

Agricultural Market Outlook for California in a Global Context

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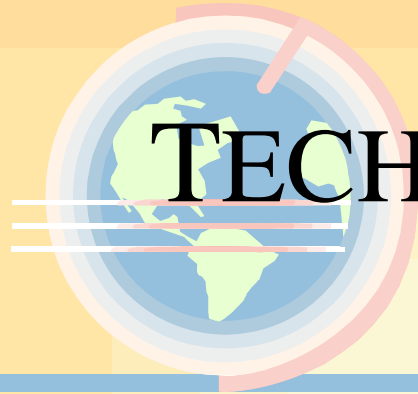
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Agricultural market drivers?

Supply was main factor until 2002
when ...

Demand factors changed the world.



TECHNOLOGY *is the* CATALYST

Advances in . . .

- * **production** create the need for global markets
- * **storage** expand the amount of time before spoilage
- * **transportation** expand the geographic size of a market

A circular icon of a globe showing the Americas, with a red circle and white lines overlaid on it.

GLOBALIZATION *and* COMMODITY MARKET PRICES

Globalization of markets affects the profitability of commodity production, which affects the composition of those markets



AGRICULTURE'S PROFITABILITY

- * Gross profit margin averaged 2 to 3% over the 1975-2005 period, higher recently.
- * 90% of U.S. farm operators households' income comes from off-farm sources.



AMERICAN AGRICULTURE...

... is “moving up the Farming Food Chain”

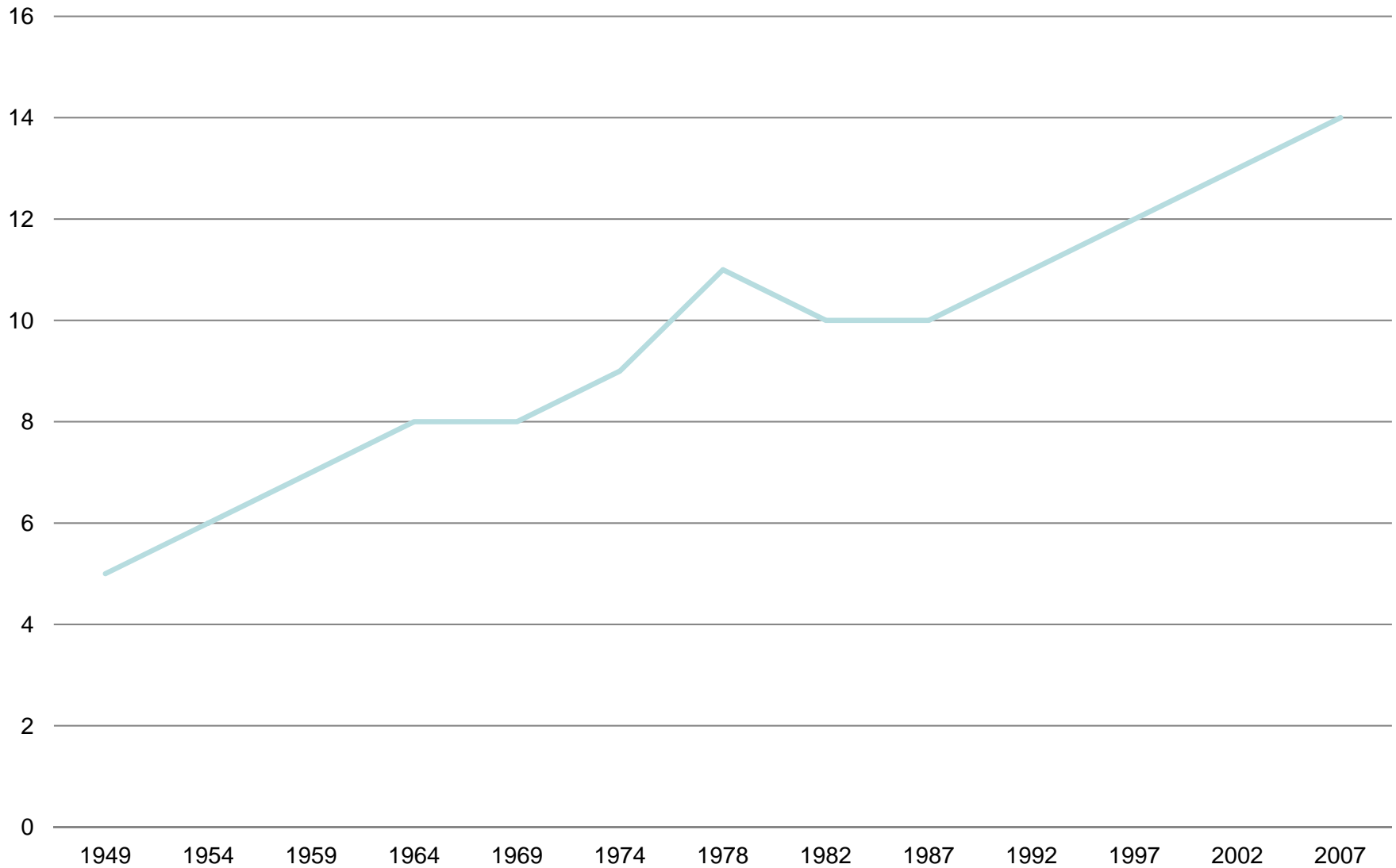
... thus becoming **more risky** and needing more \$/acre for higher value crops.



