

Trends in Agriculture – Back to the Future

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Why this title?

- Does history repeat itself?
- “Those who cannot remember the past are condemned to repeat it” –George Santayana
- How long is this deal going to last?
- What are the consequences
 - Government policies
 - Food inflation
 - Building an Ag bubble
 - Boom then bust

Two Policy Demand Shifters

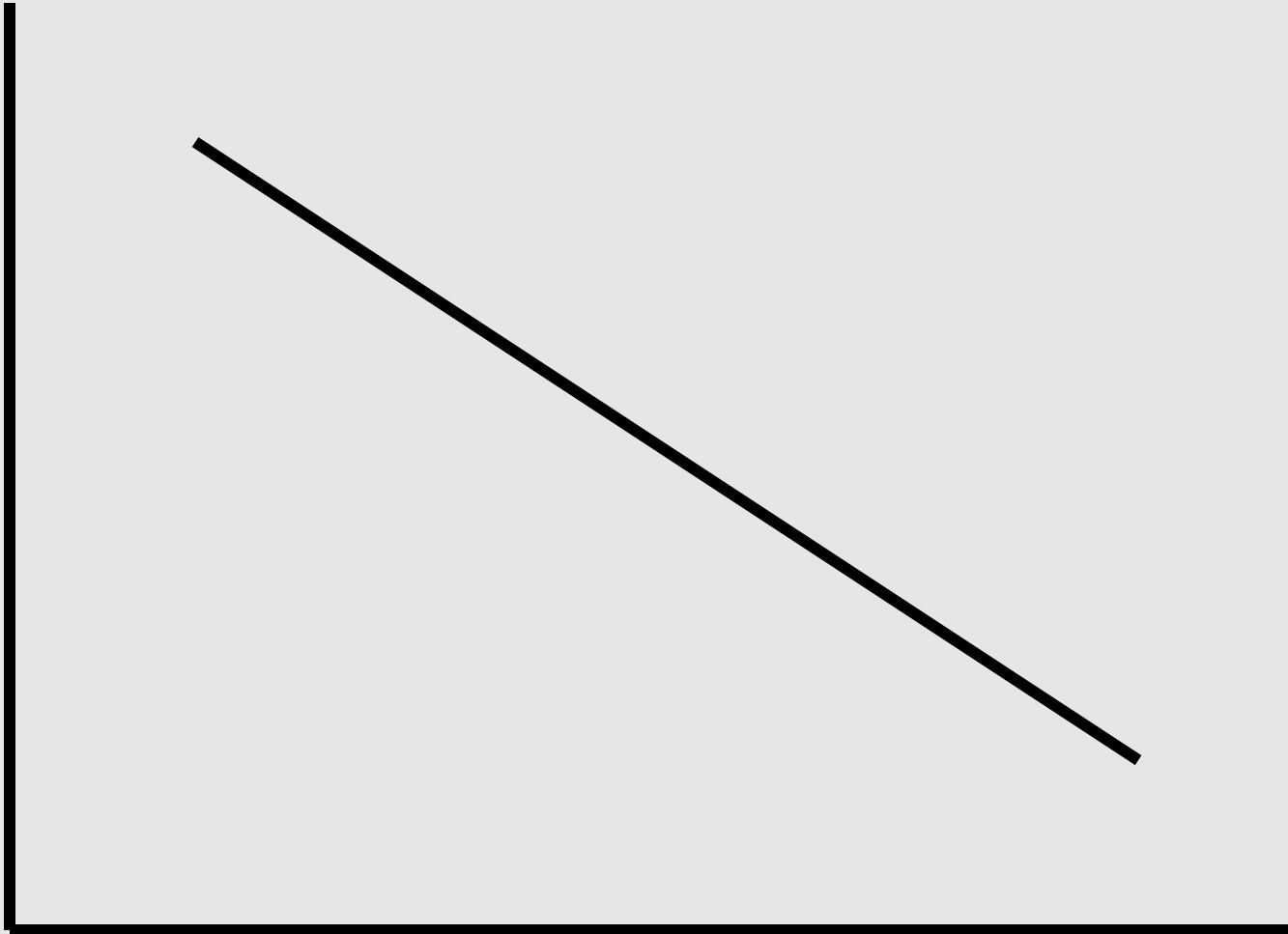
- Russia – early 1970s
- U.S. energy policy – early 2000s

A Short Lesson in Economics

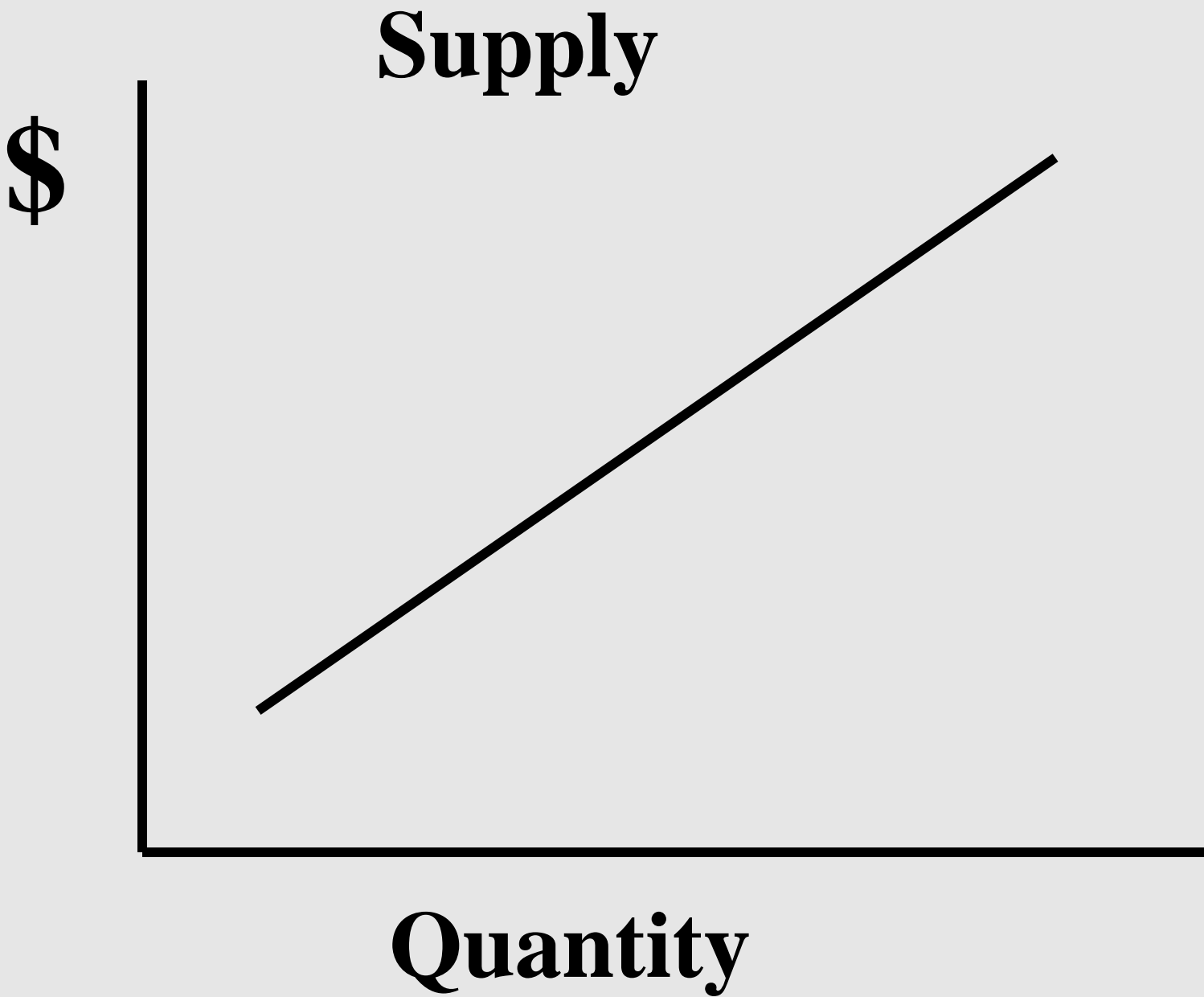
- Markets: supply & demand determine price
- Changes in quantity supplied and quantity demanded will impact price
 - Positively
 - **Negatively**

