




Global Agriculture Update & 2022 Outlook

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Our Business: Global AgriTrends

- Global analysis of agriculture markets, est. 2006; **focused on global proteins** (beef, pork, poultry)
- Economic, policy, forecasting
- Extensive **global network of clients and contacts**
- On-the-ground research on 6 continents
- Clients include multinational processors, ag banks, Wall St banks, hedge funds, brokers, producers (hogs, cattle, chickens), trade associations, feed companies, pharmaceuticals, exporters, importers and others seeking market intel in the global protein space





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Outline

- The World's Largest Macroeconomic Experiment...
- External market drivers
 - COVID
 - China
- Other Risks and Issues
- 10-year outlook



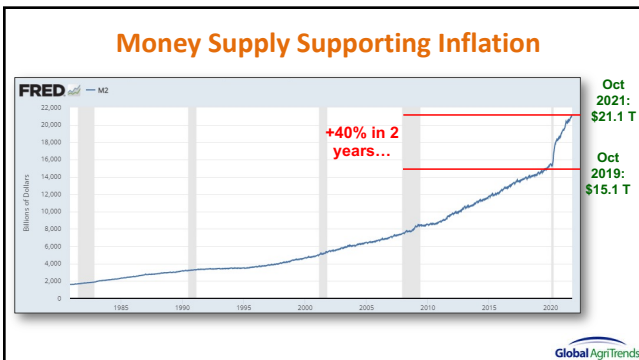
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The World's Largest Macroeconomic Experiment...

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The Commodity Super-Cycle Continues

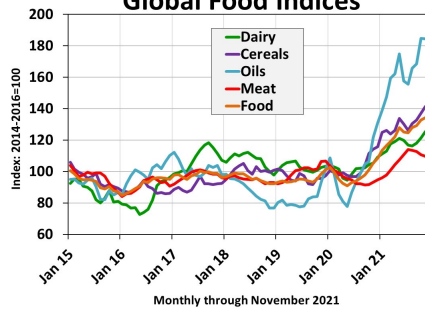
- **Driven by expanded money supplies**
 - Global COVID stimulus: US\$10 TRILLION
 - Increased demand overloaded supply chains
 - West coast port issues
 - Container shortages (eastbound from Asia)
- **NOW:**
 - Rising labor, fuel, electricity costs
 - Surging fertilizer costs, glyphosate
- **When does this end?**
 - Look further than you think
- **How does it end?**
 - Soft or hard landing?



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Global Food Indices

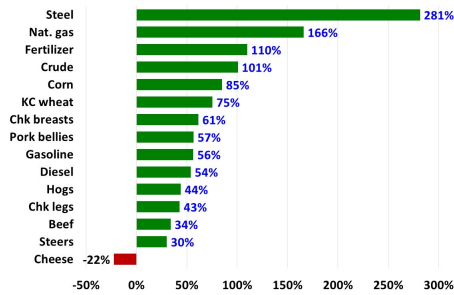


Source: UN/FAO

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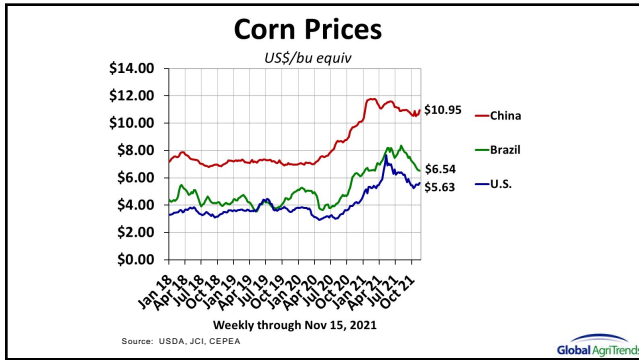
Price Inflation since Aug. 1, 2020



