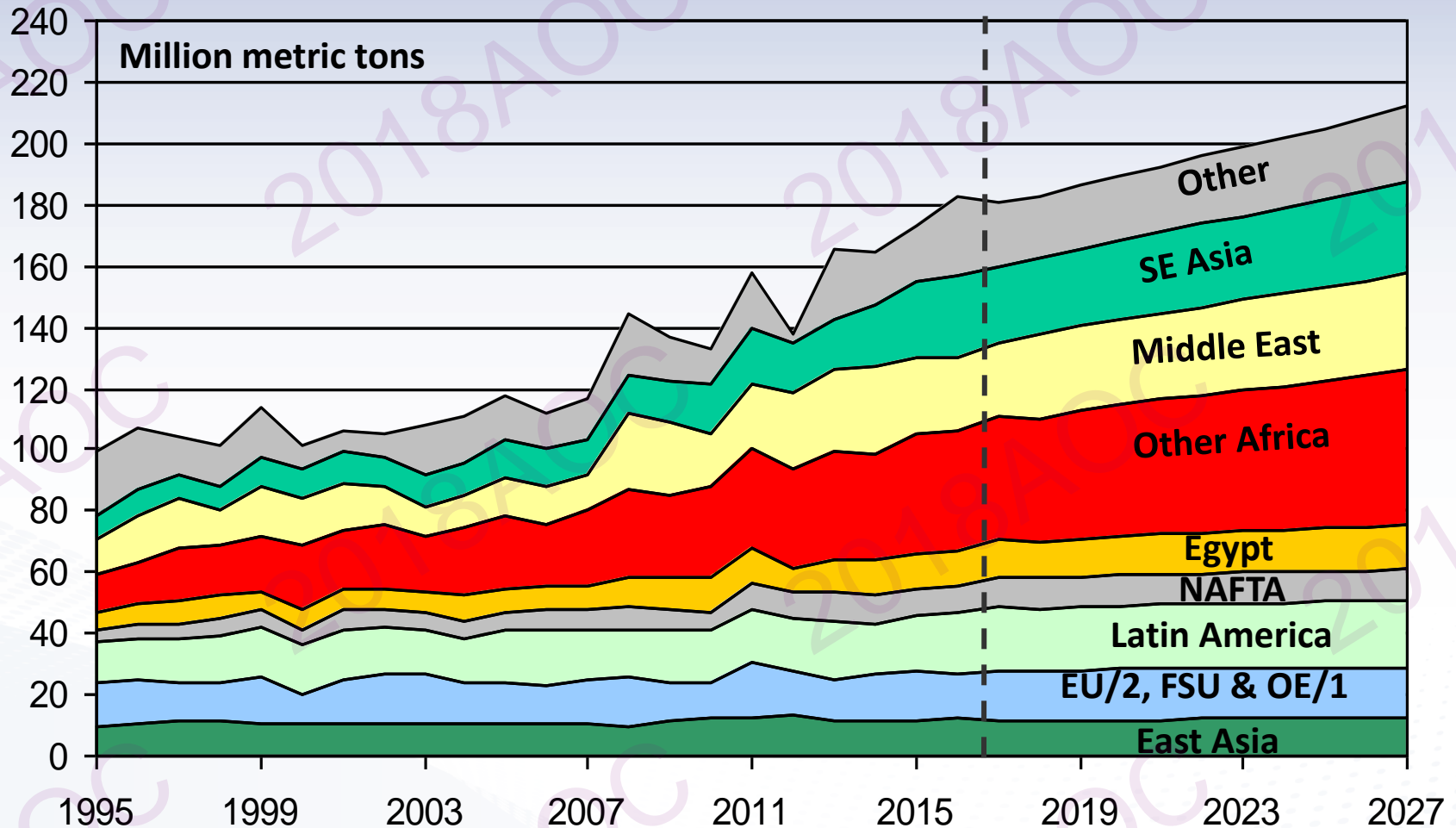
Southeast Asia: Corn, Soybeans & Meal Imports

(Vietnam, Thailand, Philippines, Indonesia & Malaysia)



Source: *USDA Agricultural Baseline Projections to 2027*, February 2018.
United States Department of Agriculture, Economic Research Service

Global Wheat Imports



1/ Former Soviet Union and other Europe.

