Climate Change and Agribusiness

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ENTERPRISES, INC.

About Us

CGB Enterprises, Inc.

ITOCHU

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ZEN-NOH

Grain

Feed Ingredients

Risk Management

Financial Services

Soybean Processing

Fertilizer

Marine

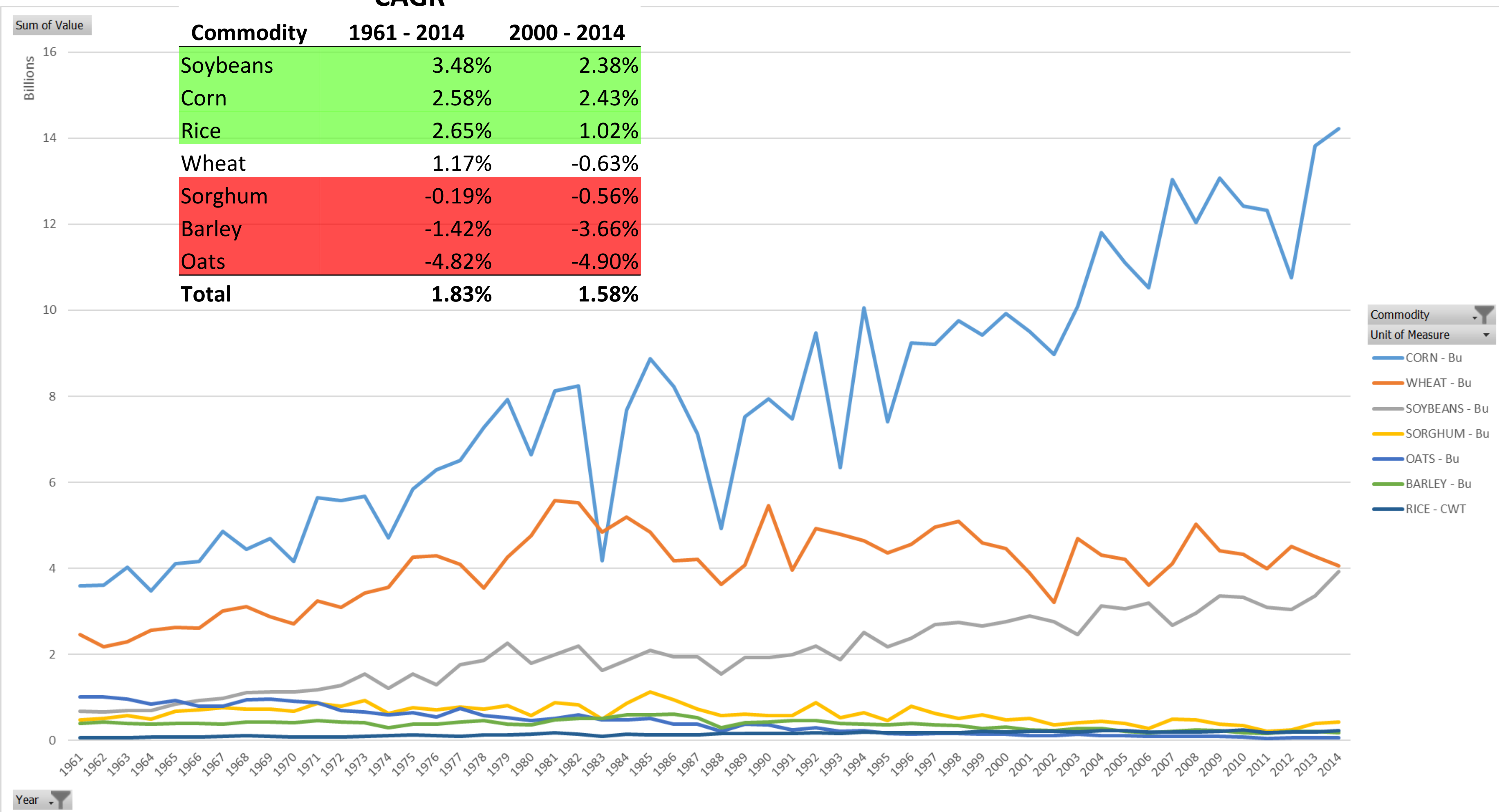