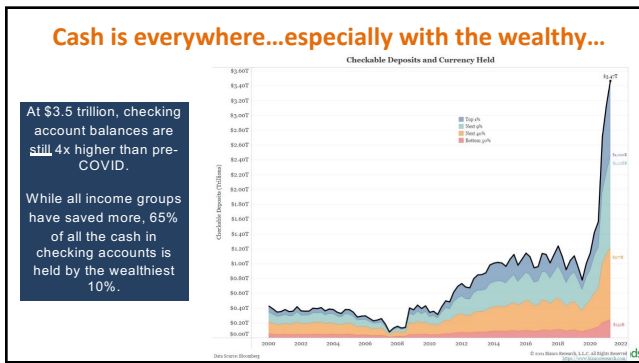
Source: Bloomberg, USDA, EIA.

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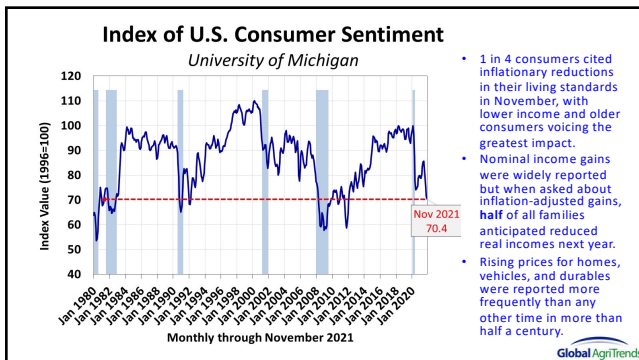
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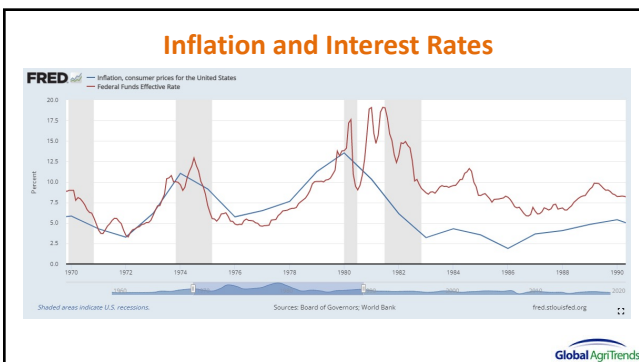
Economics
Powell Weighs Earlier End to Bond Tapering Amid Hot Inflation
 By Craig Torres, Matthew Boesler, and Christopher Condon
 November 30, 2021, 8:59 AM MST Updated on November 30, 2021, 9:39 AM MST

- Said the **strong U.S. economy and elevated inflation** could warrant ending the central bank's asset purchases sooner than planned next year, **though the new omicron strain of Covid-19 poses a fresh risk to the outlook**
- Says could wrap up purchases a few months earlier
- Says it's time to retire word 'transitory' for price increases

<https://www.bloomberg.com/news/articles/2021-11-30/powell-says-appropriate-to-wrap-up-earlier-end-to-bond-buy-tapering>



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Potential Results of Persistent Inflation

1. Inflation turns to "stagflation"
 - Inflation + economic slowing
 - Fed "tapers" bond purchases
 - Fed raises interest rates
2. Instability in the 3rd world
 - Central banks already raising rates in Africa
 - Remember Arab Spring (2010)?




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External Market Drivers

COVID
China
Other Risks and Issues

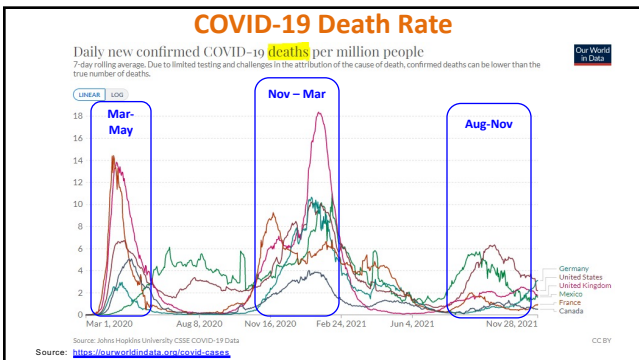
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COVID Omicron Variant

