

# Renewable Fuels: Opportunities for the Fertilizer Industry

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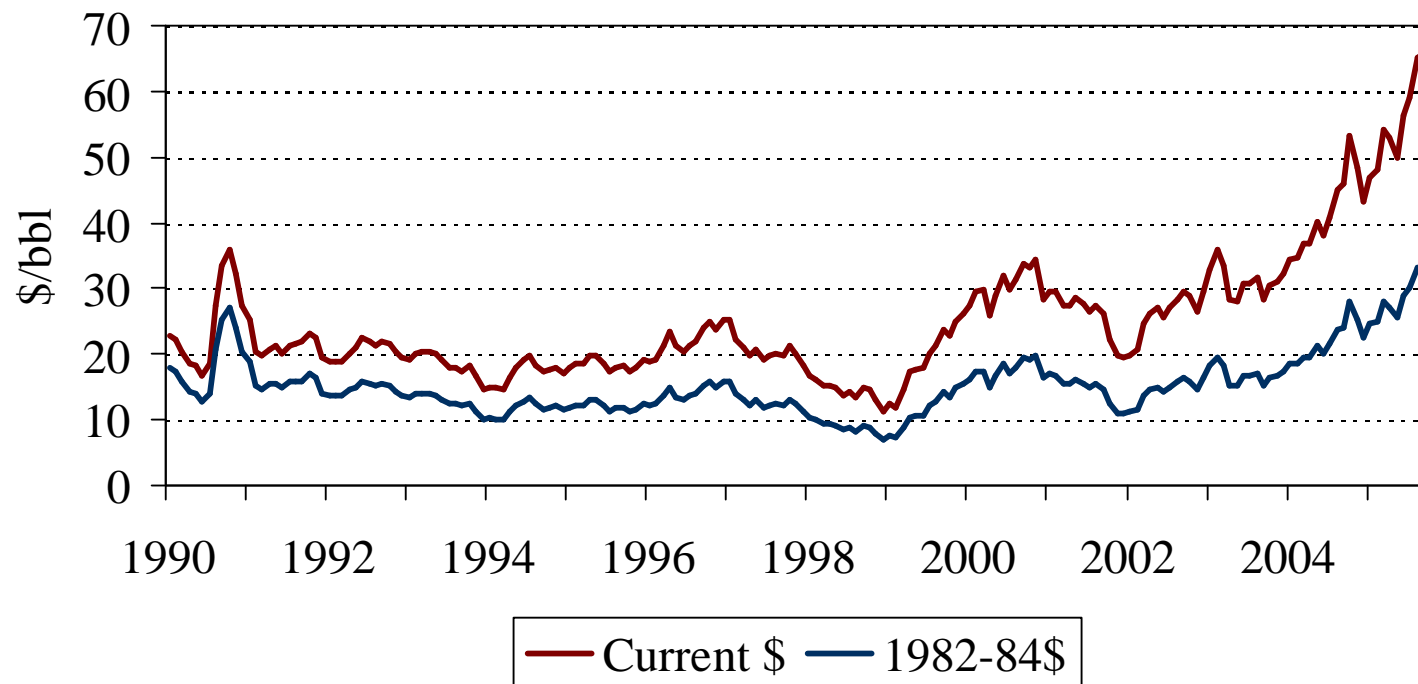


