Economic Forces Driving Agriculture and the Seed Industry

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Share of Cumulative California Seed Crop Values by Category, 2000-2011

- Field Seed: 72%
- Vegetable Seed: 26%
- Flower Seed: 2%

Source: California County Agriculture Commissioners' Annual Reports
Annual Value of California Flower Seed and Vegetable Seed Crops, 1980-2011

Value of Vegetable Seed Crop (in $ millions) vs. Value of Flower Seed Crop (in $ millions)

- Vegetable Seed Value
- Flower Seed Value
The Goals and the Plan

• Discuss important economic forces that are driving agriculture and the seed industry
• Demand for seed derives from the demand for food, fiber, foliage, flowers and more.
• The basic forces are population and income
• But, regulation and more specific prospects also affect farm costs and the demand for agricultural inputs.

• For trade, issues such as exchange rates are crucial in the short run, and trade negotiations matter in the longer run, but these not really predictable.
U.S. Seed Export Values by Category, 2005-2011

- **Flower Seeds**
- **Vegetable Seeds**
- **Field Crop Seeds**

Export Values (in $millions):
- 2005: $100
- 2006: $150
- 2007: $300
- 2008: $600
- 2009: $400
- 2010: $500
- 2011: $700
U.S. Flower Seed Value of Trade, 2005-2011

Flower Seed Imports
Flower Seed Exports
U.S. Vegetable Seed Trade Values, 2005-2011

Vegetable Seed Trade Values (in $millions)

- **Vegetable Seed Imports**
- **Vegetable Seed Exports**
World map weighted by population in 1960

Total population = 3.04 billion
U.S., China and India population trends, with projections to 2030, in millions
World map weighted by estimated population in 2050

Total population (est.) = 9.07 billion
U.S. and world real per capita GDP in 2005 dollars, 1980-2012 with projections until 2030
World map weighted by GDP in 1960
Real Gross Domestic Product (GDP), with projections

- **World**
- **Developed economies less US**
- **United States**
- **Developing economies**

[Graph showing the progression of GDP from 1980 to 2028, with projections to 2028. The graph displays the growth of GDP across different regions and categories, with a clear upward trend.]
Income growth is important

• For most people the effects of income on quantity of food consumption overall is small
• Share of income spent on food falls as income rises.
• But, quality of diet improves as income goes up and that means more vegetables and meats etc.
• For high-quality foods and diet improvement expenditures are proportional to income growth
• This is good news for producers of these higher demand growth products and the inputs that go into those products. So, corn and soybean demand driven by increasing meat demand has been strong.
Relatively Poor Countries Exhibit Strong Growth Prior to Price Boom

Graph showing the comparison between World GDP Growth and Lower-Middle Income GDP Growth from 1965 to 2010.
Population and real per capita GDP in ‘000 2005 dollars, 2012 and 2030 projections (US per capita income will rise a little to about $60K)
U.S. Real GDP Percent Change, with projections
New Home Sales in the US, with 2013 and 2014 Projections
Regulatory Issues

• Costs imposed on the production and system do little to reduce food consumption overall, but shift across suppliers with lower regulatory burden

• For example, the new food safety rules exempt many small firms and some that sell directly to retailers, but cost rise by 7% for small farms that are not exempt and rise by 1% for larger farms.
Regulations

• Some standards are be consumer (or buyer) driven and the market reflects those demands.
• Others use force of law to claim to represent consumers.
• The recent attempt to impose mandatory biotech labels in California showed how active proponents can push regulations in the name of consumers.
• The overreach, including enforcement by lawsuit and odd definitions of ‘natural’, help defeat that effort, but the issue and the proponents are still with us.
• The basic lesson that markets provide choices and thus should be allowed function effectively needs constant reinforcement.
Concluding Remarks

• Effects of income of food consumption overall is small
• But, quality of diet improves as income goes up and that means more vegetables and meats etc.
• For high quality foods and diet improvement expenditures are proportional to income growth
• What could get in the way?
  • Bad policy to destroy economic growth
  • Bad policy to regulate in ways to drive up costs for agriculture