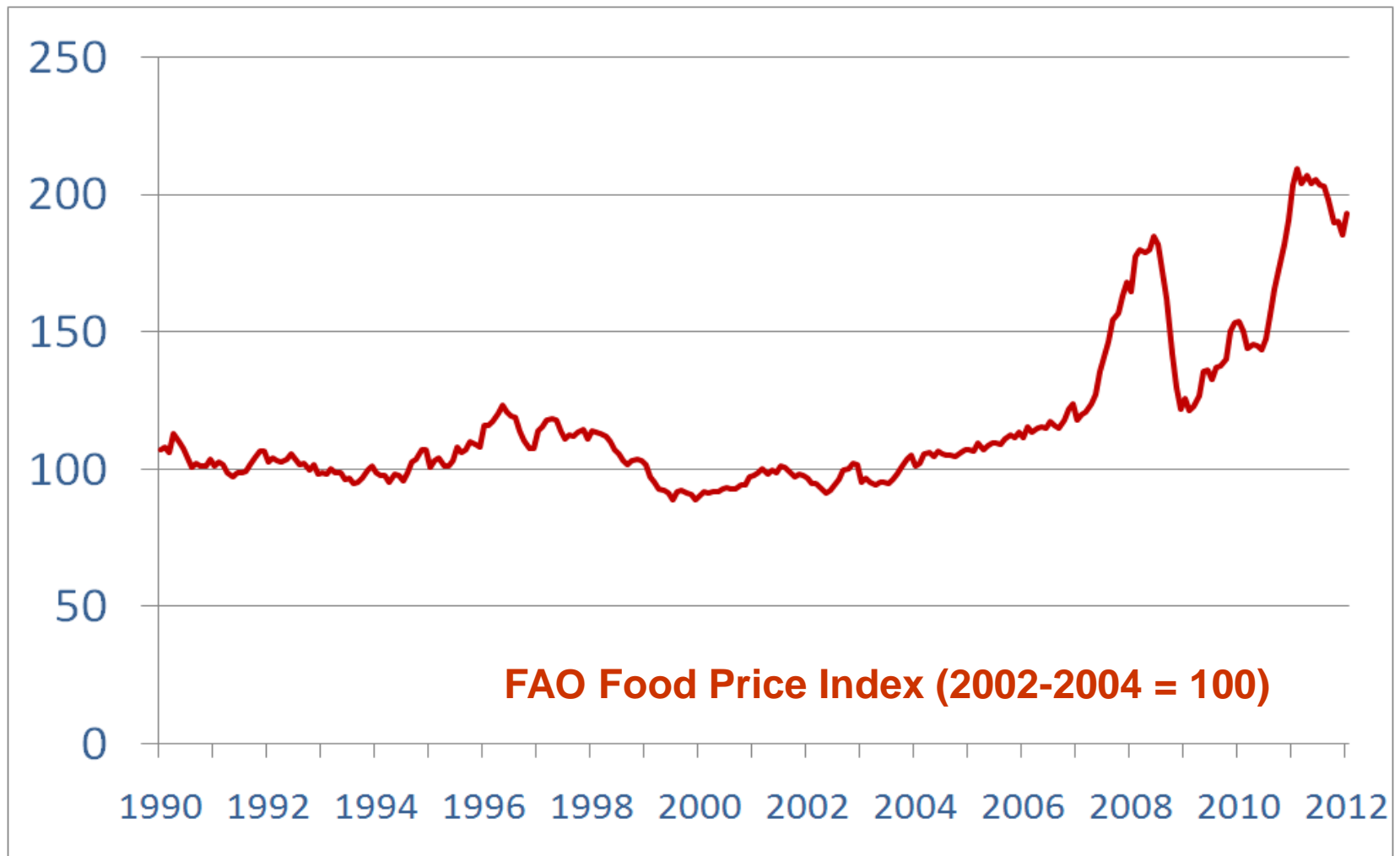


Food Price Crises and Policies for Food Security

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The Food Price Crises of 2007/08 and 2010/?