The FARMING FOOD CHAIN

<i>Development stage</i>	<i>Crop type</i>	<i>Investment asset fixity</i>
4th	High-value perennial	Very high, highly fixed
3rd	High-value annual	High, inflexible
2nd	Low-value perennial	Moderate, flexible
1st	Low-value annual	Low, very flexible

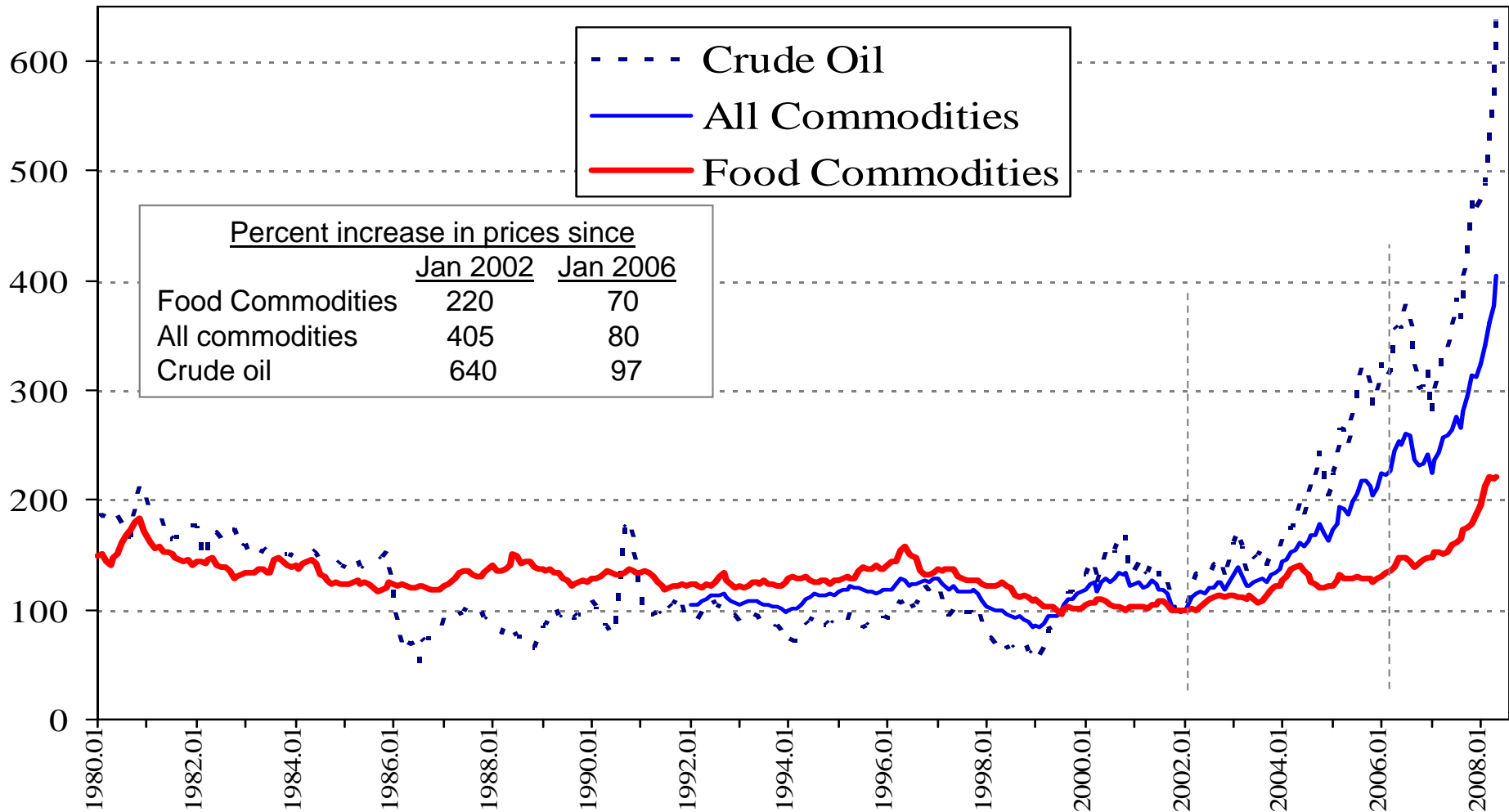
Irrigated % of U.S. Cropland, 1949-2007



Prices of many commodities rose:

Crude oil went up 640 % January 2002 to July 2008

Index: January 2002 = 100

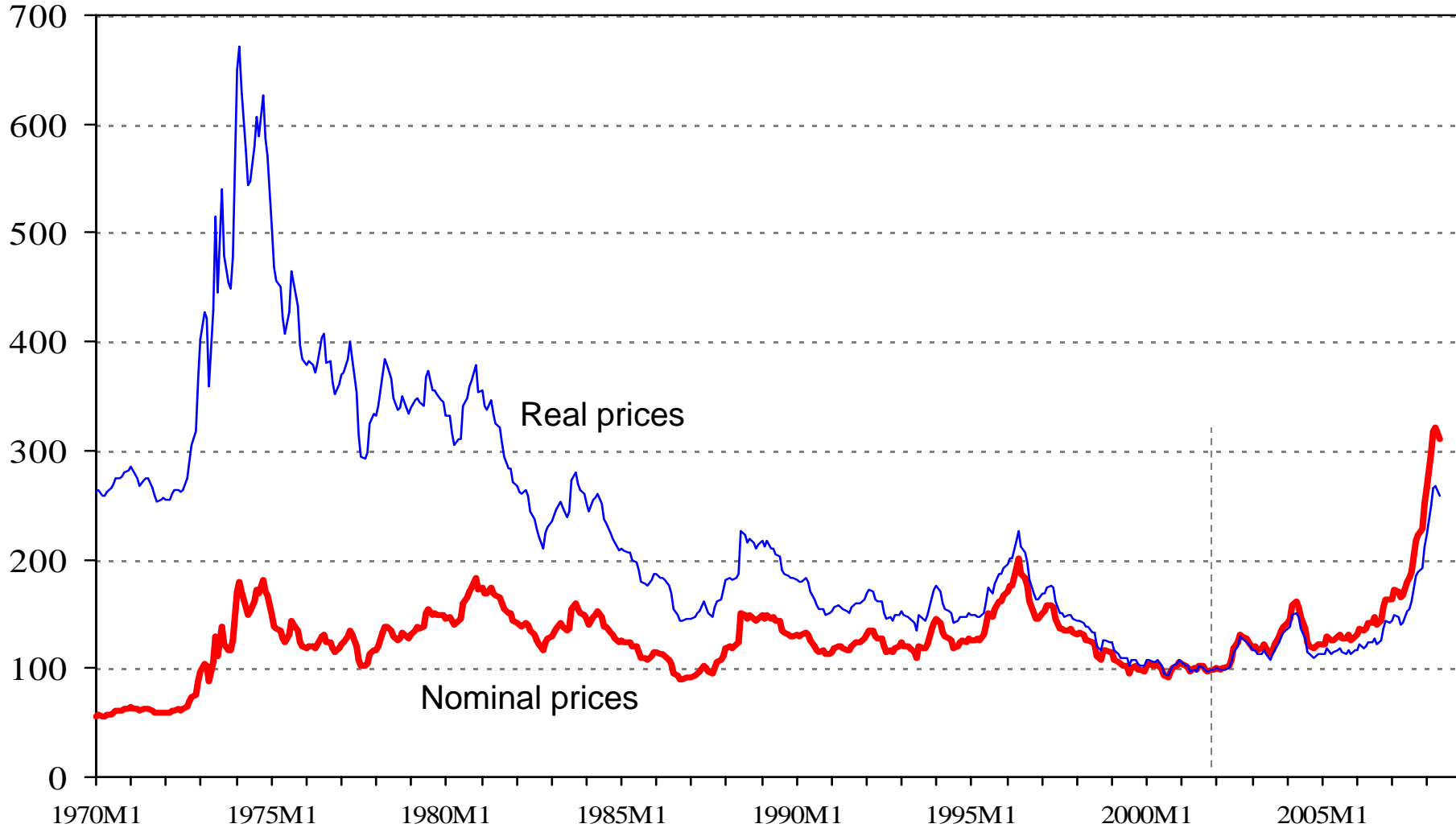


1/ Food Commodities include grains, vegetable oils, meats, sugar, and other basic food commodities.