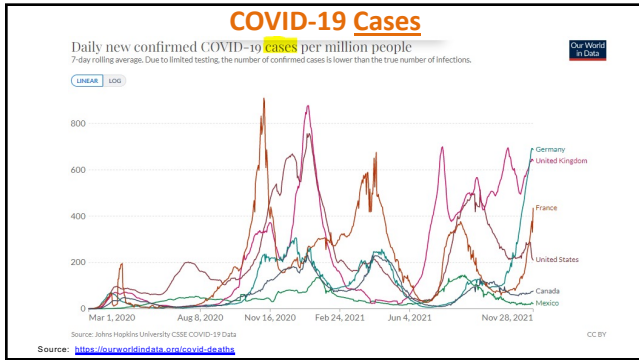
- A **highly divergent variant with a high number of mutations ...** some of which are concerning and may be associated with **immune escape potential and higher transmissibility**. - WHO
- WHO says omicron poses a **“VERY HIGH”** global risk
 - Suggests **“SEVERE CONSEQUENCES”** for some areas
- By next week we should know much more about
 - Transmissibility
 - Virulence
 - Existing vaccine protection

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Global Vaccination Rates

Location	Doses given	Fully vaccinated	% fully vaccinated
China	2.33B	1.07B	76%
India	1.13B	378M	27%
U.S.	443M	194M	59%
Brazil	297M	128M	60%
Indonesia	217M	85.4M	31%
Japan	195M	95.8M	76%
Mexico	130M	63.4M	49%
Pakistan	120M	48.6M	22%
Turkey	119M	49.8M	59%
Germany	116M	56.3M	68%
Russia	115M	51.7M	36%
U.K.	110M	46M	69%

Location	Doses given	Fully vaccinated	% fully vaccinated
France	101M	46.4M	69%
Vietnam	101M	36.1M	37%
Iran	98.2M	42.2M	50%
Italy	92.6M	43.9M	74%
Thailand	85.4M	37.1M	53%
Bangladesh	84.9M	33.1M	20%
S. Korea	82.2M	40.2M	78%
Spain	74M	37.5M	79%
Philippines	71.7M	39.5M	36%
Argentina	64.3M	27.5M	61%
Canada	59.7M	28.7M	76%
Colombia	51.8M	22.9M	45%

<https://ourworldindata.com/> Global AgriTrends

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COVID will continue to drive global markets, likely for years...