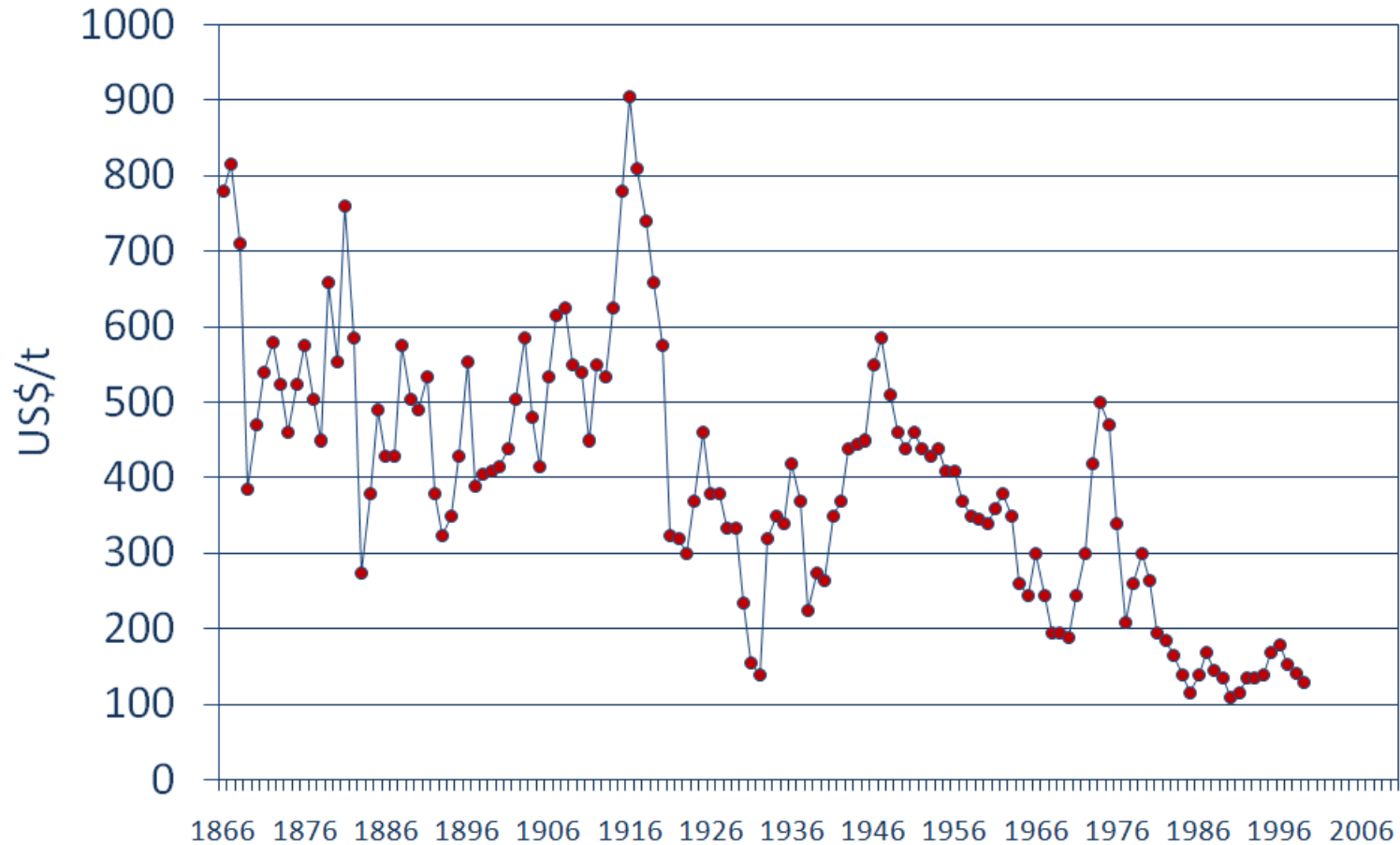
Outline

1. Thomas Malthus and the ‚dismal science‘
2. Long-term global food price trends
3. What drives food prices?
4. Policy responses

1. Malthus and the ‚dismal science‘

- Thomas Malthus (1766-1834):
An Essay on the Principal of Population
 - Population grows in geometric progression
(1, 2, 4, 8, ...)
 - Food production grows in arithmetic progression
(1, 2, 3, 4, ...)
- Consequences: Hunger, disease and war