Demand

\$

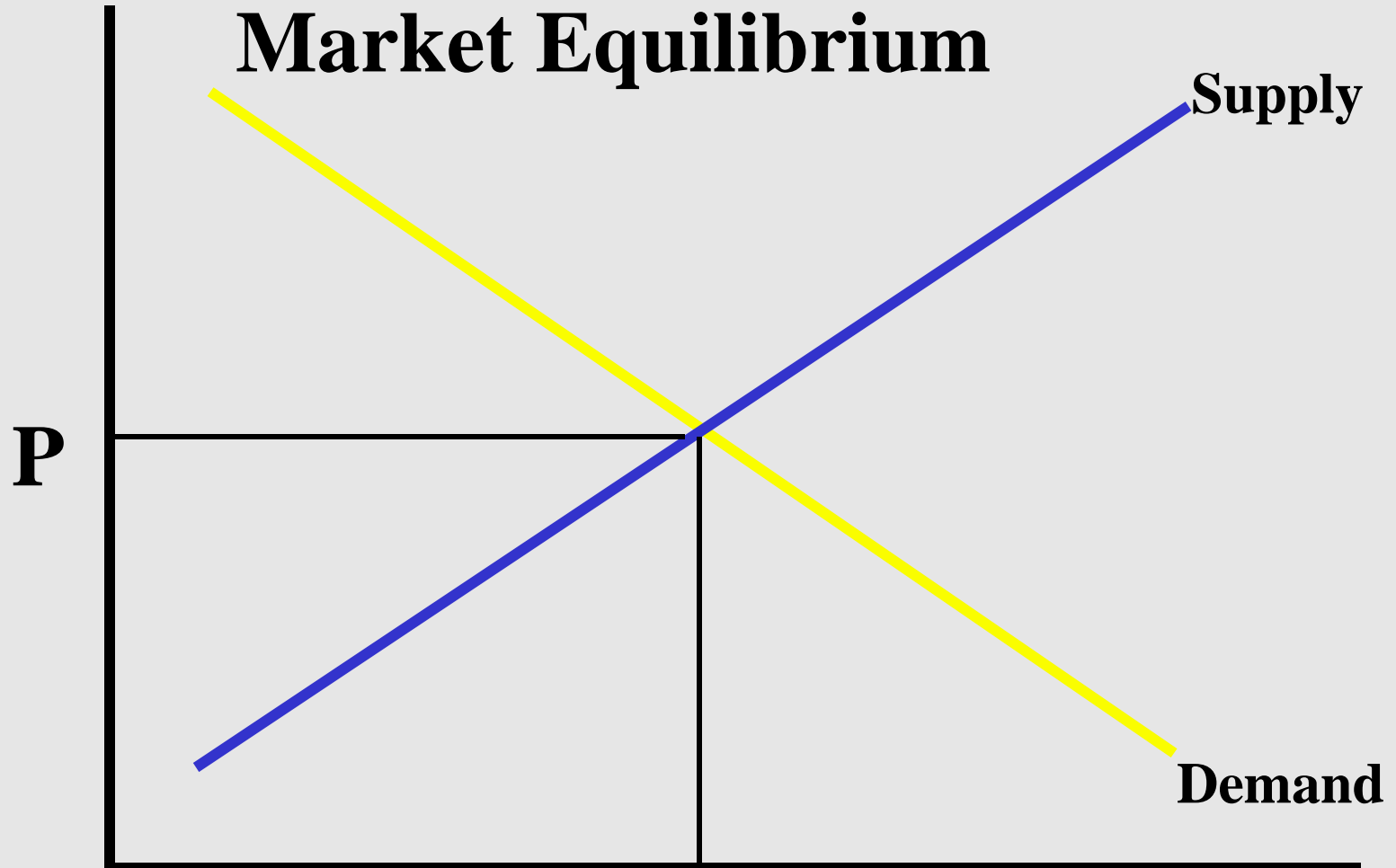


Quantity



\$

Perfect Competition – Market Equilibrium



P

Supply

Demand

Q

Quantity

Ag Market Shifters

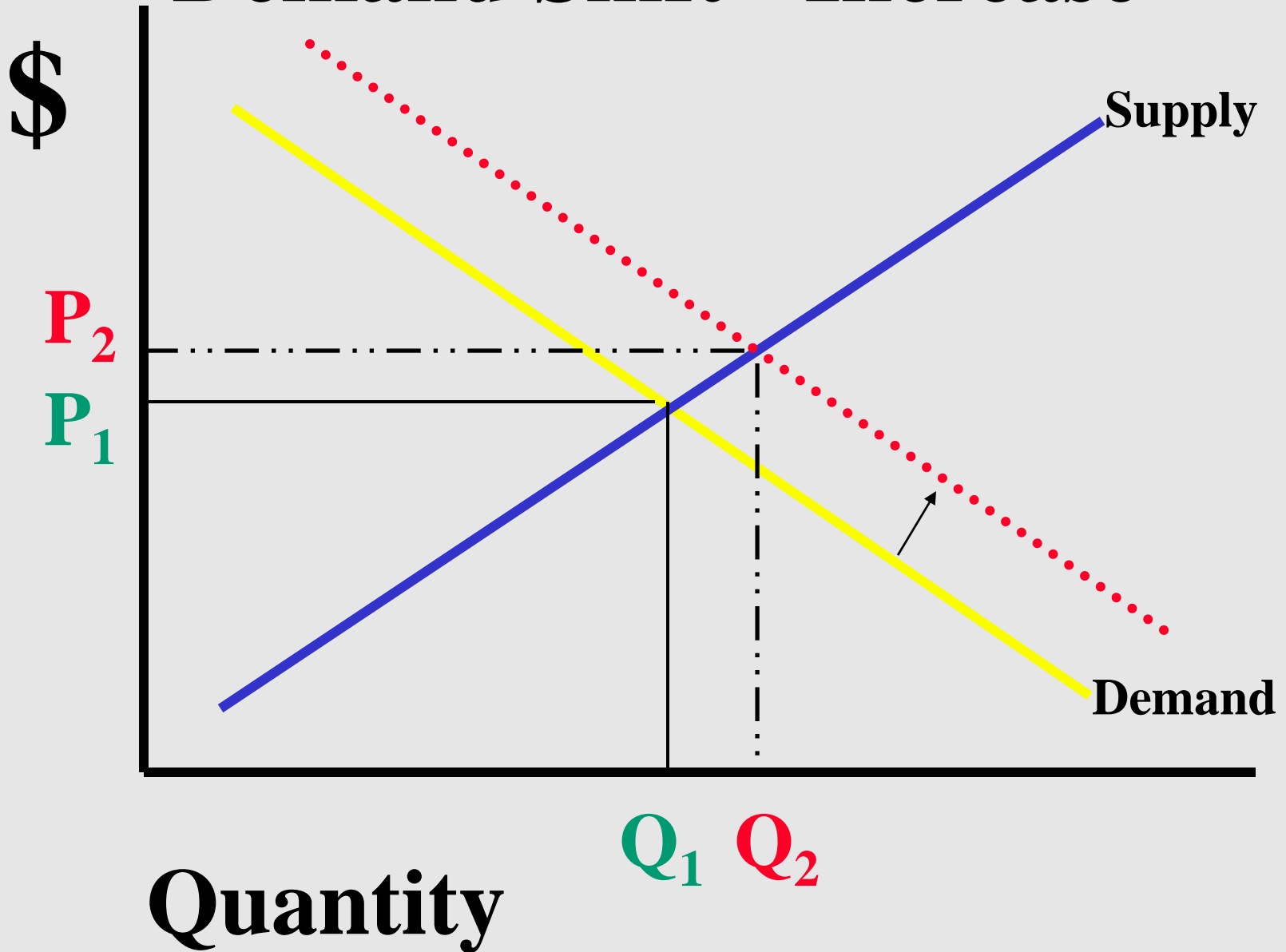
Demand

- Changing real income
- Population growth
- Growing exports
- Government Policy
- Change in consumers tastes & preferences