## Why do we need renewable fuels?



# Economics

## WTI Spot Oil, Cushing, OK

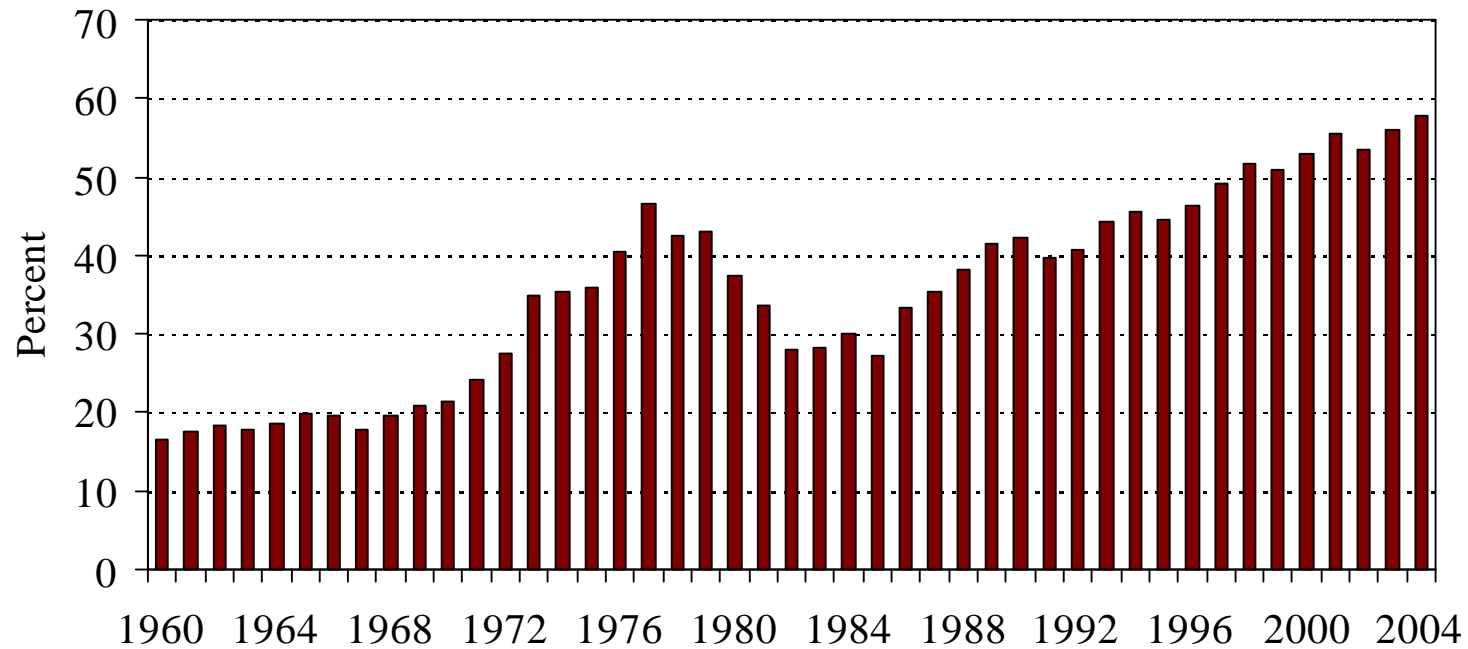


Source: EIA



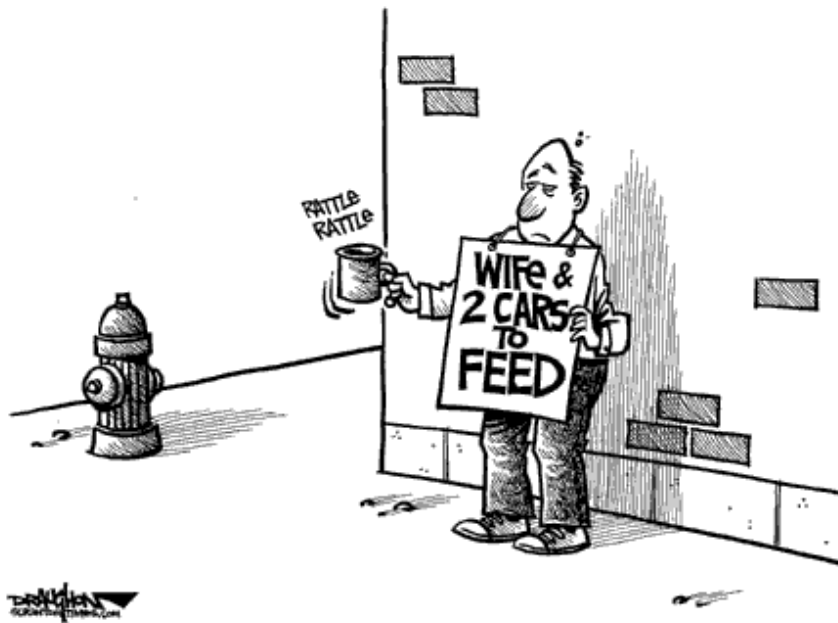