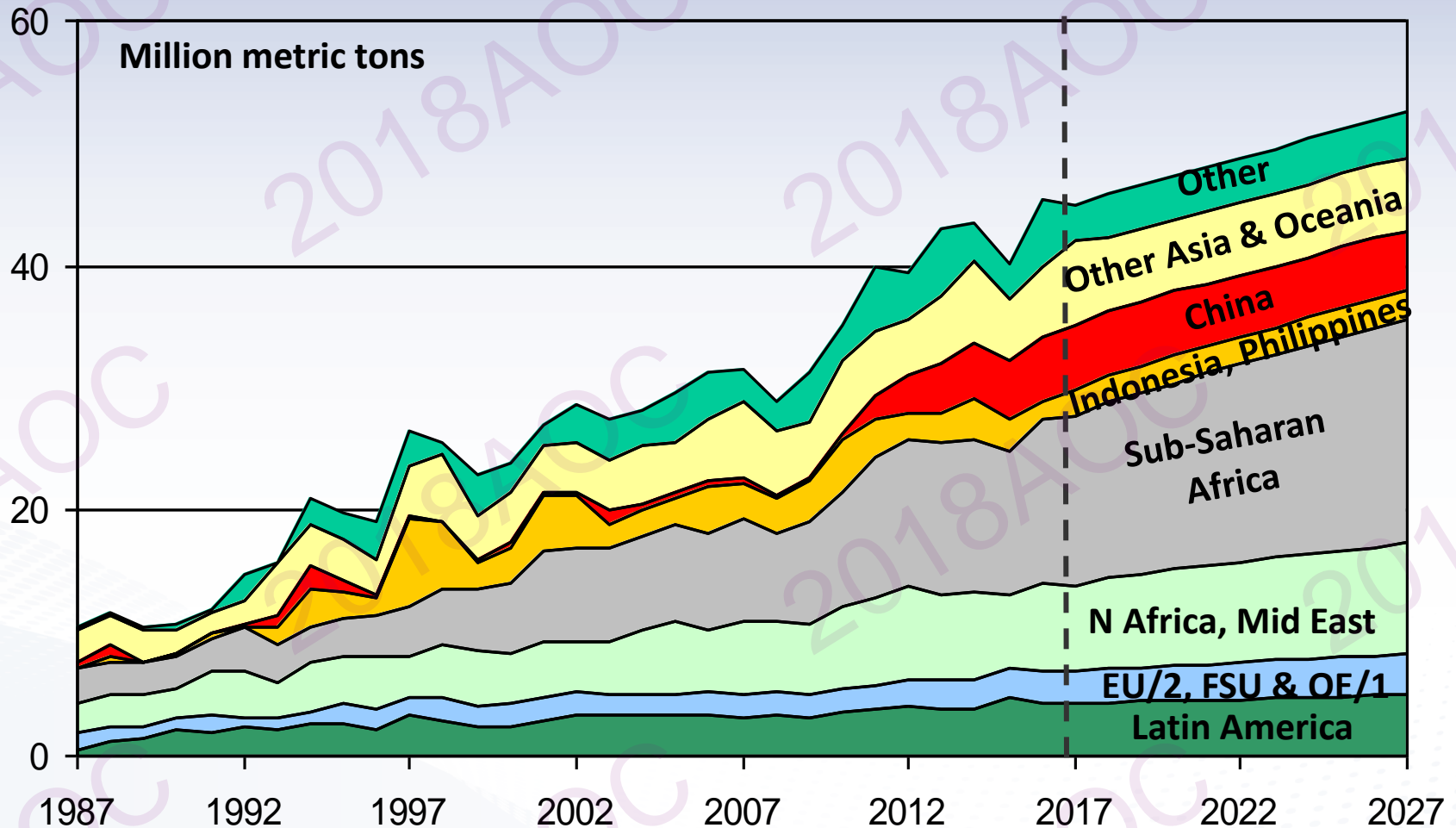
2/ Excludes intra-EU trade.

Source: *USDA Agricultural Baseline Projections to 2027*, February 2018.



United States Department of Agriculture, Economic Research Service

Global Rice Imports



1/ Former Soviet Union and other Europe,
2/ Excludes intra-EU trade.