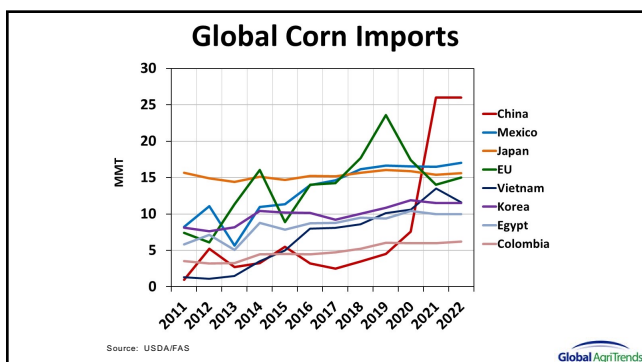


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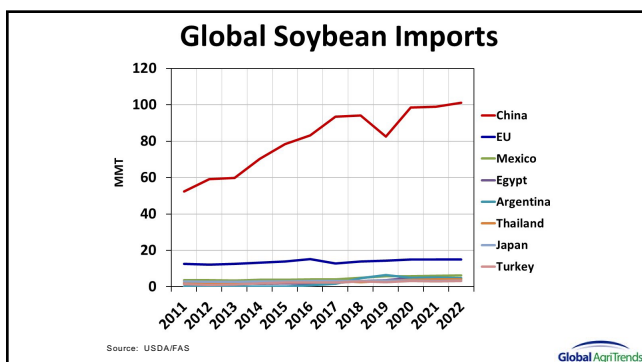
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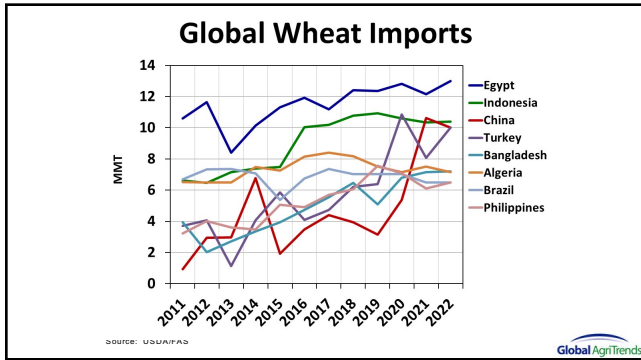
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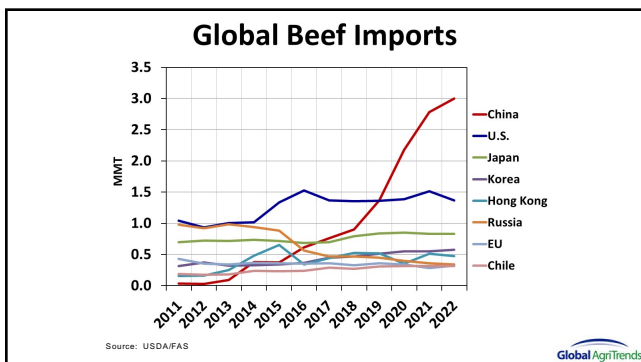
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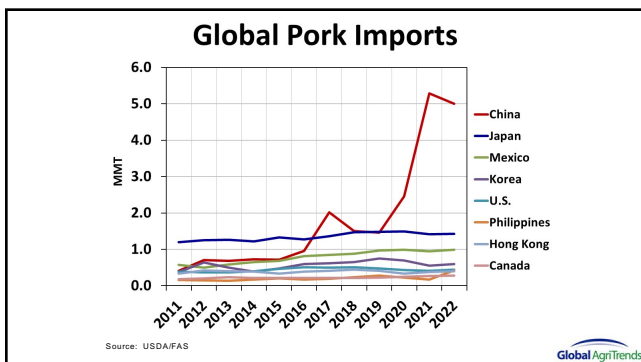
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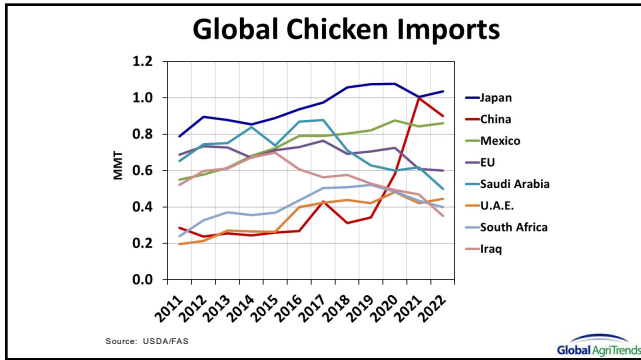