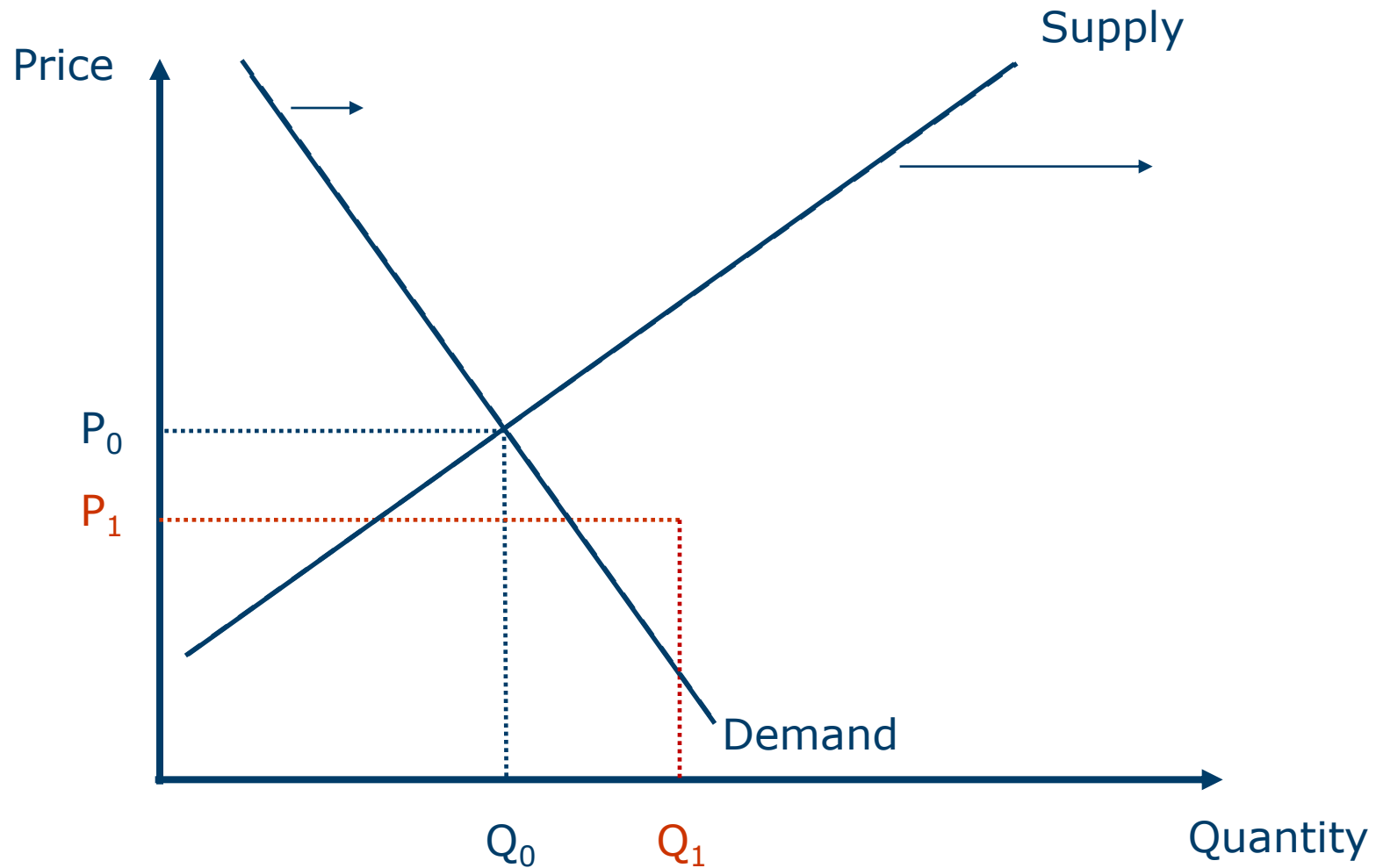
2. Long term global food price trends



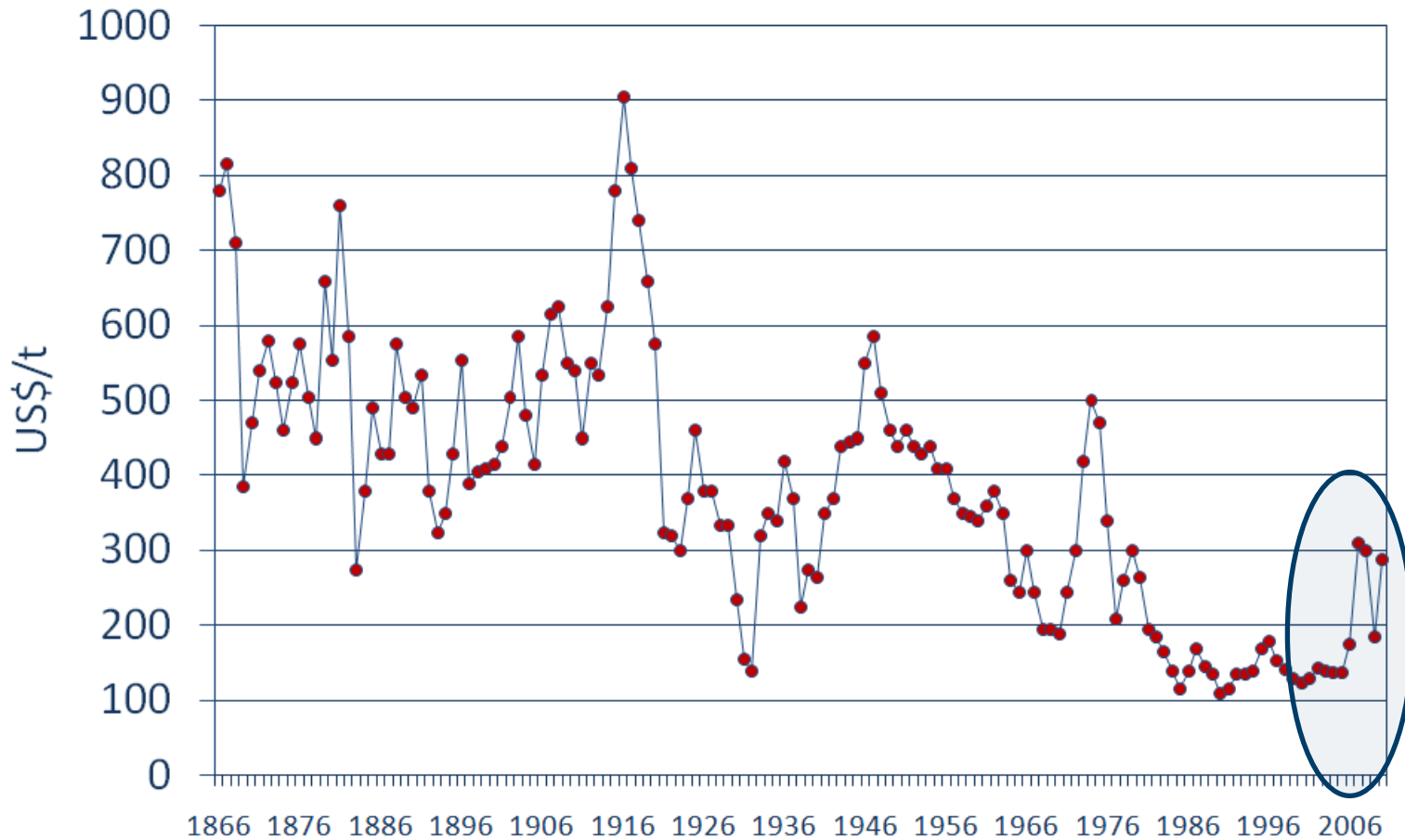
3. What drives food prices?

- The supply side
 - Technological change (yields)
 - Acreage
