Effects of a Variable Ethanol Subsidy or Higher Renewable Fuels Standard on US Agriculture

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Background

- Current US production capacities:
  - Ethanol: 5.6 billion gallons
  - Biodiesel: 0.864 billion gallons
- New capacity under construction:
  - Ethanol: 6.2 billion gallons
  - Biodiesel: 1.7 billion gallons
- Fossil energy situation highly uncertain

Ethanol Market

- Petroleum prices are the primary influence on demand
- We already produce much more ethanol than we need for blending reformulated gasoline
- Marginal use is for gasoline extension/replacement
- Per BTU, the US average ethanol wholesale ethanol prices are at a premium to US average premium unleaded gasoline prices

Biodiesel Market

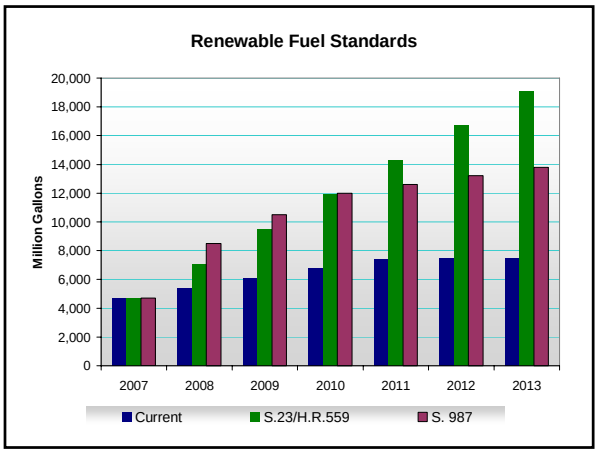
- Less integrated than the ethanol market
- Spot prices available for few locations

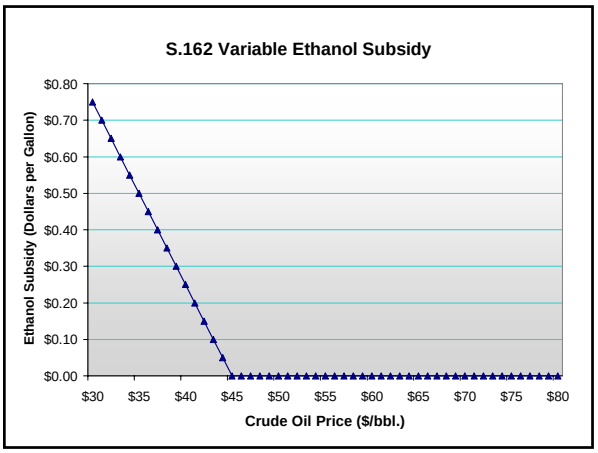
	B-100 Rack Price, 2007-03-22
Cartersville, GA	2.780
Williamstown, NJ	3.200
Cape Girardeau, MO	2.960
Dallas, TX	2.976
Los Angeles, CA	3.200

- US ave. biodiesel price tends to trade at a premium to ave. retail petrodiesel price

Policy Situation

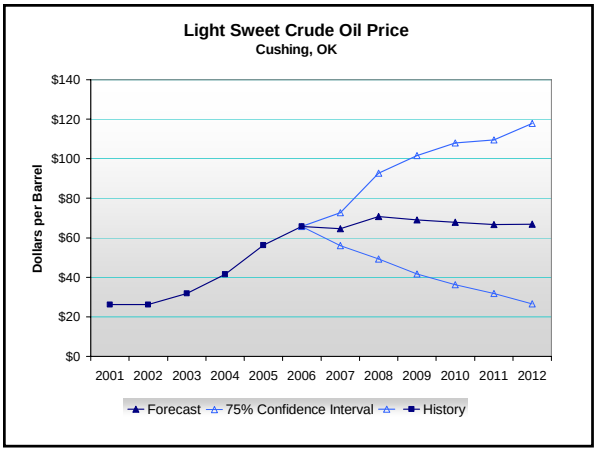
- Current Renewable Fuel Standard (EPACT 2005) unlikely to bind
- Proposals for higher RFS (S.23/H.R.559; S.987)
- Current ethanol subsidy rapidly getting expensive, even as market incentives for ethanol production are high
- Proposal for variable ethanol subsidy (S.162)
  - Subsidy is zero if crude oil price > $45 / bbl.