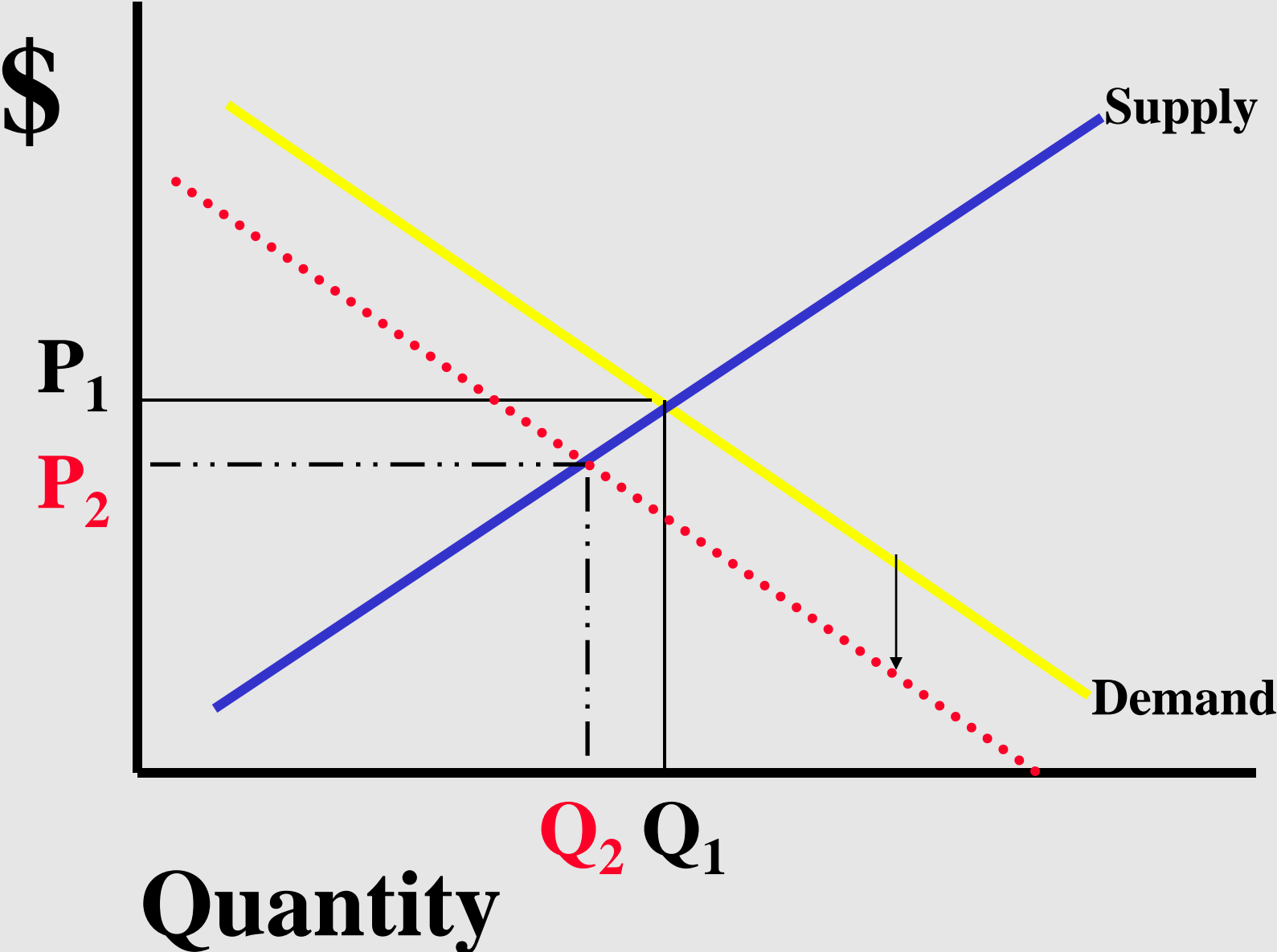
Supply

- Change in acres
- Technology
- **Government Policy**

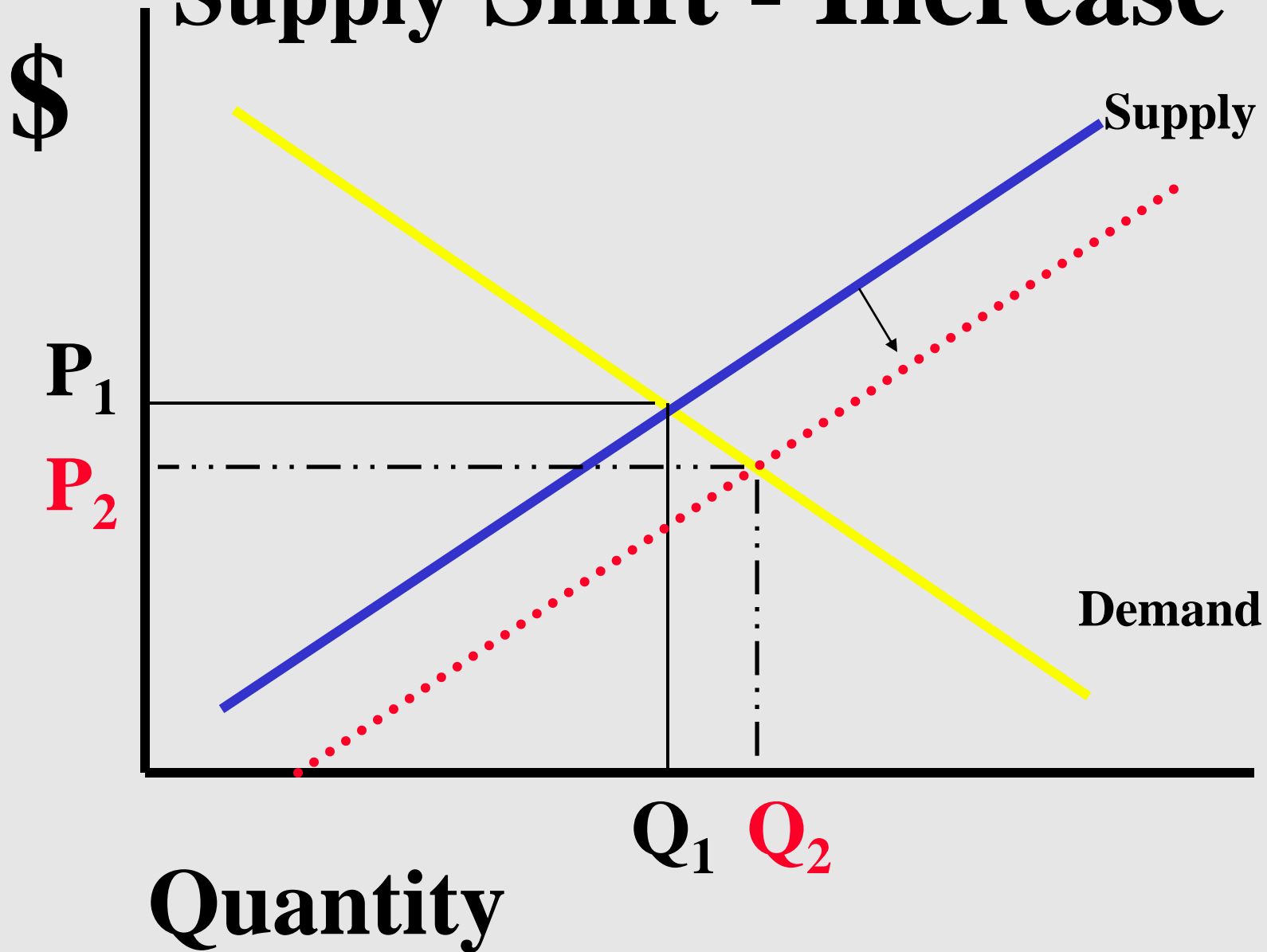
Demand Shift - Increase



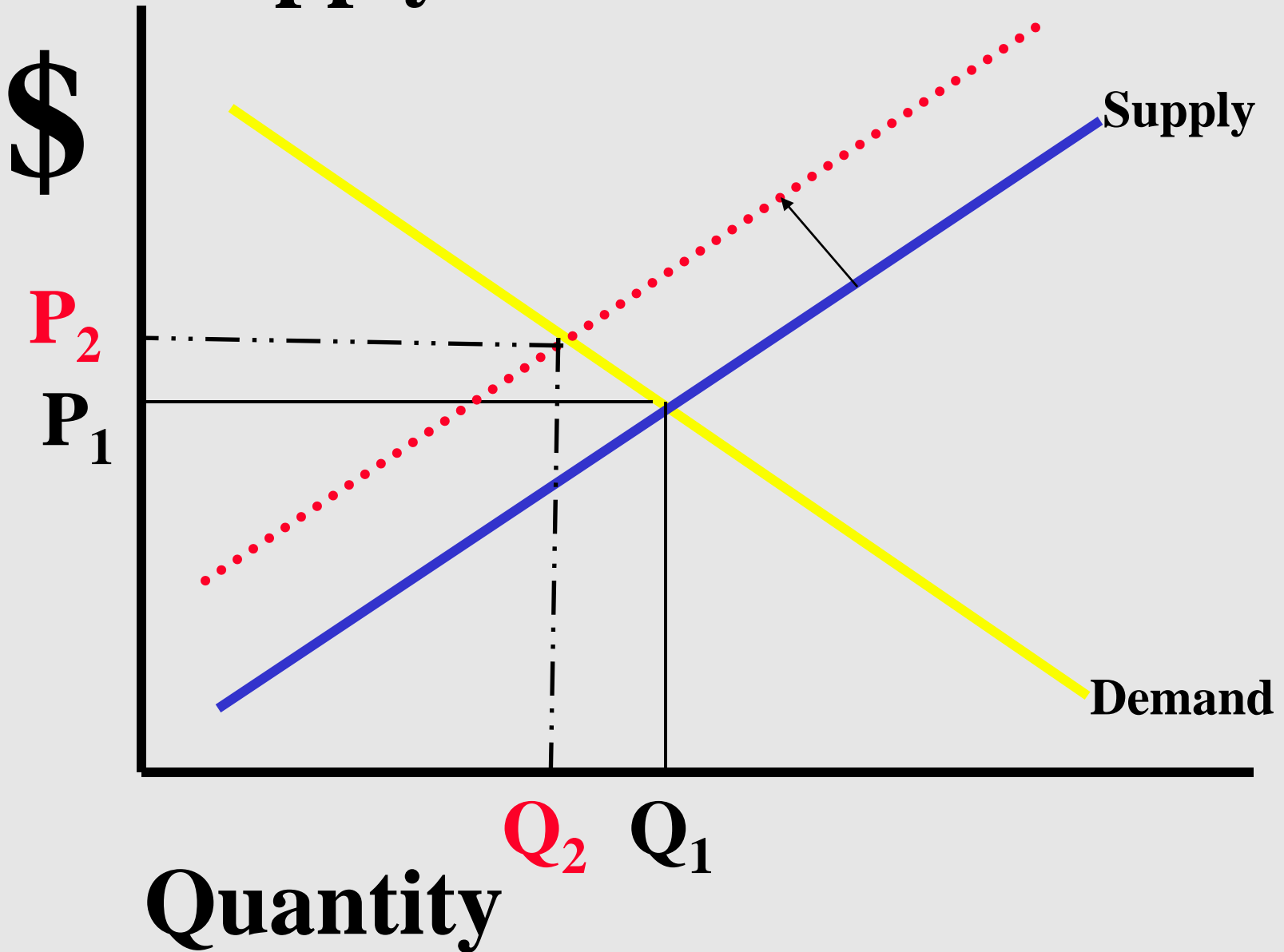
Demand Shift - Decrease



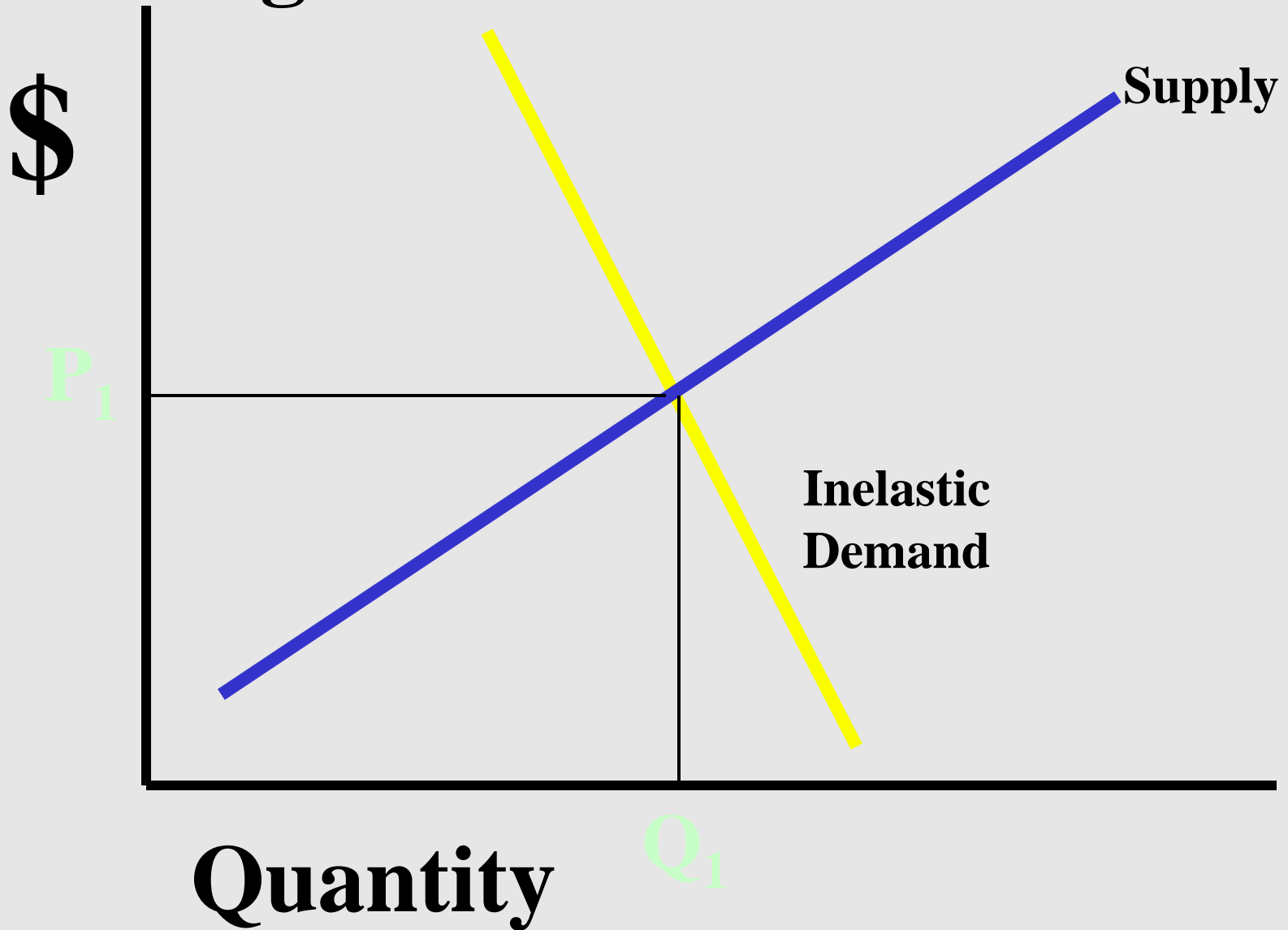