 - $\text{Acreage} * \text{Yield} = \text{Production}$
- The demand side
 - Population growth
 - Incomes
 - Preferences / consumption patterns

As economists like to see it...



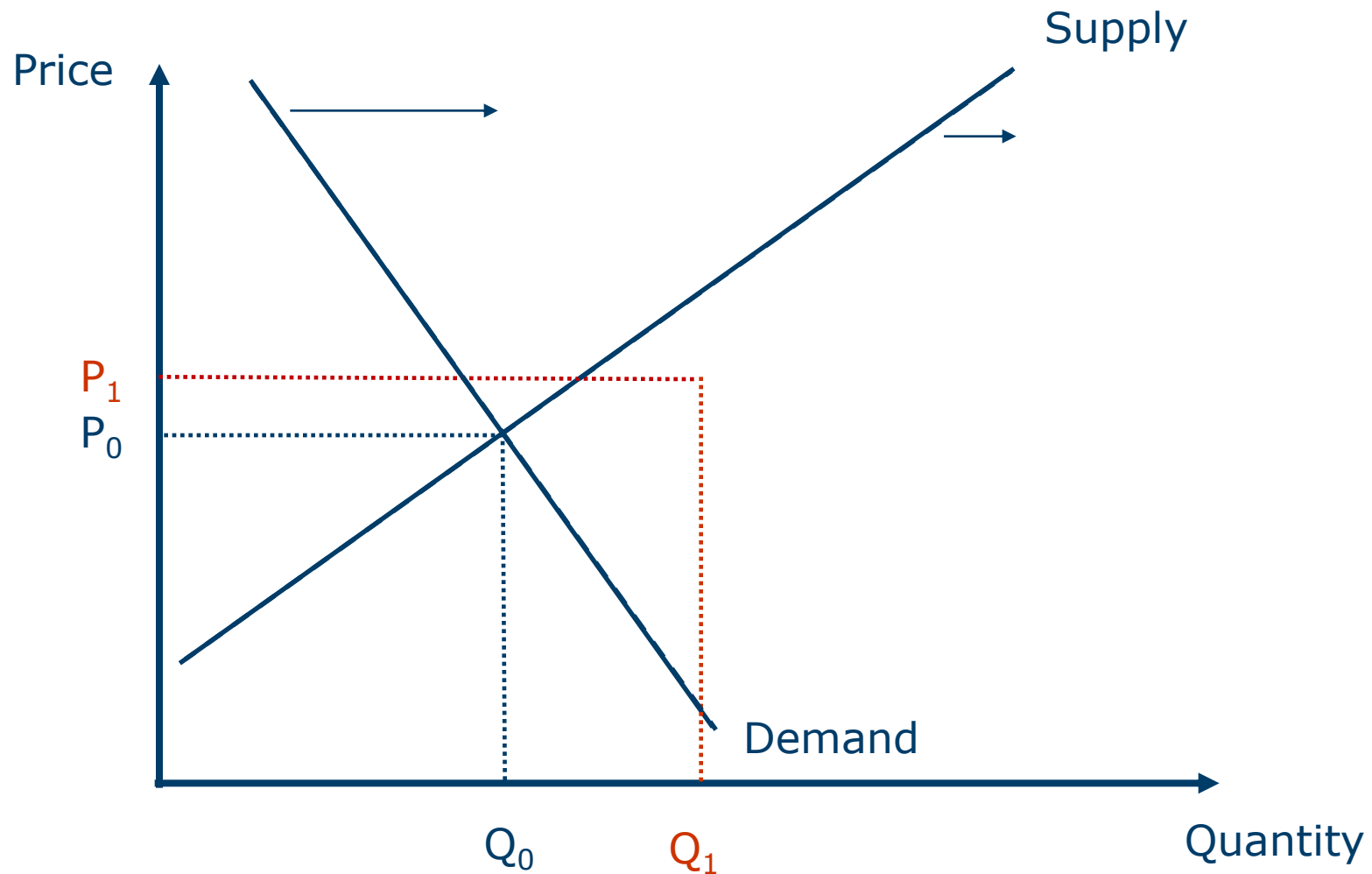
Has the situation changed?