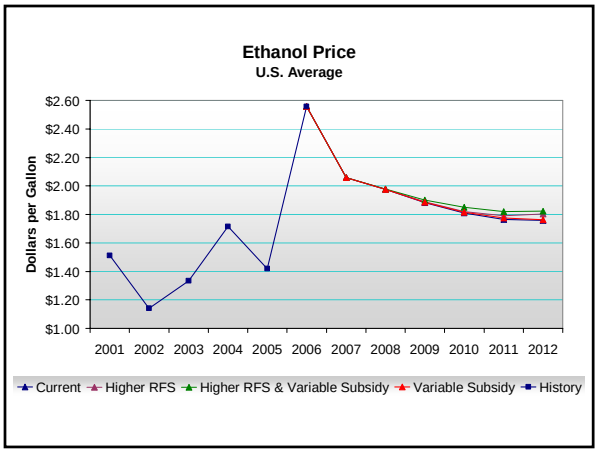


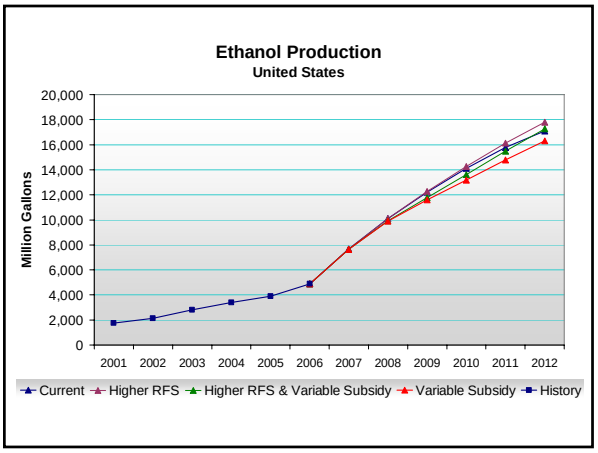


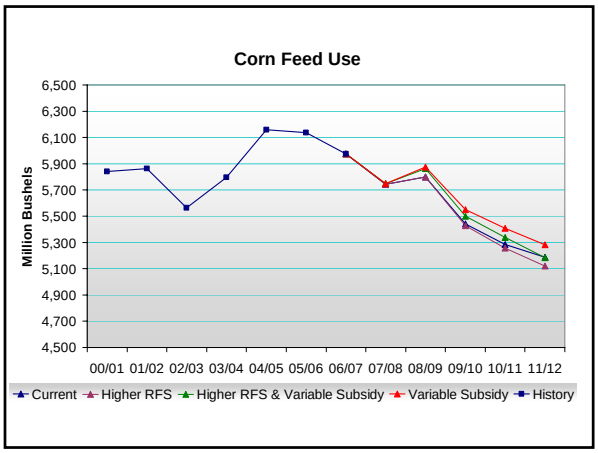
Four Policy Scenarios

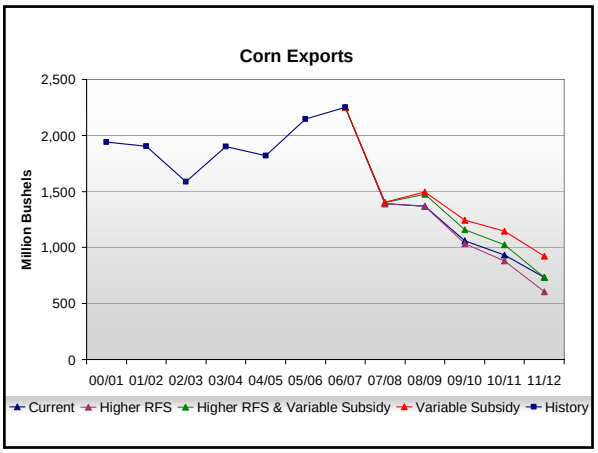
- Current situation continues
- Higher RFS is set at average of S.23 and S.987 (and current subsidy remains)
- Variable ethanol subsidy replaces the fixed subsidy (and RFS is unchanged)
- Higher RFS and variable ethanol subsidy