Terminals & Logistics

Table of Contents

U.S. Domestic Production Trends

CAGR

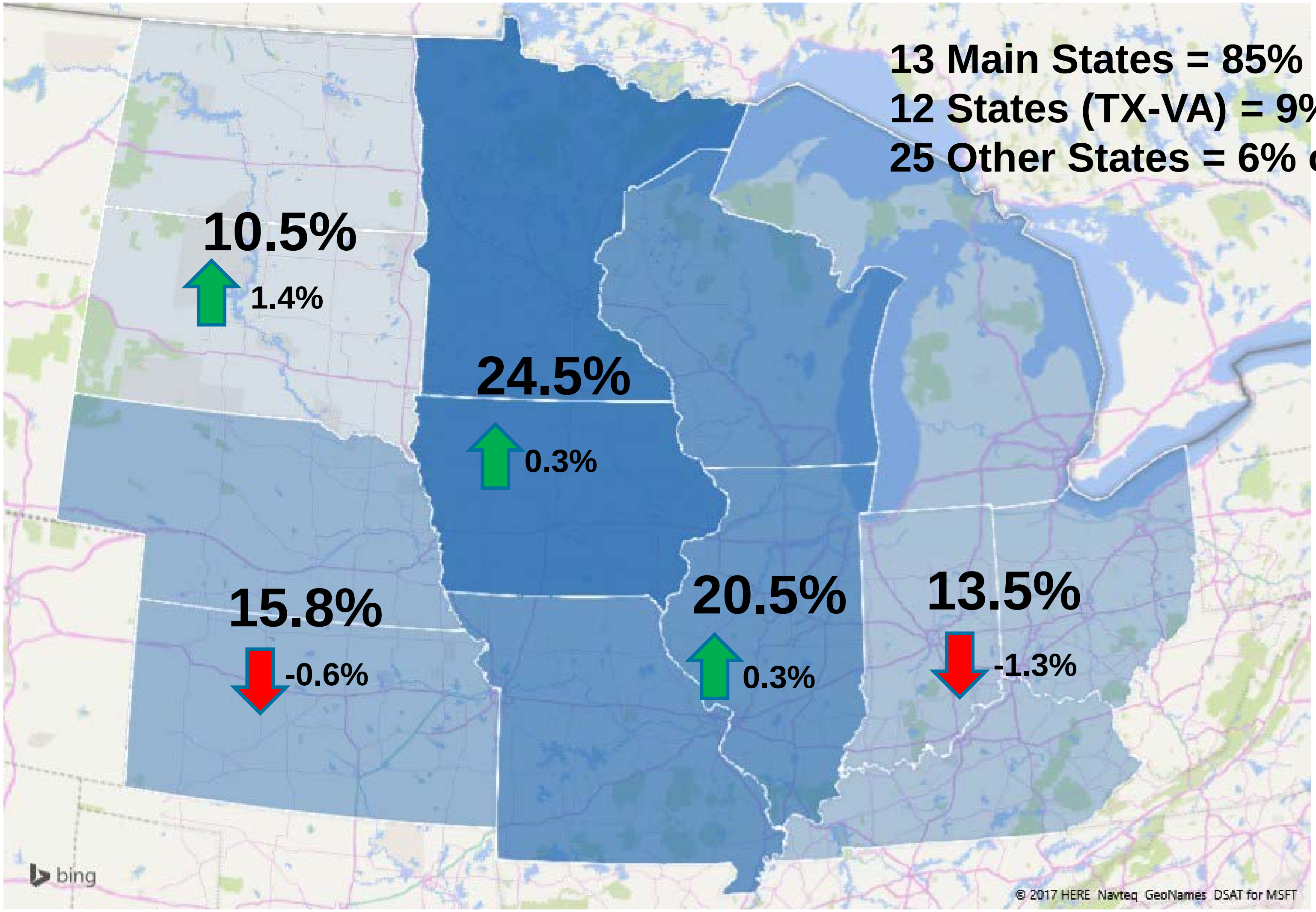
Commodity	1961 - 2014	2000 - 2014
Soybeans	3.48%	2.38%
Corn	2.58%	2.43%
Rice	2.65%	1.02%
Wheat	1.17%	-0.63%
Sorghum	-0.19%	-0.56%
Barley	-1.42%	-3.66%
Oats	-4.82%	-4.90%
Total	**1.83%**	**1.58%**