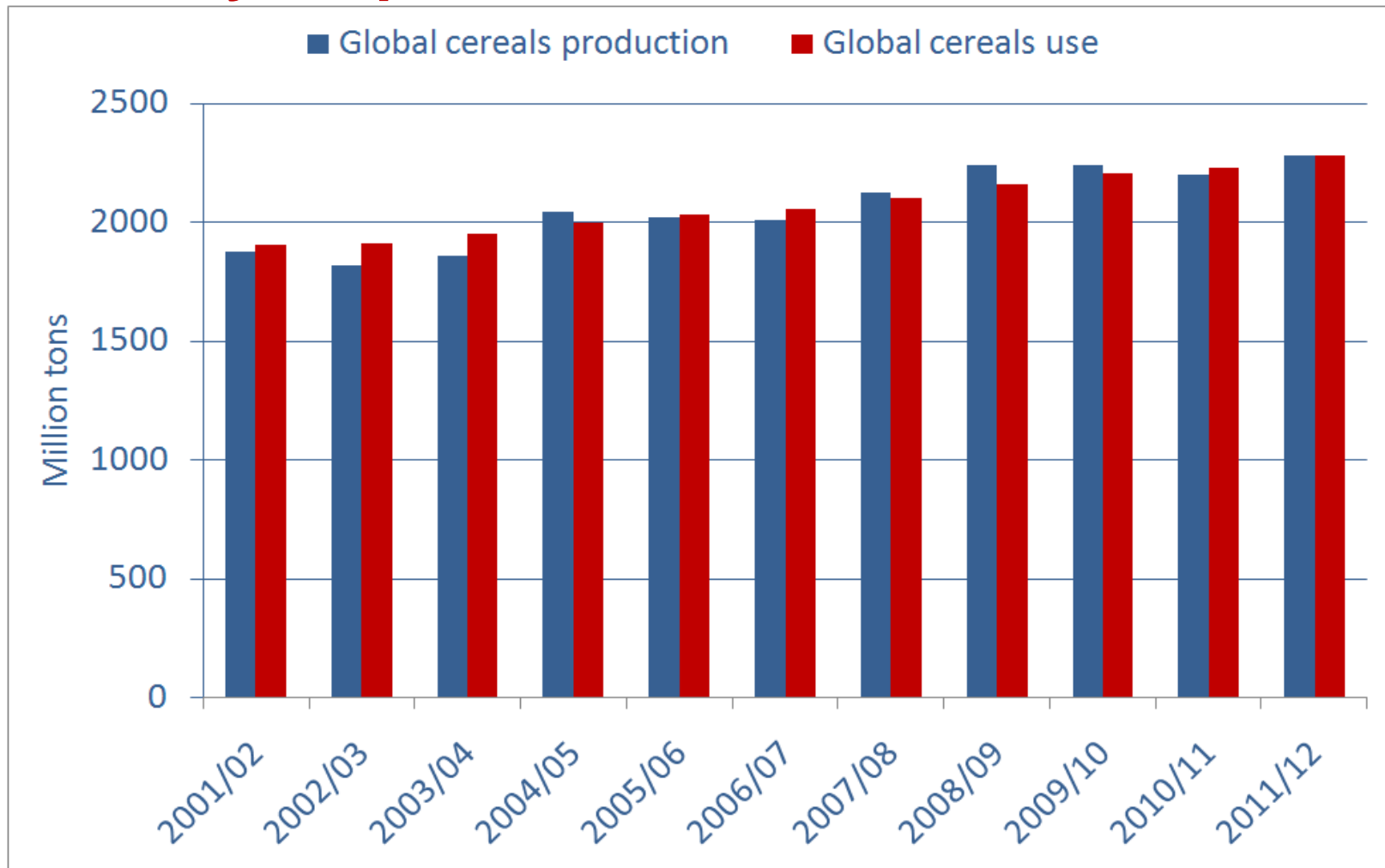
How has the situation changed?