# National Security

## Net Petroleum Import Share of Consumption

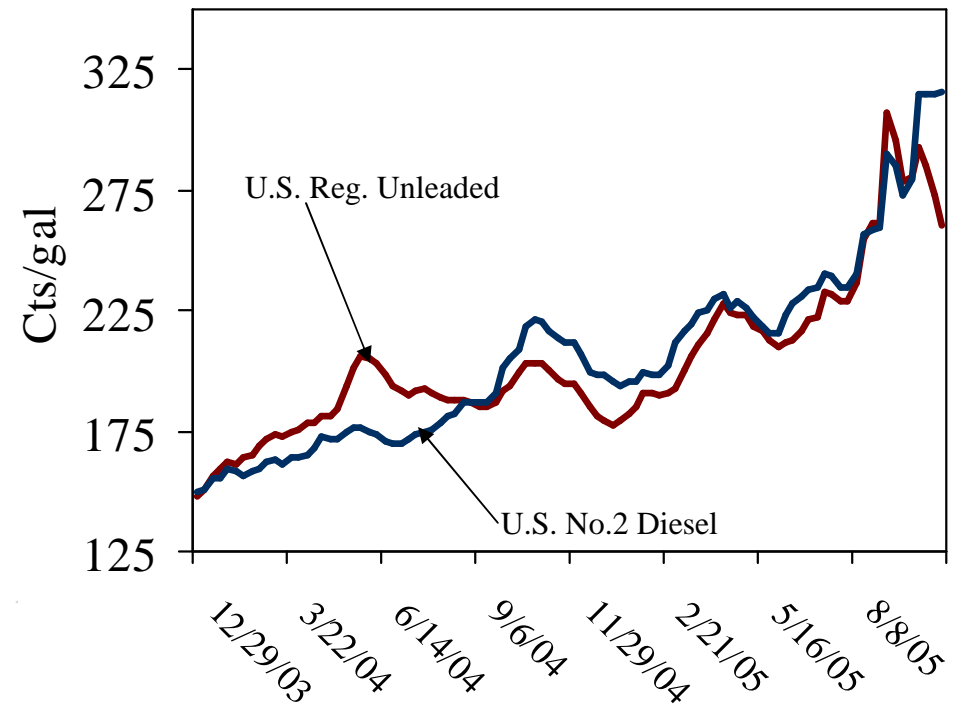


Source: EIA

## Higher pump prices are becoming a problem for consumers and business ...