Source: USDA - NASS

2016 US Grain & Oilseed Production Share

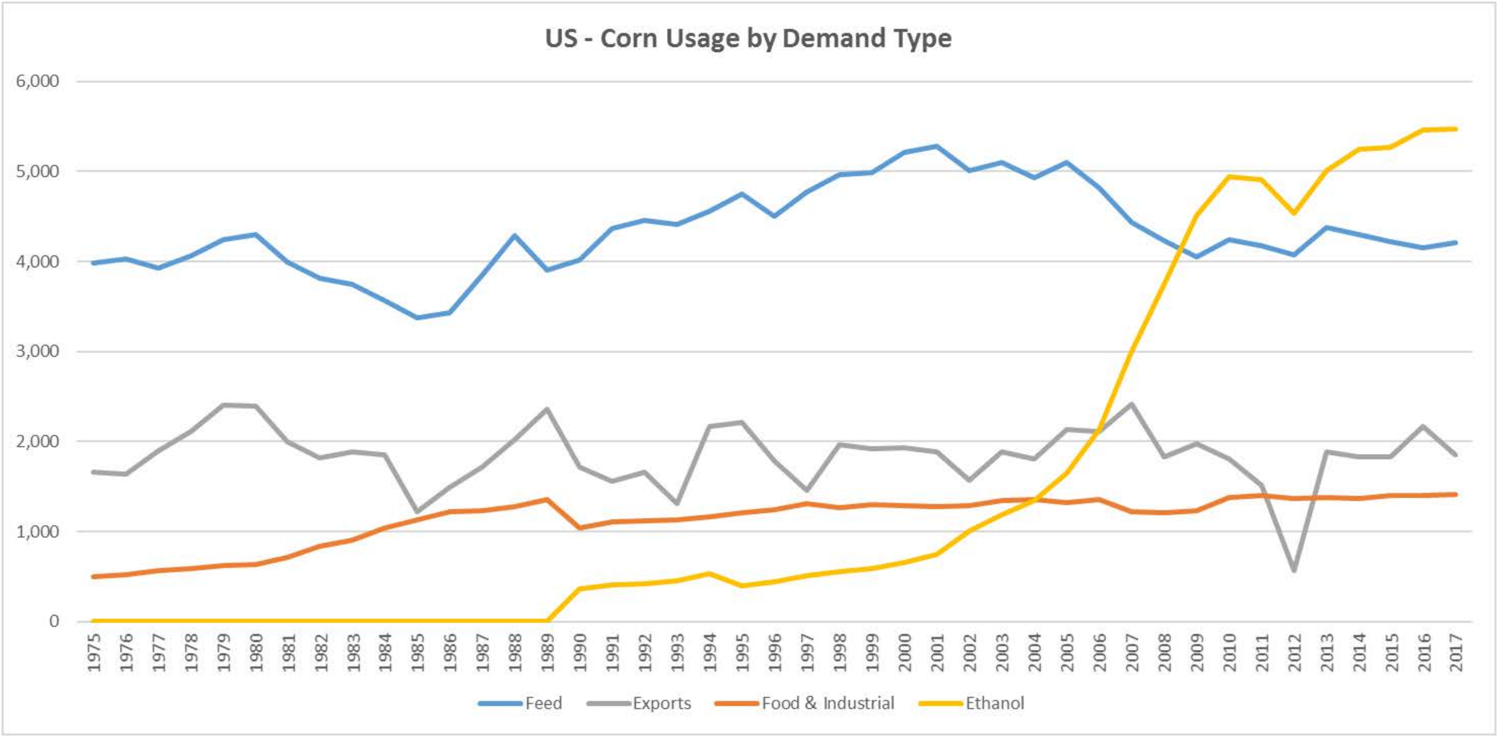
Change relative to 2009



Source: USDA - NASS

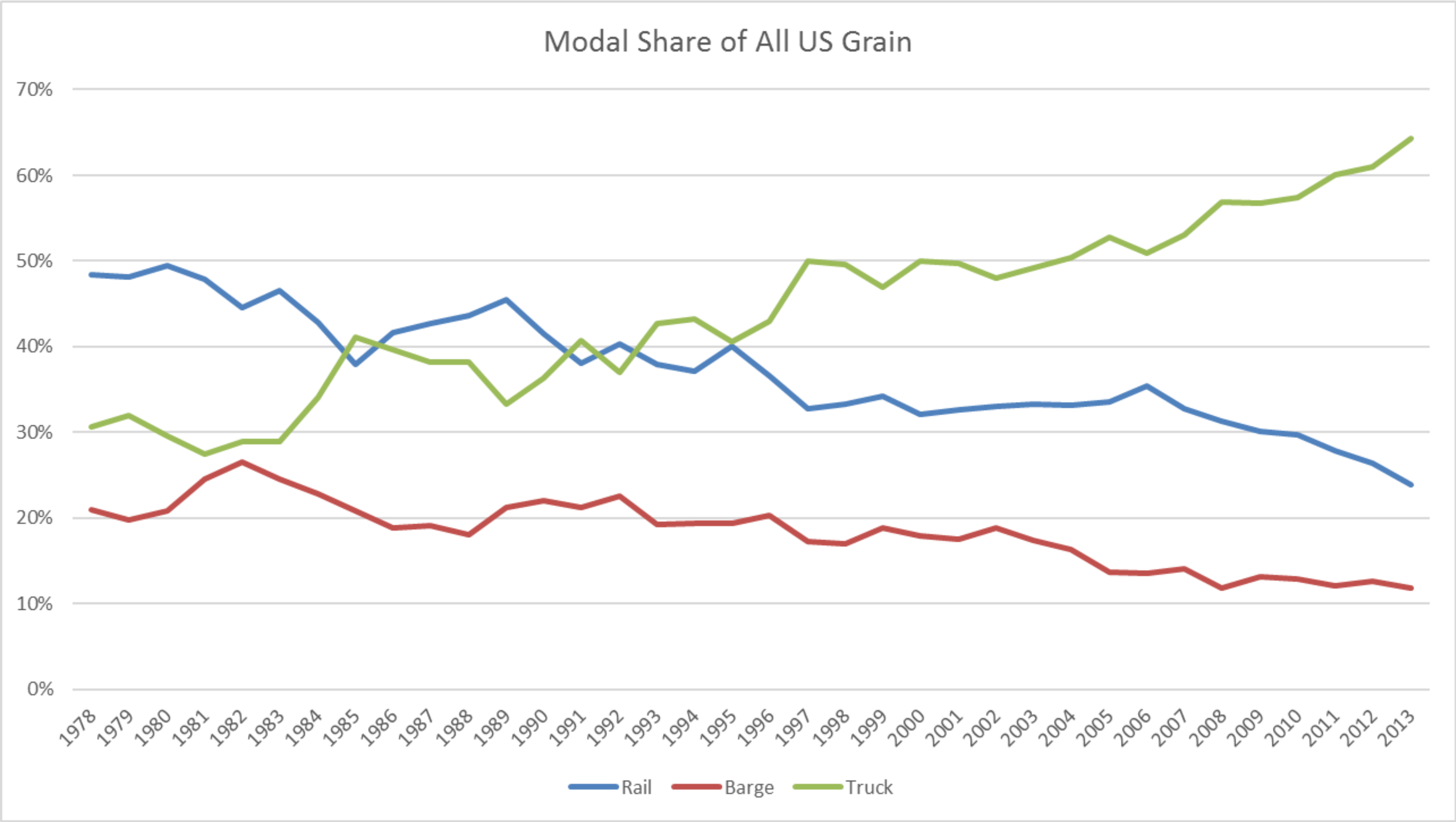
Domestic Use Opportunities

- Corn Ethanol (E-15?)
- Soybean Crush (biodiesel)
- Livestock Feed



Source: ProExporter Network

U.S. Grain Transportation



Source: USDA - AMS

Truck Transportation

- **Longer trips are more typical in northern and western markets.**
  - Implications from reduced Arkansas River barge transportation.

- **Livestock production moving north and additional processing capacity will reduce average trip length.**

- **Increasing capacity per truckload offered efficiencies through 1990's. Few efficiency gains have developed since.**