- The supply side
 - Technical change is slowing?
 - Limits to acreage growth reached?
 - Climate change?
- The demand side
 - Continued population growth
 - Rapid income growth in populous, emerging economies
 - Westernization of diets around the world

The new Malthusian scenario



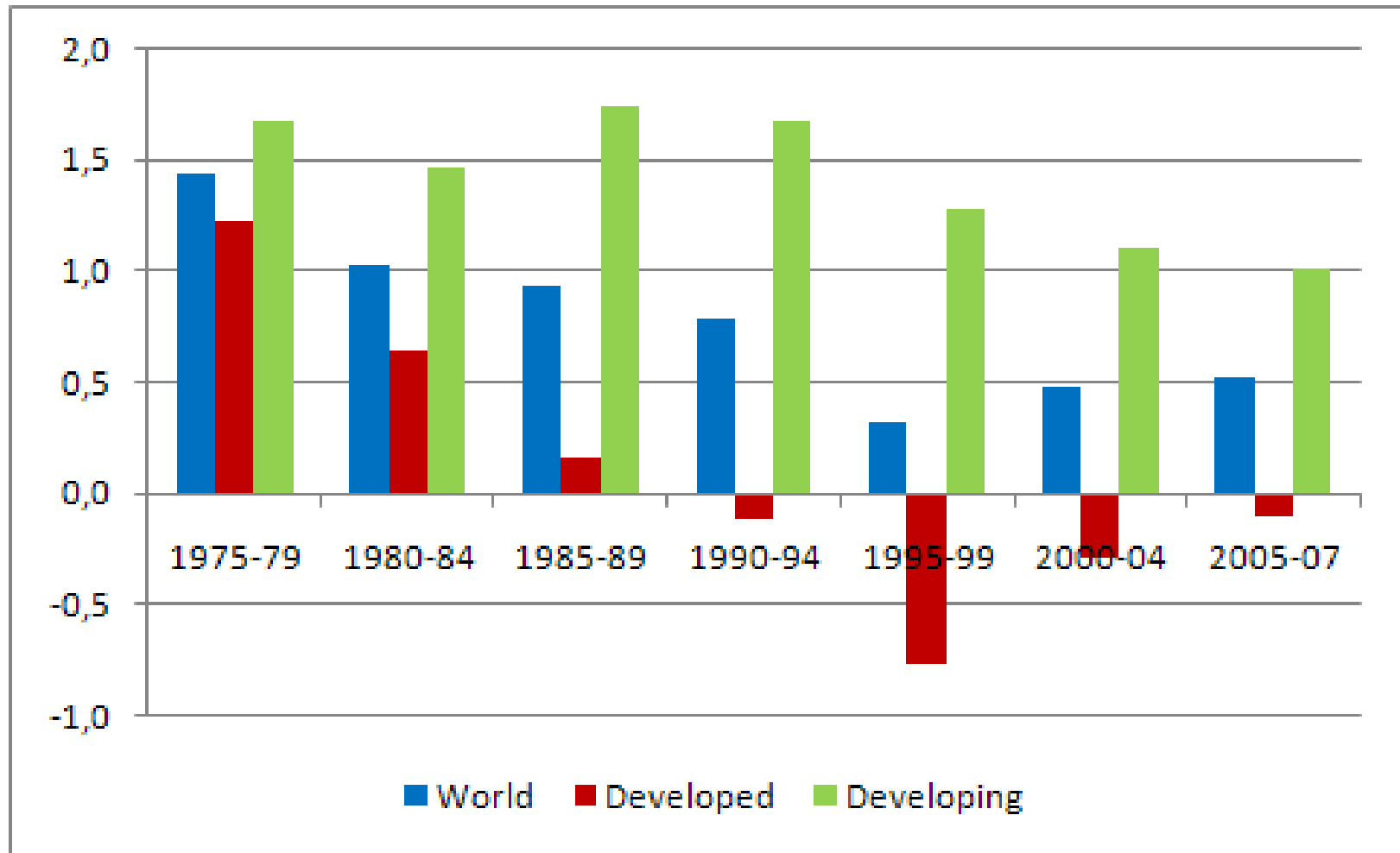
4. Policy responses



Policy responses

- The supply side
 - Technical change (GMOs)
 - Investment (research and education)
 - Acreage (FSU, Africa and Latin America)
 - WTO rules vis-à-vis export restrictions