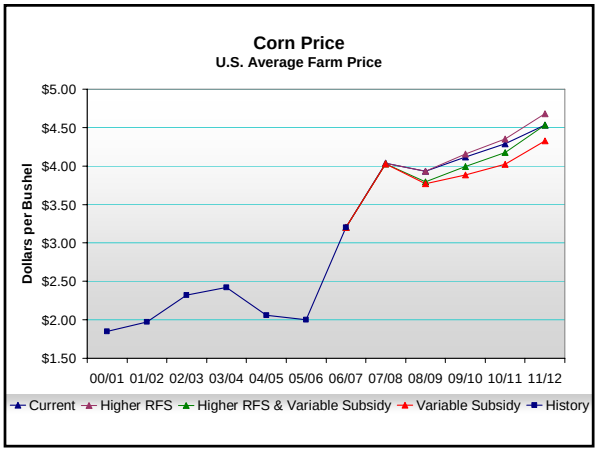


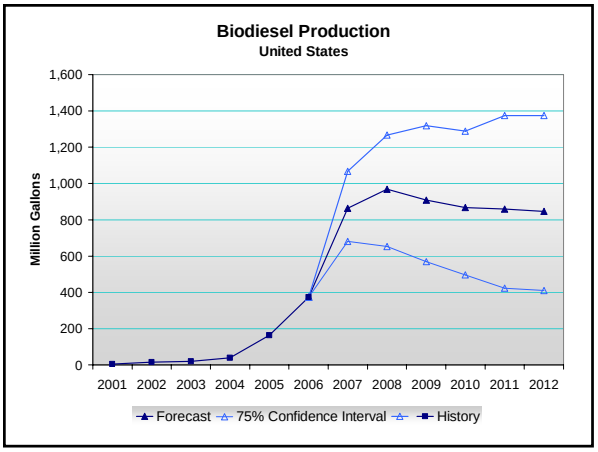


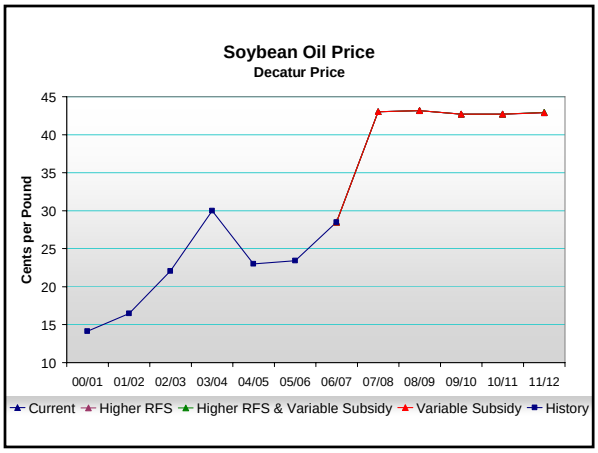


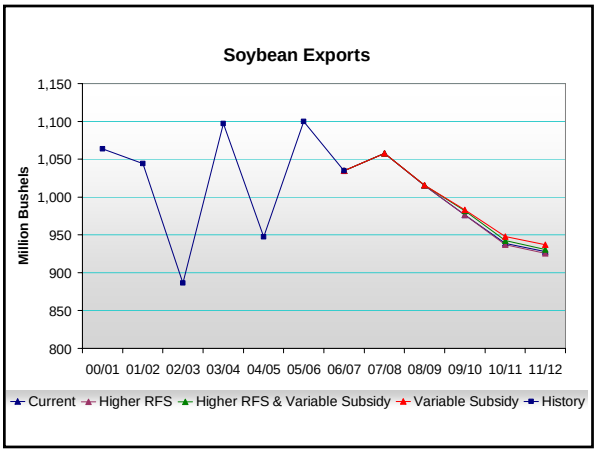

Corn Feed Use
Million Bushels
6,500
6,300
6,100
5,900
5,700
5,500
5,300
5,100
4,900
4,700
4,500
00/01 01/02 02/03 03/04 04/05 05/06 06/07 07/08 08/09 09/10 10/11 11/12
Current
Higher RFS
Higher RFS & Variable Subsidy
Variable Subsidy
History