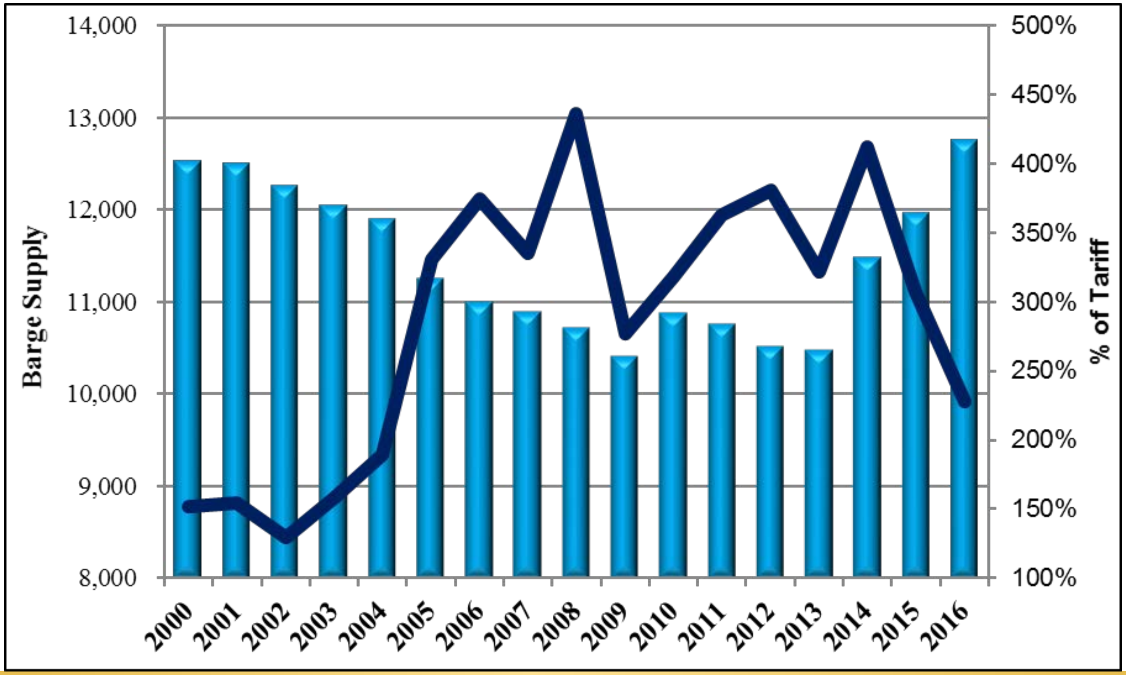
Rail Transportation

- **Increased rail demand = 130 trains per month.**
  - ~15% increase to 2013.

- **Carrying capacity opportunities:**
  - Railcar design,
  - Train length, or
  - GWOR increases.

Barge Transportation

- **Demand reduced by ~800 barges/month.**
  - ~30% reduction from 2013.
- **Mississippi River winter closure may shorten.**
- **Arkansas River most heavily impacted.**