Supply Shift - Increase



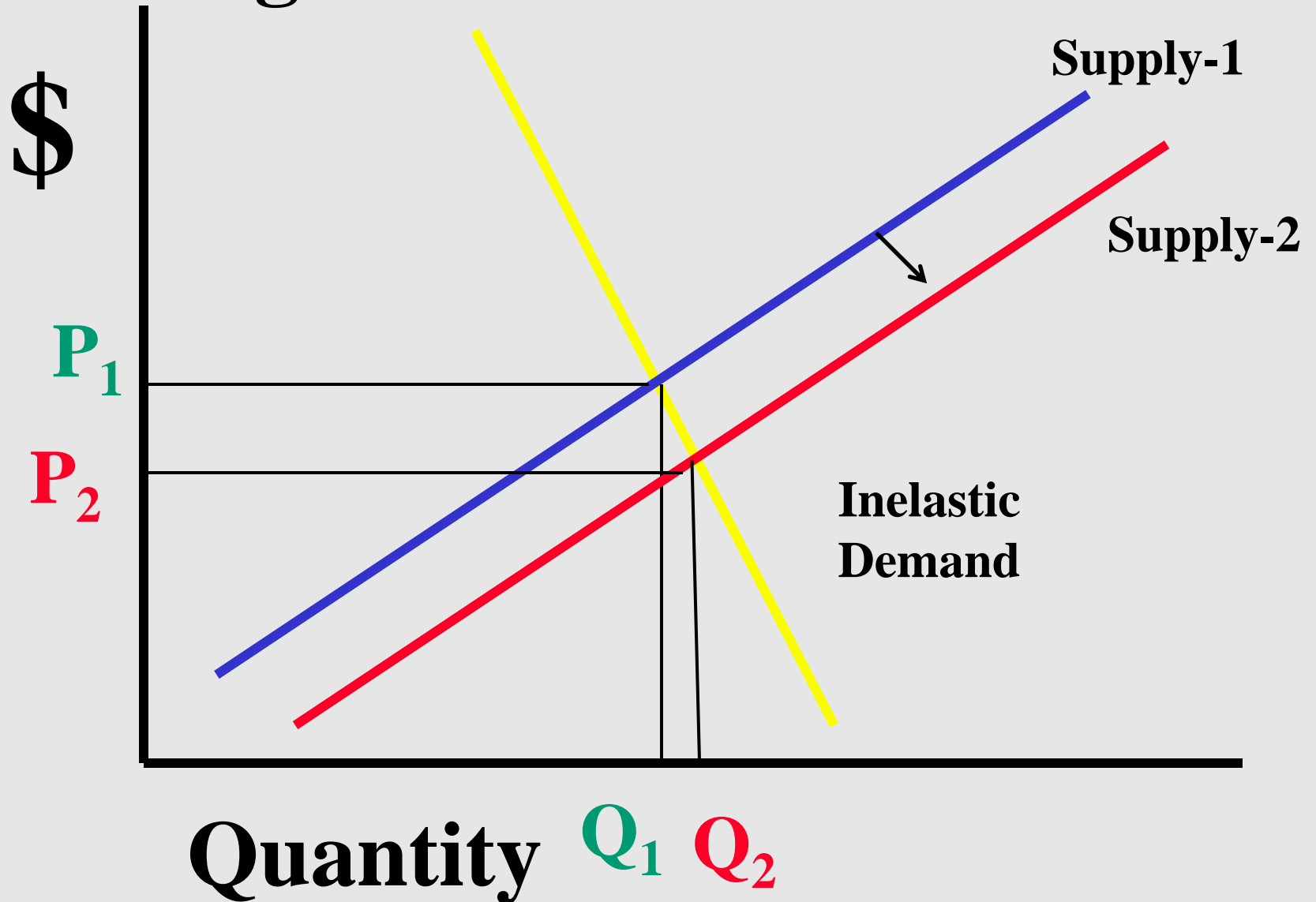
Supply Shift - Decrease



Agricultural Markets



Agricultural Markets



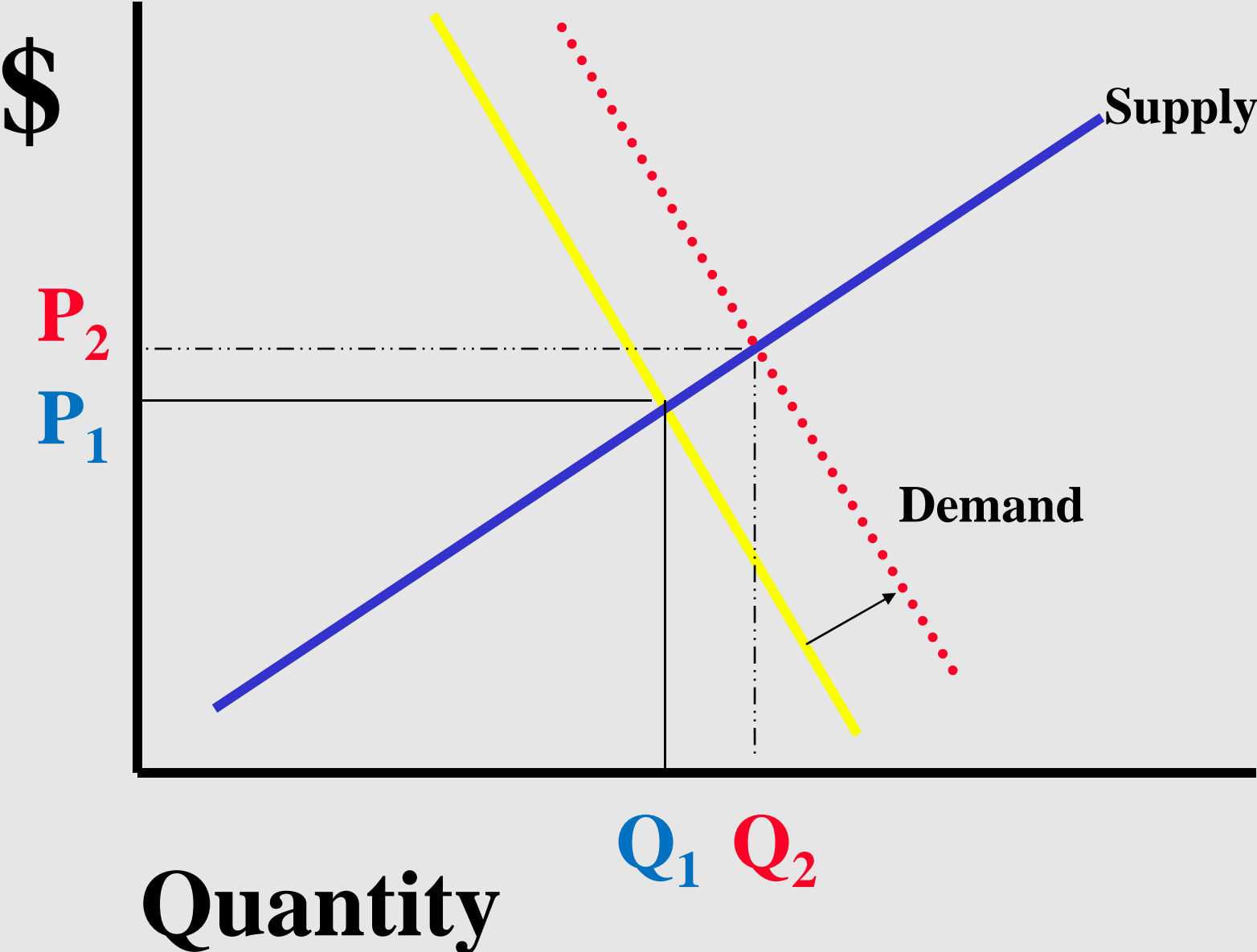
The 1970s - A History Lesson

- Weak dollar
 - Removed Gold Standard – Aug. '71
 - Floating exchange replaced fixed exchange
 - World currencies realigned
 - Dollar devalued
- Strong global economic growth, world real GDP rising at annual rate of 5.1%, '62-'71
- Sharp increase in oil prices, tripling between 1972 and 1977, peaking 1981
- Russian wheat deal
 - Demand shift