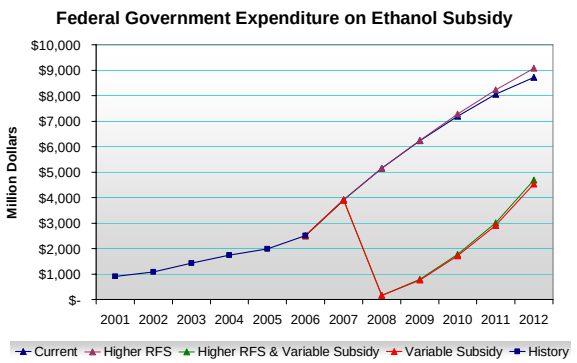

Corn Exports
Million Bushels
2,500
2,000
1,500
1,000
500
0
00/01 01/02 02/03 03/04 04/05 05/06 06/07 07/08 08/09 09/10 10/11 11/12
Current
Higher RFS
Higher RFS & Variable Subsidy
Variable Subsidy
History


Corn Price
U.S. Average Farm Price
Dollars per Bushel
$5.00
$4.50
$4.00
$3.50
$3.00
$2.50
$2.00
$1.50
00/01 01/02 02/03 03/04 04/05 05/06 06/07 07/08 08/09 09/10 10/11 11/12
Current
Higher RFS
Higher RFS & Variable Subsidy
Variable Subsidy
History


Biodiesel Production
United States
Million Gallons
1,600
1,400
1,200
1,000
800
600
400
200
0
2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012
Forecast
75% Confidence Interval
History


Soybean Oil Price
Decatur Price
Cents per Pound
45
40
35
30
25
20
15
10
00/01 01/02 02/03 03/04 04/05 05/06 06/07 07/08 08/09 09/10 10/11 11/12
Current
Higher RFS
Higher RFS & Variable Subsidy
Variable Subsidy
History


Soybean Exports
Million Bushels
1,150
1,100
1,050
1,000
950
900
850
800
00/01 01/02 02/03 03/04 04/05 05/06 06/07 07/08 08/09 09/10 10/11 11/12
Current
Higher RFS
Higher RFS & Variable Subsidy
Variable Subsidy
History



Results

- We are likely to produce a lot more ethanol in coming years, and somewhat more biodiesel
- Biodiesel capacity glut likely
- Prices for crops are likely to continue to rise

Results

- Effects on ag economy of different policy scenarios are minimal over the next 5 years
- However, relative to the current policy configuration:
  - The higher RFS leads to higher prices for major crops
  - The higher RFS would reduce uncertainty regarding the trajectories of acres and prices
  - The variable ethanol subsidy would reduce price uncertainty for corn

Biofuels and Feed Tradeoffs

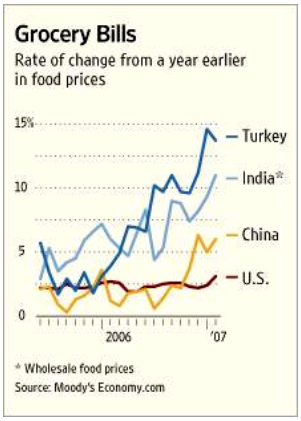
- Higher feed prices…
- Somewhat lower quantities of corn will be used for feeding…
- But, steadily increasing quantities of ethanol by-products available
- Bottom line: US feed industry likely to adapt, higher prices ultimately passed on to consumers

Biofuels and Food Tradeoffs

- United States
  - For US consumers, the sacrifices will likely be minimal
  - USDA: an average of only $0.19 of each consumer dollar spent on food goes to food inputs
    - Lower for cereal and bakery items
    - Higher for meats
  - NCGA: higher corn prices imply CPI-Food 6-8%, rather than 3%
  - Result: somewhat higher prices for consumers, especially for meats

Biofuels and Food Tradeoffs

- Foreign consumers
  - World population will continue to increase for decades
  - Forecasts of significantly lower exports reflect the lower ability-to-pay of foreign consumers
  - Fats and proteins especially likely to be more expensive, as feed costs increase



- WSJ, April 9, 2007:
  - Food price inflation increased significantly in 2006 for Chinese and Indian consumers
  - Chinese corn stocks estimated to be 2-3 months consumption

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Thanks!

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