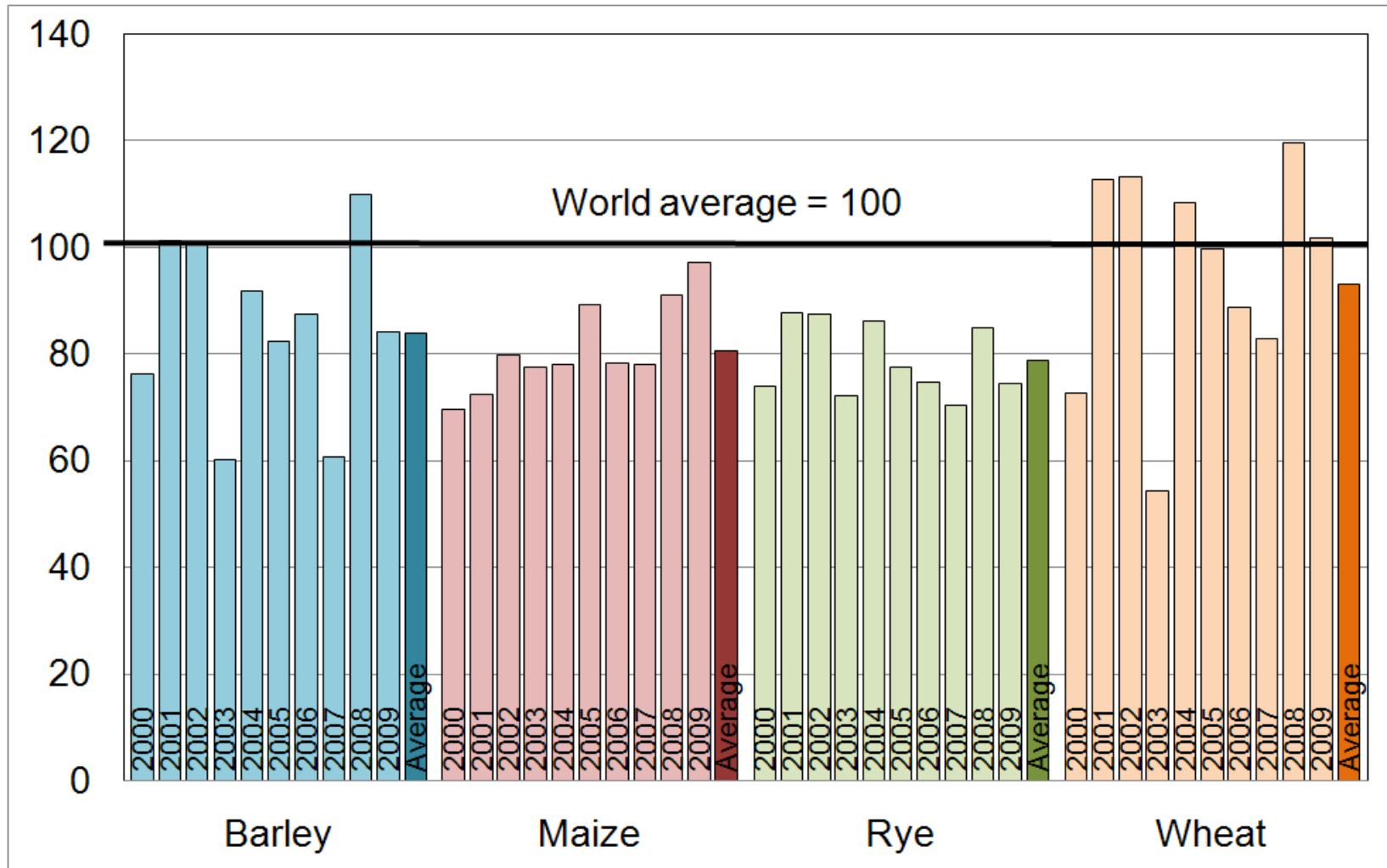
Investment in agricultural capital (1975-2007)



Are we investing in the right places

Hunger prevalence category	1975–2007 annual rate of growth		
	Agricultural Capital Stock	Population active in agriculture	ACS per person in agriculture
1 (< 5% undernourished)	1.2	0.3	0.9
2 (5–9% undernourished)	1.9	-0.1	2.0
3 (10–19% undernourished)	1.8	1.5	0.3
4 (20–35% undernourished)	1.2	1.5	-0.3
5 (> 35% undernourished)	1.3	2.2	-0.9
China (9% undernourished)	1.7	1.0	0.7