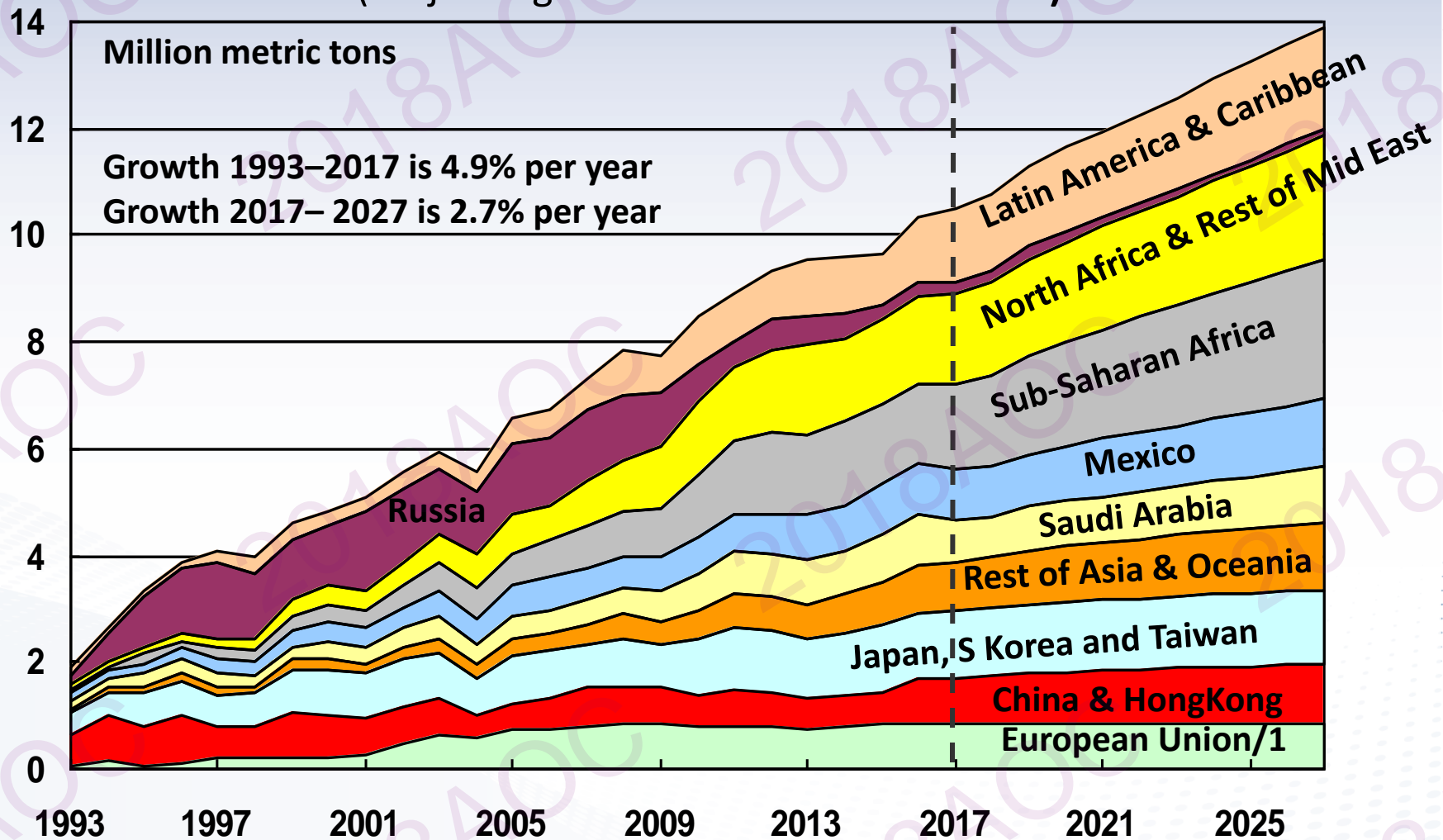
Source: *USDA Agricultural Baseline Projections to 2027*, February 2018.



United States Department of Agriculture, Economic Research Service

Poultry Imports

(Major Regions and Selected Countries)



1/ EU-28 excludes intra-trade after 2002, EU-15 intra-trade before 2003, Slovenia before 1992.



Source: *USDA Agricultural Baseline Projections to 2027*, February 2018.
 United States Department of Agriculture, Economic Research Service

Conclusions and Summary:

- Continued global trade growth in agriculture commodities. Assumed normal weather conditions. There are no significant increases in real world commodity prices.
- Strong income and population growth in many developing countries and urbanization lead to increased import demand for grains, soybeans and High Value Products. Countries have large income elasticities for food, elastic.
- Trade to remain very competitive
 - Expanding production potential in Brazil & Argentina, FSU, India and EU
- Mature markets / developed economies are not expanding imports, but maintain stable consumption patterns, such as East Asia (Japan, S Korea, Taiwan) and EU
- Unfortunately global agriculture prices are expected to be depressed in our projections. Farmers and producers will continue to face difficult times as they try to make profit.
- Uncertainty
 - Energy prices and costs of agriculture production
 - Policy changes by importers and exporters
 - Disease impacts, especially avian influenza
 - Weather impacts, increasing volatility in weather patterns
 - Potential for severe droughts and flooding,



Thank You

Data: USDA-FAS Global Agricultural Trade System Data Base
<https://apps.fas.usda.gov/gats/default.aspx>

Data: USDA-ERS Long-Term Projections briefing room
<https://www.ers.usda.gov/topics/farm-economy/agricultural-baseline/>

or

Use Search Engines for
USDA FAS GATS
USDA ERS agricultural projections