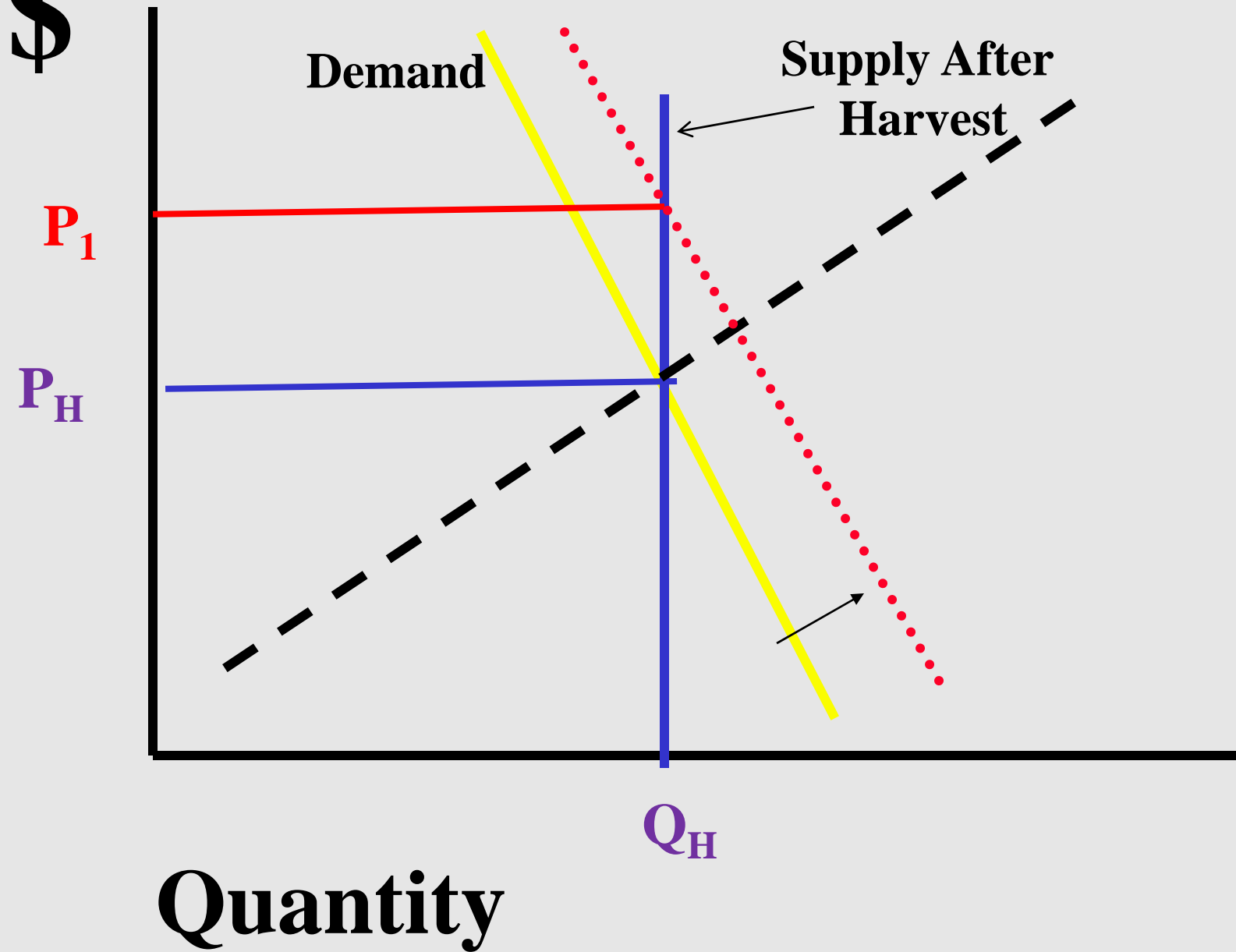
The Russian Wheat Deal

- July/Aug 1972 440 million bushels sold
 - 30% of U.S. production
 - 80% of U.S. domestic food use
 - Credit: \$750 million
- \$700 million in subsidized sales
- Rising grain prices
- Rising food prices

Demand Shift - Increase



Market Situation After Harvest



Rising Prices – 1 year later

	8/15/72	8/15/73	Change
Wheat	\$1.51	\$4.45	+195%
Corn	\$1.15	\$2.68	+133%
Soybeans	\$3.36	\$8.99	+168%
Steers	\$35.60	\$55.20	+55%
Hogs	\$28.00	\$56.50	+102%
Broilers	\$0.15	\$0.38	+153%

Source: USDA, Ag Prices.

Annual Food Inflation Rates: CPI-Food

	1970s	1980s	1990s	2000s
0	2.3	10.3	5.3	2.7
1	4.6	4.4	1.8	2.6
2	4.6	3.0	1.3	1.4
3	20.1	2.4	2.9	3.6
4	12.1	3.9	2.8	2.6
5	6.7	2.7	2.1	2.3
6	0.6	3.8	4.3	2.1
7	7.8	3.3	1.5	5.4
8	11.4	5.2	2.3	
9	10.3	5.5	1.9	
Average	8.1	4.5	2.6	2.8

Source: Bureau of Labor Statistics.

Annual Food Inflation Rates: CPI-Food

	1970s	1980s	1990s	2000s	2010s
0	2.3	10.3	5.3	2.7	8.0
1	4.6	4.4	1.8	2.6	7.0
2	4.6	3.0	1.3	1.4	7.0
3	20.1	2.4	2.9	3.6	
4	12.1	3.9	2.8	2.6	
5	6.7	2.7	2.1	2.3	
6	0.6	3.8	4.3	2.1	
7	7.8	3.3	1.5	5.4	
8	11.4	5.2	2.3	7.5	
9	10.3	5.5	1.9	8.5	
Average	8.1	4.5	2.6	3.9	

Source: Bureau of Labor Statistics. **Advanced Economic Solutions.**

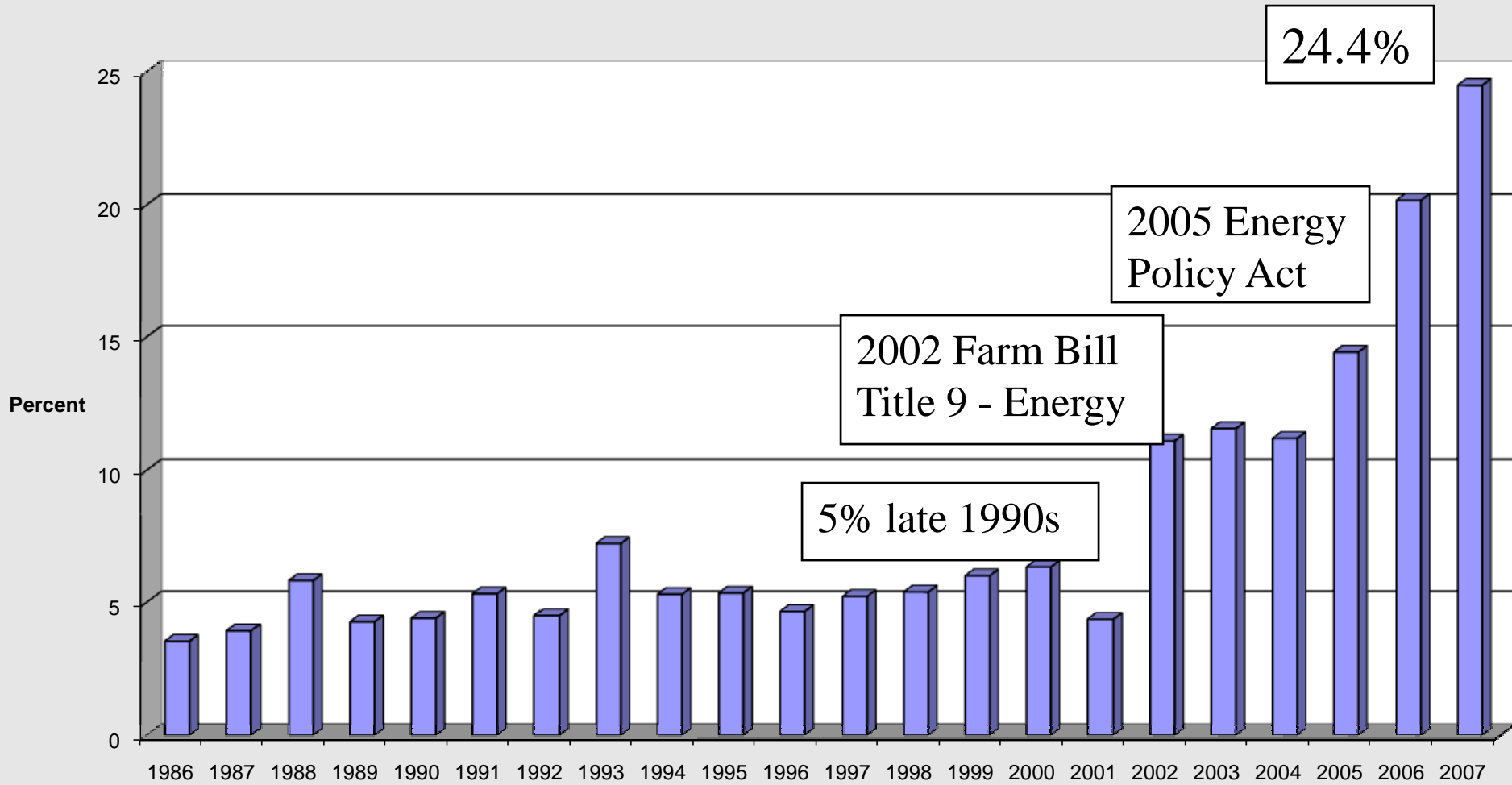
A Recent History Lesson

- Weak dollar – high negative balance of payments
- Record world economic growth since 2002 – China, India & other developing nations
- Record high energy prices – rising demand
- Rising inflation
- Weak economy
- Renewable energy policy
 - A demand shift