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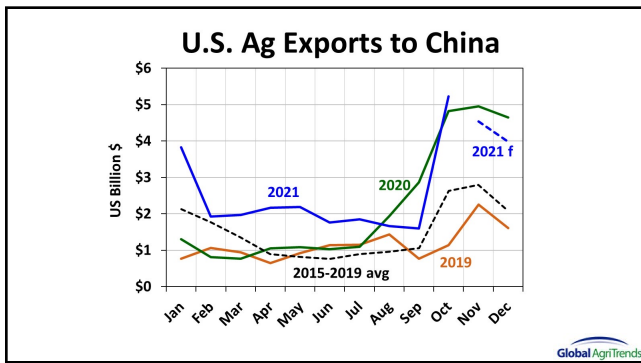
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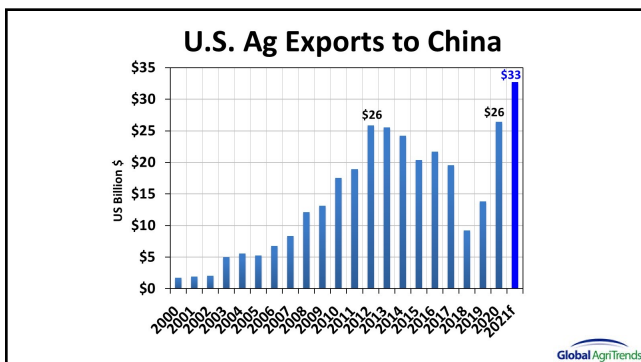
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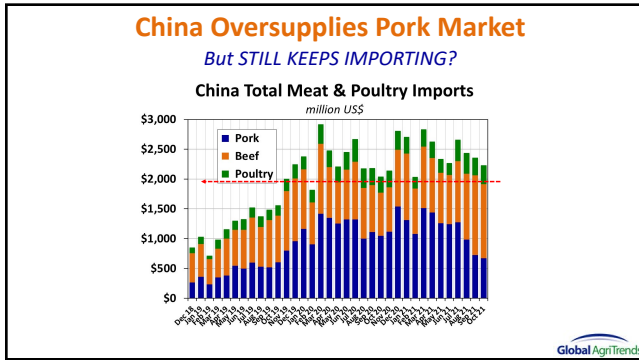
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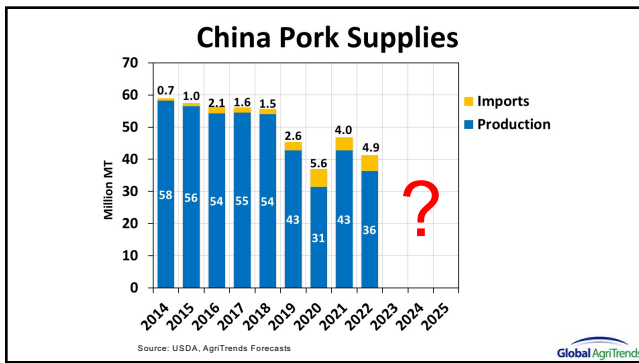
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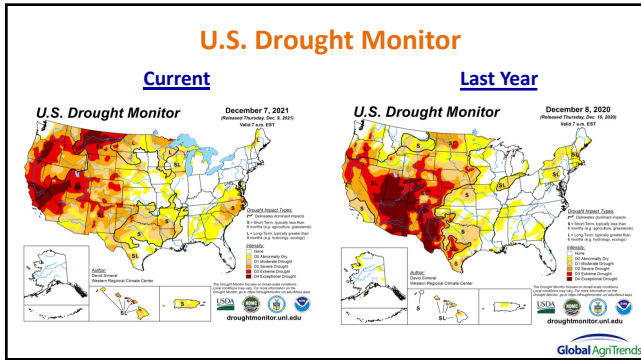