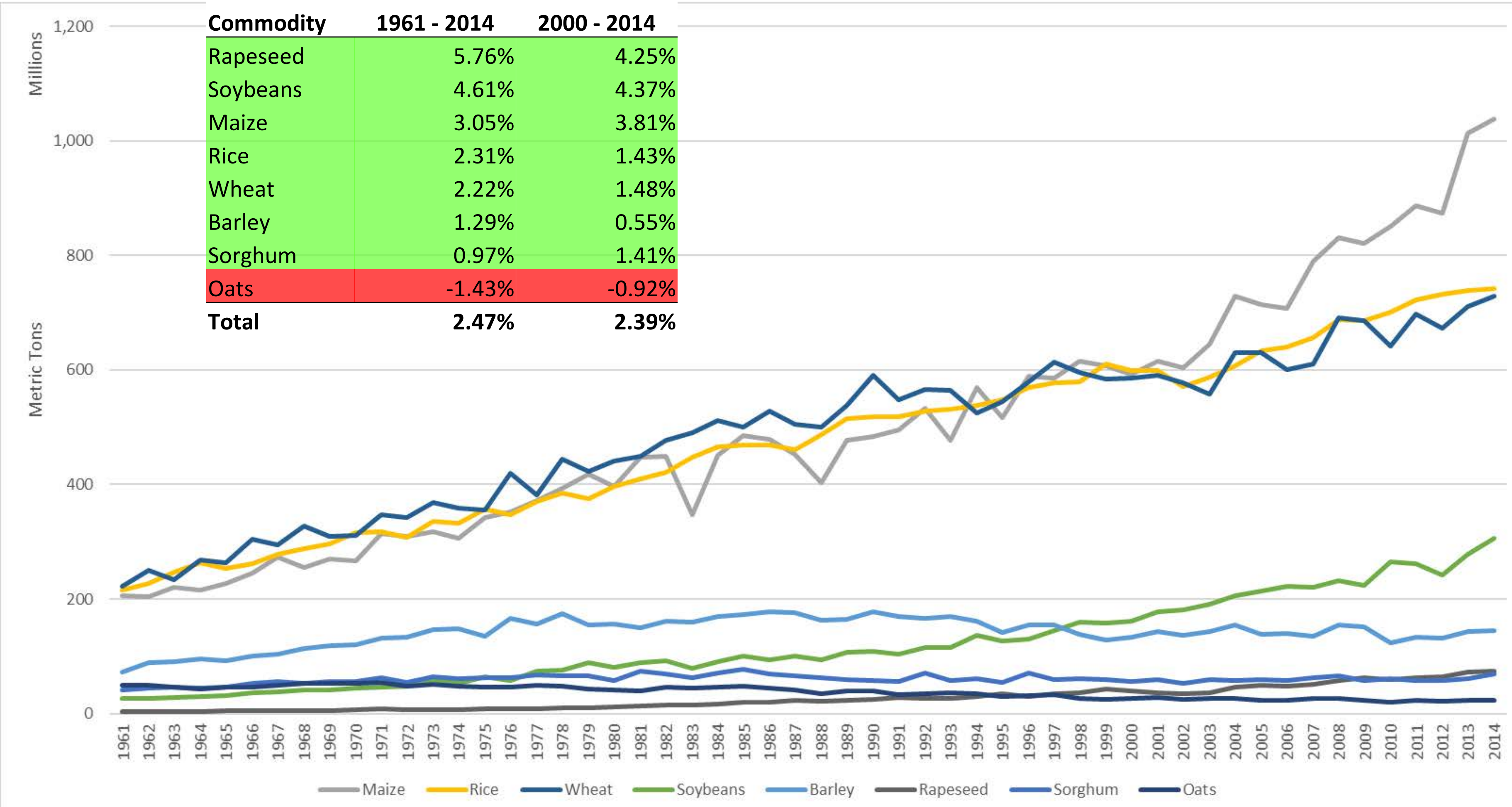


Source: Informa Economics

World Production Trends

CAGR

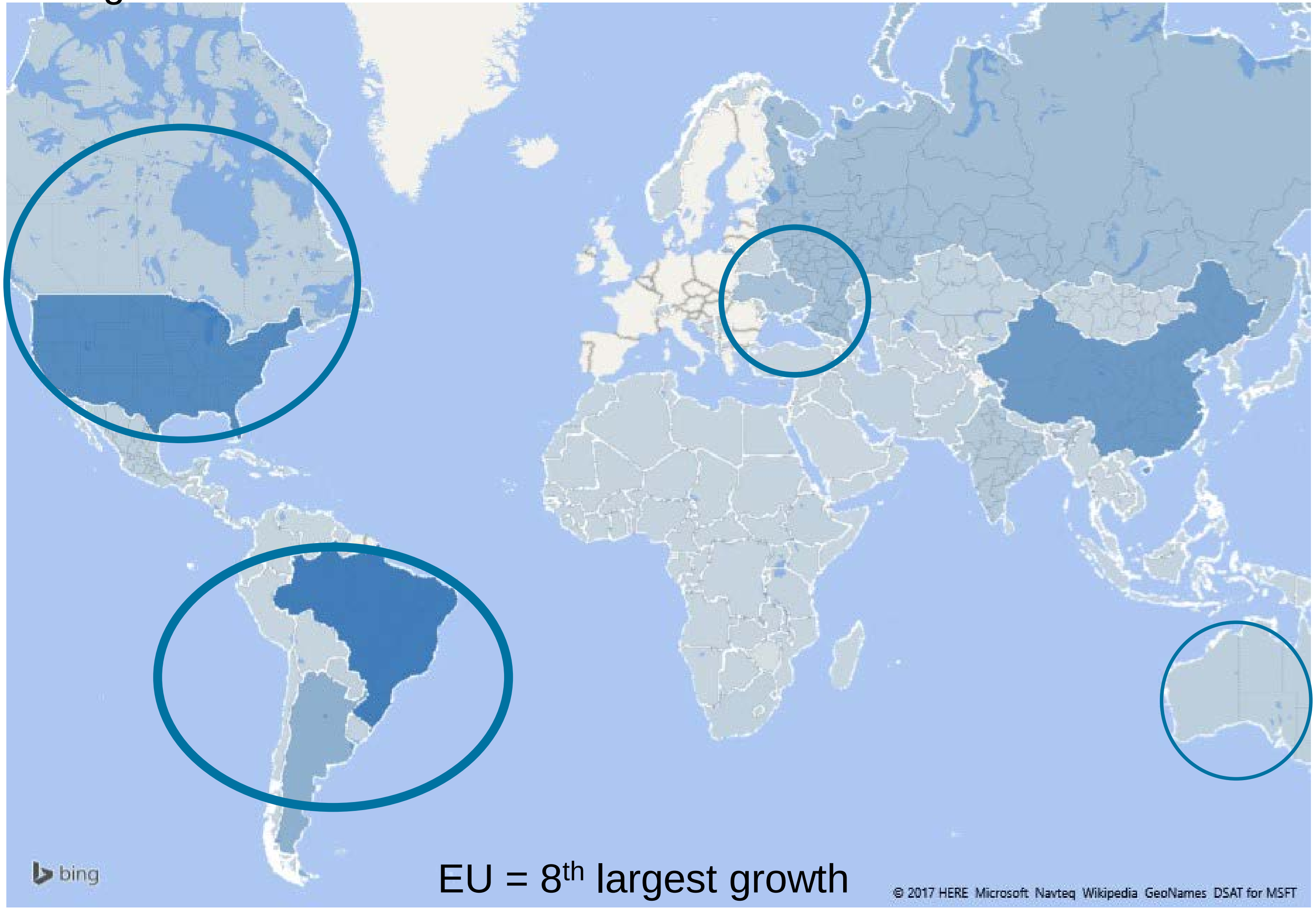
Commodity	1961 - 2014	2000 - 2014
Rapeseed	5.76%	4.25%
Soybeans	4.61%	4.37%
Maize	3.05%	3.81%
Rice	2.31%	1.43%
Wheat	2.22%	1.48%
Barley	1.29%	0.55%
Sorghum	0.97%	1.41%
Oats	-1.43%	-0.92%
Total	**2.47%**	**2.39%**