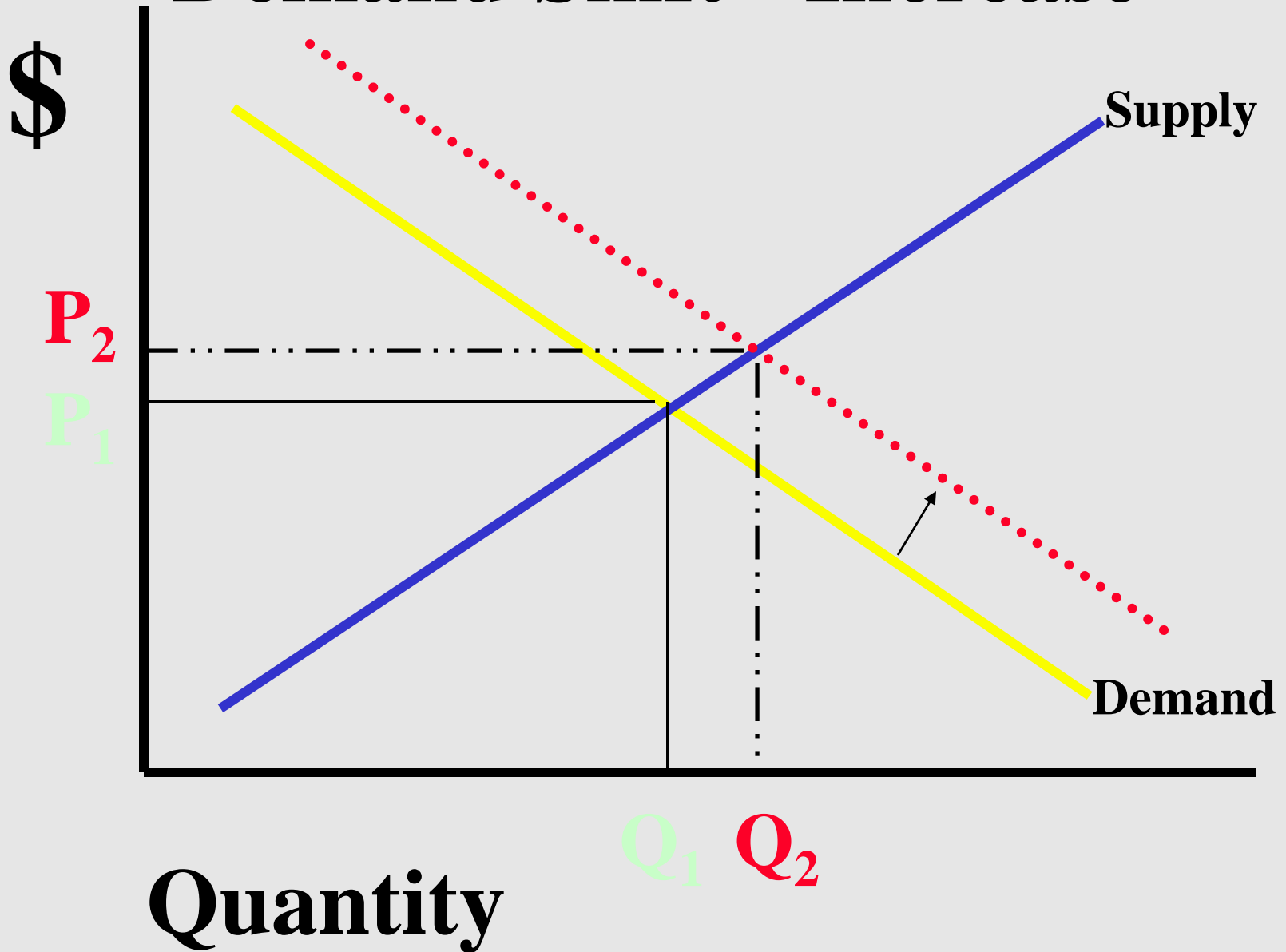
Recent Public Policy and Ethanol

- **Air Quality**
- **Agricultural Policy – Energy Title**
 - **Raise farm income**
 - **Reduce subsidies**
- **Energy Security – Energy Policy Act of 2005**
 - **Renewable Fuels Standard**
 - **Blend 4 billion gal by 2006**
 - **Blend 7.5 billion gal by 2012**

Corn Used in Ethanol as Share of Corn Production



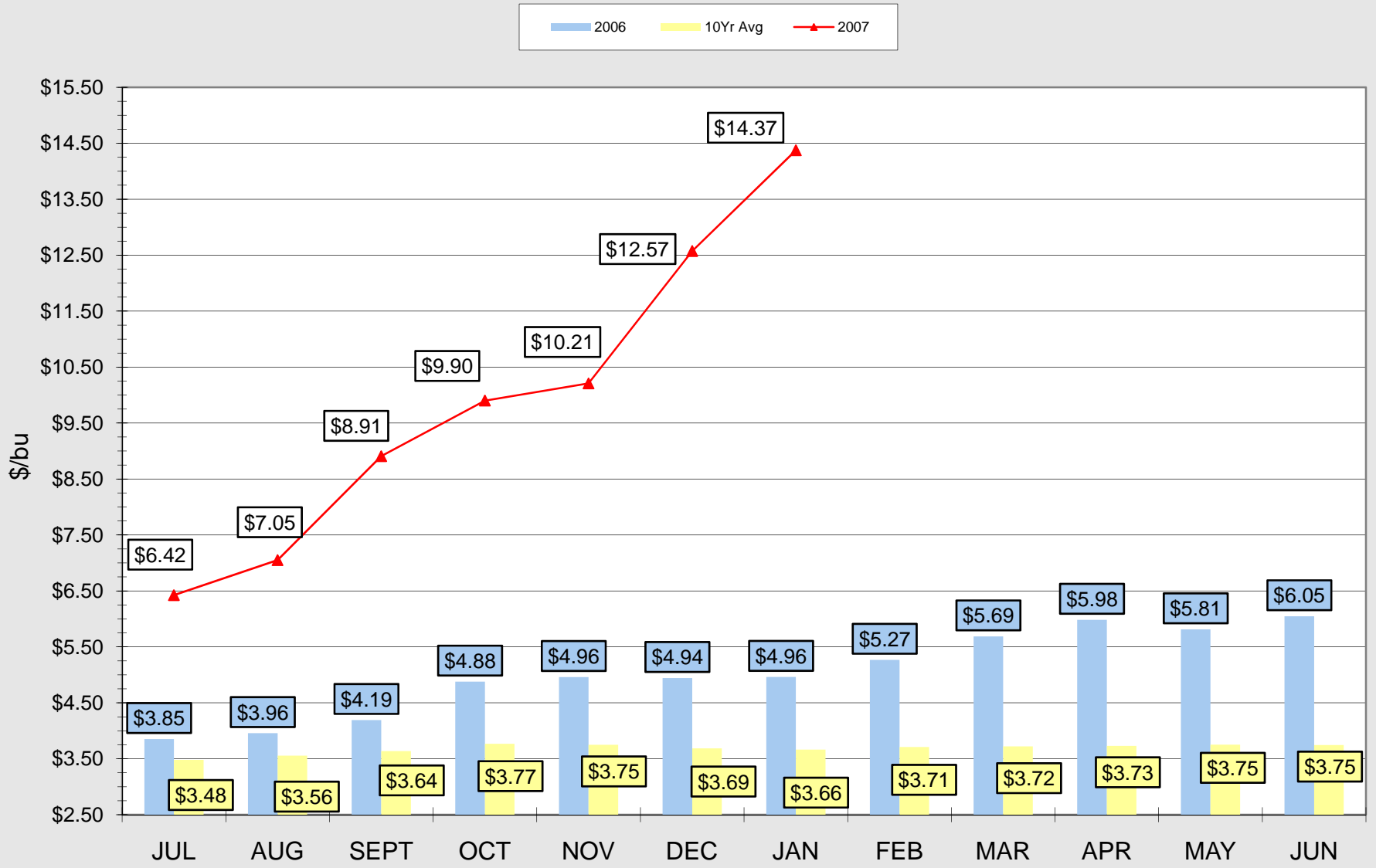
Demand Shift - Increase



How long?