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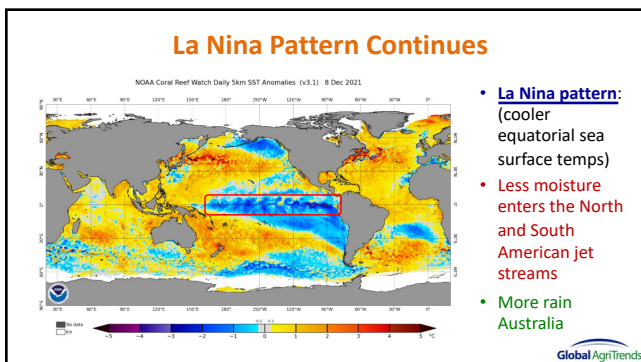
Are there any other global risks to the markets that we need to be mindful of going into 2022 and beyond?

Drought?
Labor
Fertilizer shortages?
Climate policy – war on methane
Russian troop buildup on the Ukraine border

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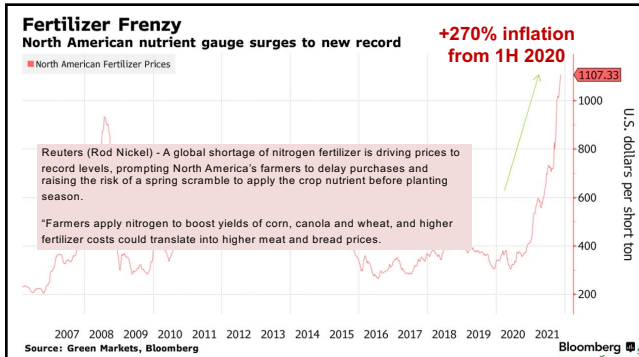


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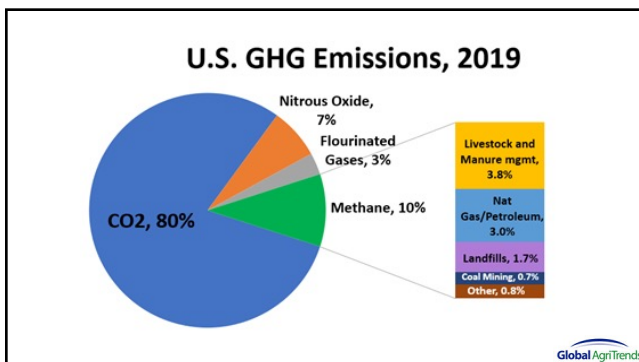
Labor Issues and Risks

- 11 million job openings currently in the U.S.
 - 6.5 million hirings in November
- Labor unions are seeing **MAXIMUM LEVERAGE**
 - Strikes ahead?
- How is it fixed?
 - Get used to it...

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Russian Troop Buildup on the Ukraine Border

- 175,000 troops and equipment moved up to the Ukraine border
- Timing is very good
 - EU (UK) energy shortages have driven them to Russia for help
- Pres. Biden reaffirmed the United States' unwavering commitment to Ukraine's sovereignty and territorial integrity.!
- Ukraine:
 - #6 global corn producer
 - #4 global corn exporter
 - #7 global wheat producer
 - #4 global wheat exporter

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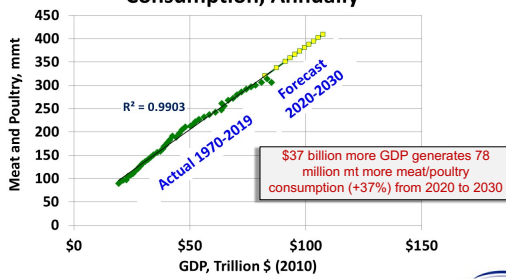
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Global Demand



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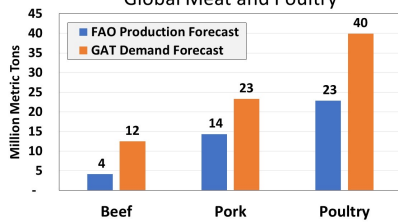
Global GDP and Meat & Poultry Consumption, Annually



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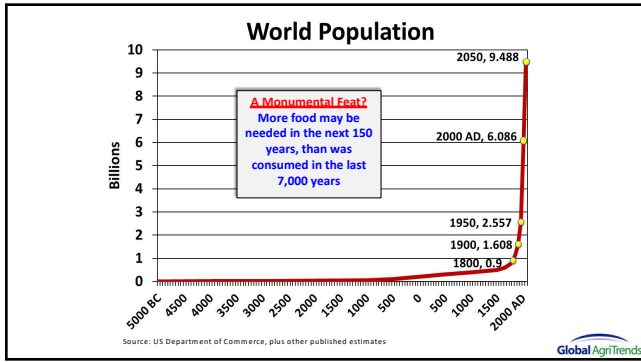
Supply and Demand Projections

10-Year Projections: Global Meat and Poultry



Production forecast, FAO <http://www.fao.org/publications/default.asp?lang=en&info=ag-2019-01-01-2019-01-01>
Demand forecast, AgriTrends Demand model

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Global AgriTrends
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Thank You

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