Source: Food and Agriculture Organization of the United Nations

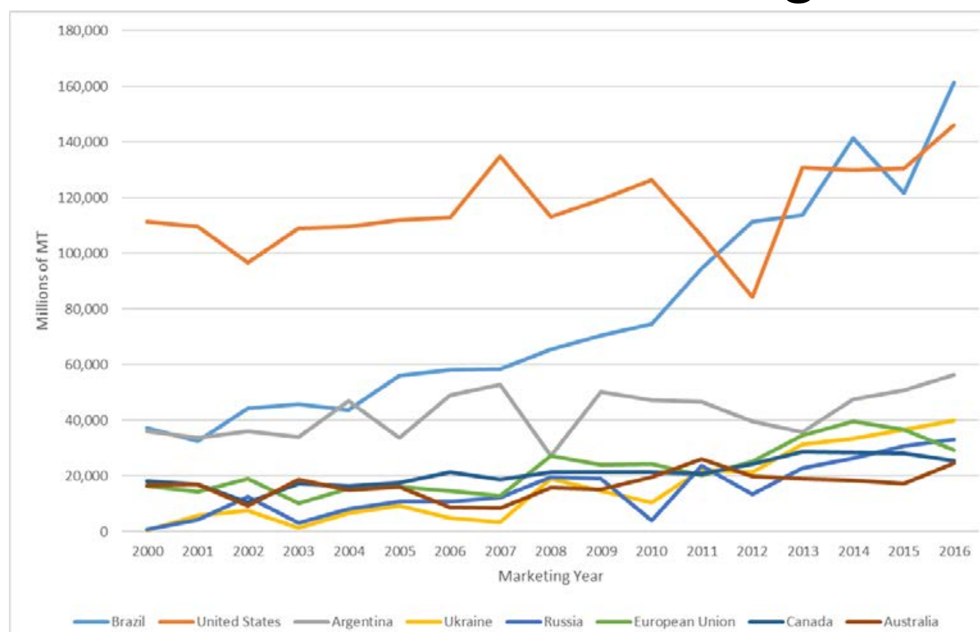
Global Production & Export Changes

Change from 2000 to 2016



Global Grain and Oilseed Exports

- **Brazilian export capacity investment continues.**
- **Black Sea Region export investment occurring, but not to degree of Brazil.**
  - Possibly the most opportune future export region.
- **US' share of global exports will decline further, noting reduced barge commerce.**



U.S. Agriculture Investment Opportunities

- **Domestic grain consumption:**
  - E-15,
  - Livestock.

- **Grain storage capacity:**
  - Increased 12 month consumption system,
  - Reduced seasonal impact of exports.

Thank you!