- July 08 Futures: 1/22/08
 - CBT \$8.78
 - KCBT \$9.67
 - MGE \$10.52
- July 09 Futures: 1/22/08
 - CBT \$8.66
 - KCBT \$8.90
 - MGE \$11.02

Portland Soft White Wheat Marketing Year Monthly Average Prices



How Long?

- World wheat stocks-to-use lowest since WWII (18%)
- Stocks (111 mmt) are lowest since 1977, but consumption has risen by 55%
- 3 of the largest crops in the past 4 years, & yet consumption > production last 3 years
- U.S. wheat stocks (292 million bu) lowest in 60 years
- U.S. stock-to-use ratio (12.6%) lowest since 1946/47

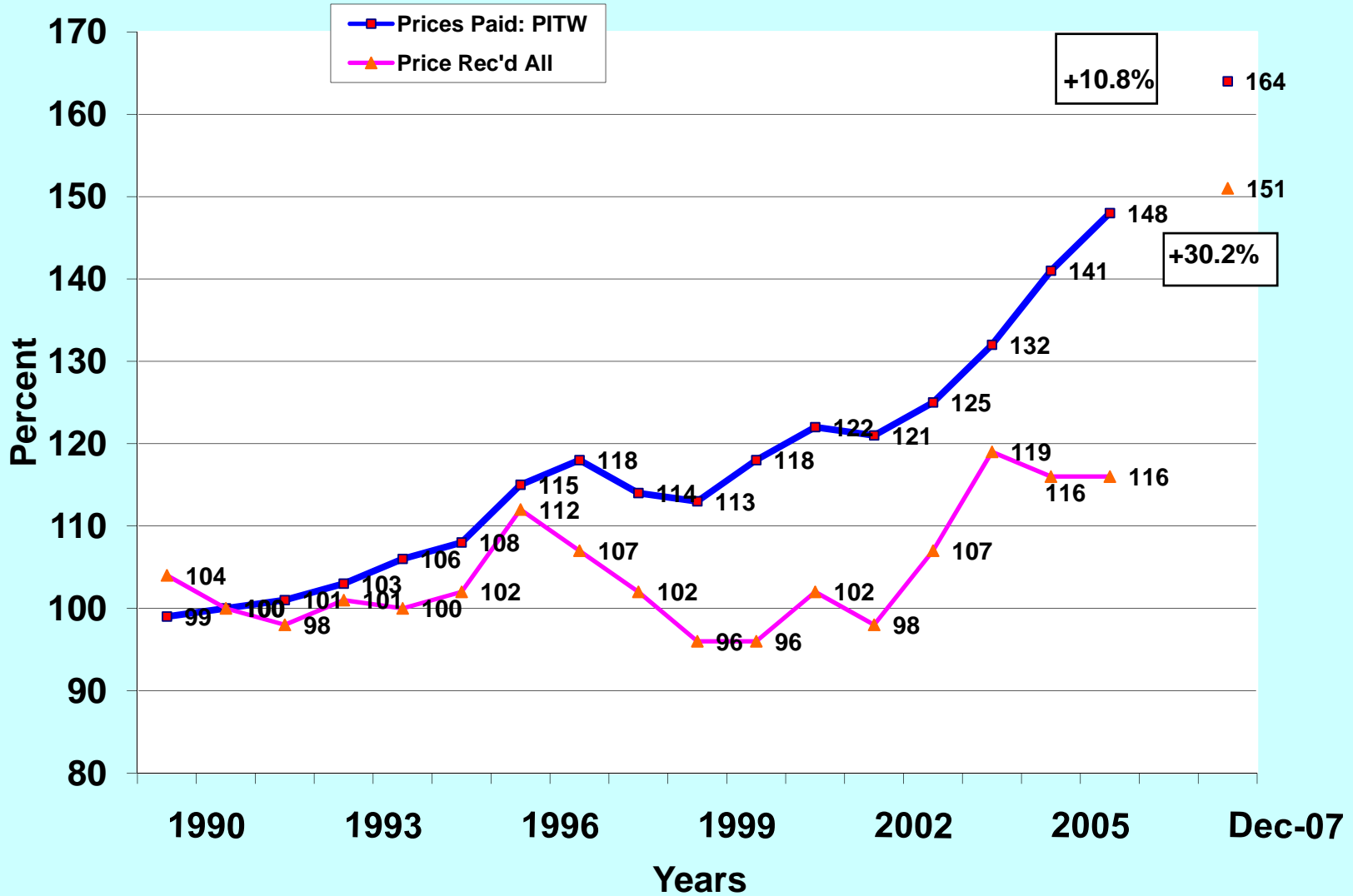
A Perspective on the Future

- Ag Product Demand (Credit Susie Group)
 - Growing population (~ 1% annual growth)
 - Changing diets (+ 2.5% over 5 – 8 years)
 - Biofuel mandates
 - ~2% of arable land today
 - 10 – 12 % in 10 – 15 years
- Combined growth required: 3.3%
 - Historic growth: 2.3%

How Long & What Prices?

- 8-10 years of volatile prices at historically high levels
- 3-4 years of significantly higher prices
- Markets will find a new “mean-reverting” equilibrium
- Corn: \$2.30 to \$4.00
- Wheat: \$3.25 to \$5.00/\$5.50
 - 5-yr. avg. = \$3.60
 - 10-yr. avg. = \$3.12
 - 20-yr avg. = \$3.28

USDA Crop Price Indices 1990-92 = 100



Strategies

- Know your cost of production
- Know & monitor your financial situation
- Evaluate risk
 - Land purchases – impact of 25% change in value
- Maintain flexibility
 - Lease don't buy
 - Cost contribution crop leases:
 - Crop share
 - Flex cash leases

Soft White Spring Wheat: Eastern Idaho

		2007	2008
Seed	120 lbs	\$.17	\$.25
N	110	\$.49	\$.60
P2O5	40	\$.37	\$.64
Urea		\$447	\$550
11-52-0		\$492	\$800
Diesel		\$2.55	\$2.75
Land		\$125	\$175

Soft White Spring Wheat: Eastern Idaho

	2007	2008	Change
Seed	\$20	\$30	+47%
Fertilizer	\$69	\$92	+33%
Pesticides	\$27	\$28	+3.7%
Custom	\$55	\$58	+5.5%
Irrigation	\$48	\$50	+4.1%
Fuel & Lube	\$23	\$25	+8.7%
Repairs	\$5	\$6	+20%
Labor	\$21	\$22	+4.8%
Other	\$7	\$8	+14.3%
Interest	\$6.50	\$6.50	--
Total Op Cost	\$282	\$326	+15.6
Op Cost / bu	\$2.56	\$2.96	+15.6
Yield	110	110	

Soft White Spring Wheat: Eastern Idaho

	2007	2008	Change
Machinery	\$28	\$30	+7.1%
Overhead	\$7	\$8	+14.3%
Management	\$16	\$20	+25%
Land	\$125	\$175	+40%
Total Own.	\$176	\$233	+32%
Own. Cost/bu	\$1.60	\$2.12	+52%
Yield	110	110	
Total Cost	\$458	\$559	+22%
Total Cost/bu	\$4.16	\$5.08	+22%

Source: 2007 - University of Idaho & 2008 - projected.

“If you don’t know where you are going, you will wind up somewhere else.”

Yogi Berra