Crop price increases: real vs. nominal

Average of 4 crops (wheat, soybeans, corn & rice)

Index: January 2002 = 100



Other contributing factors

Strong:

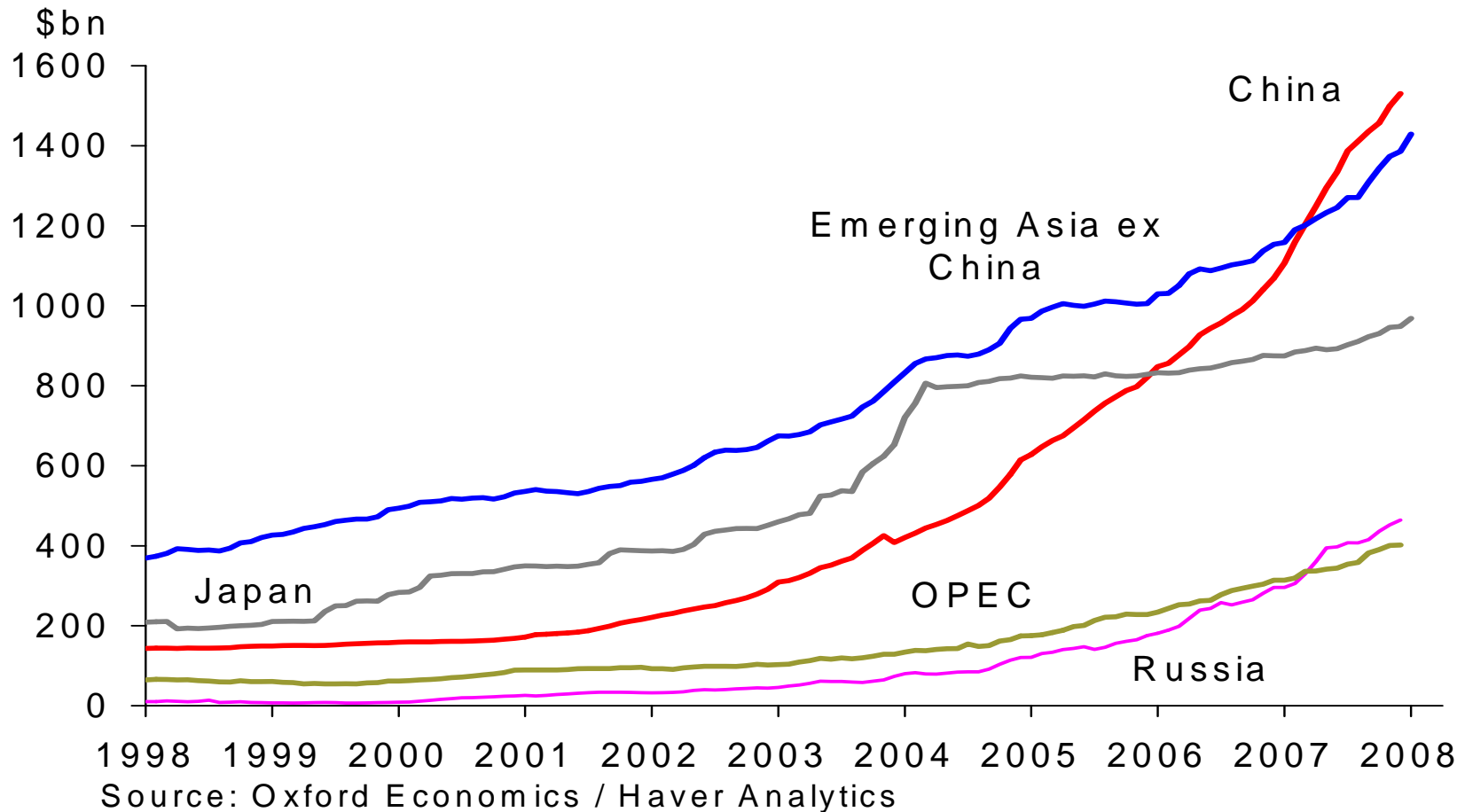
- Policy changes (e.g., ethanol)
- Increasing foreign exchange reserves held by importers
- Role of hedge funds, index funds, & sovereign wealth funds: affect demand and/or volatility?

Weak:

- Higher energy prices
- Weaker U.S. dollar
- Adverse weather reduced crop production

Foreign Exchange Reserves

Emerging Asia: Foreign exchange reserves



What do these changes in agricultural markets mean to U.S. vegetable producers?

- 1 - Income risks are increasing
- 2 - China is competitor now,
customer later

How are producers responding?

- Expanding size of operations
- Diversifying crop portfolios
- Forward contracting output

The Trend in Economies of Scale

*Florence medians,
(weighted by
harvested acres).*

<i>Selected Crops</i>	<i>1987</i>	<i>2007</i>
	<i>-Harvested acres-</i>	
Asparagus	160	240
Lettuce	949	1,815
Tomatoes	400	820
Apples	83	146
Almonds	203	450
Oranges	450	1,113

Source: Census of Agriculture microdata

In conclusion ...

- Vegetable crop markets are highly responsive to supply/demand shifts
- Commodity markets have seen huge expansions in demand over the last decade
- U.S. vegetable markets are expected to continue expanding with domestic demand, subject to Chinese trade competition (& S. America in long-run)