Cereal yields in Ukraine (2000-2009)



Policy responses

- The supply side
 - Technical change (GMOs)
 - Investment (research and education)
 - Acreage (FSU, Africa and Latin America)
 - WTO rules vis-à-vis export restrictions
- The demand side
 - Global income growth and income distribution
 - Bioenergy
 - Meat consumption
 - Food waste
 - Speculation

Biofuels



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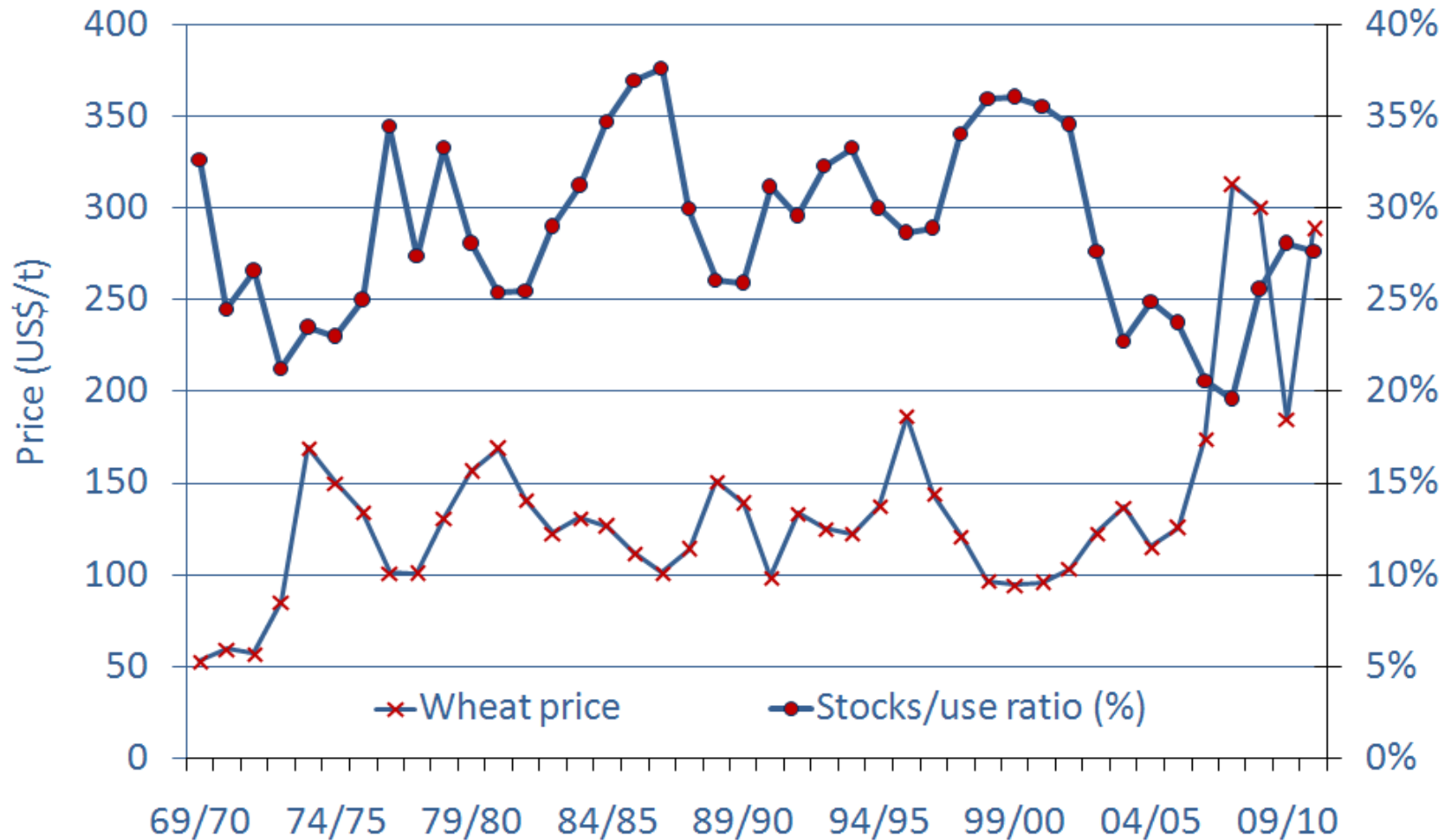
Food waste – estimated 30% worldwide





Thank you

Agricultural prices and global stocks



Global cereal and oilseed yields (kg/ha)