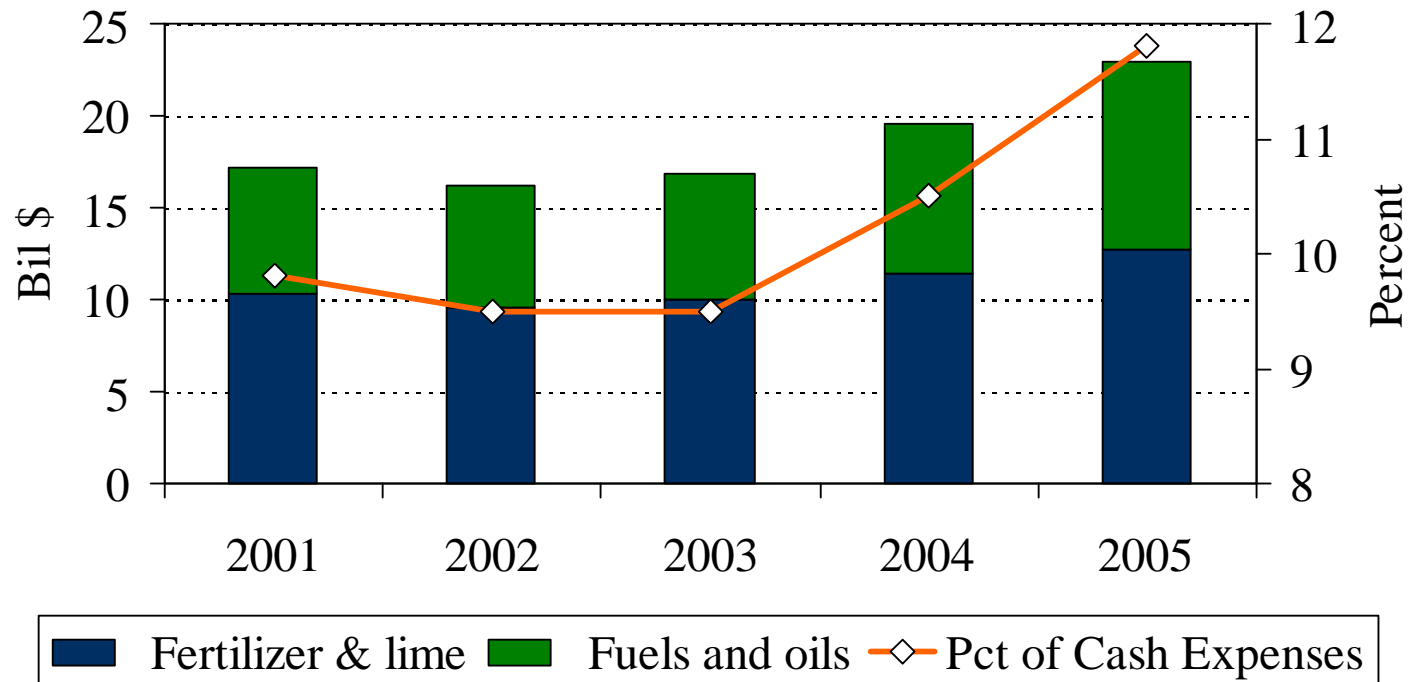


Average Retail Prices

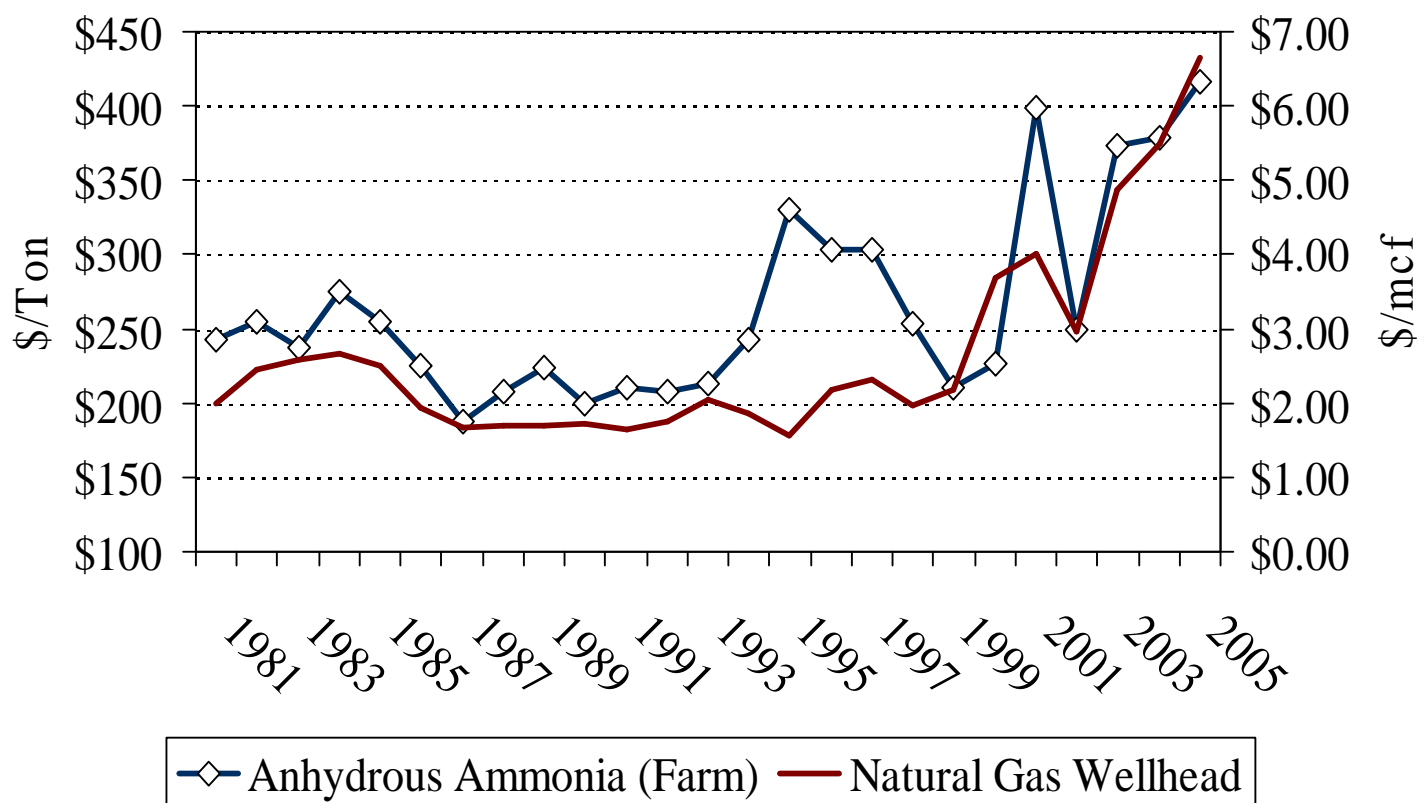


and for farmers.

### Prices Paid for Fertilizer and Fuel



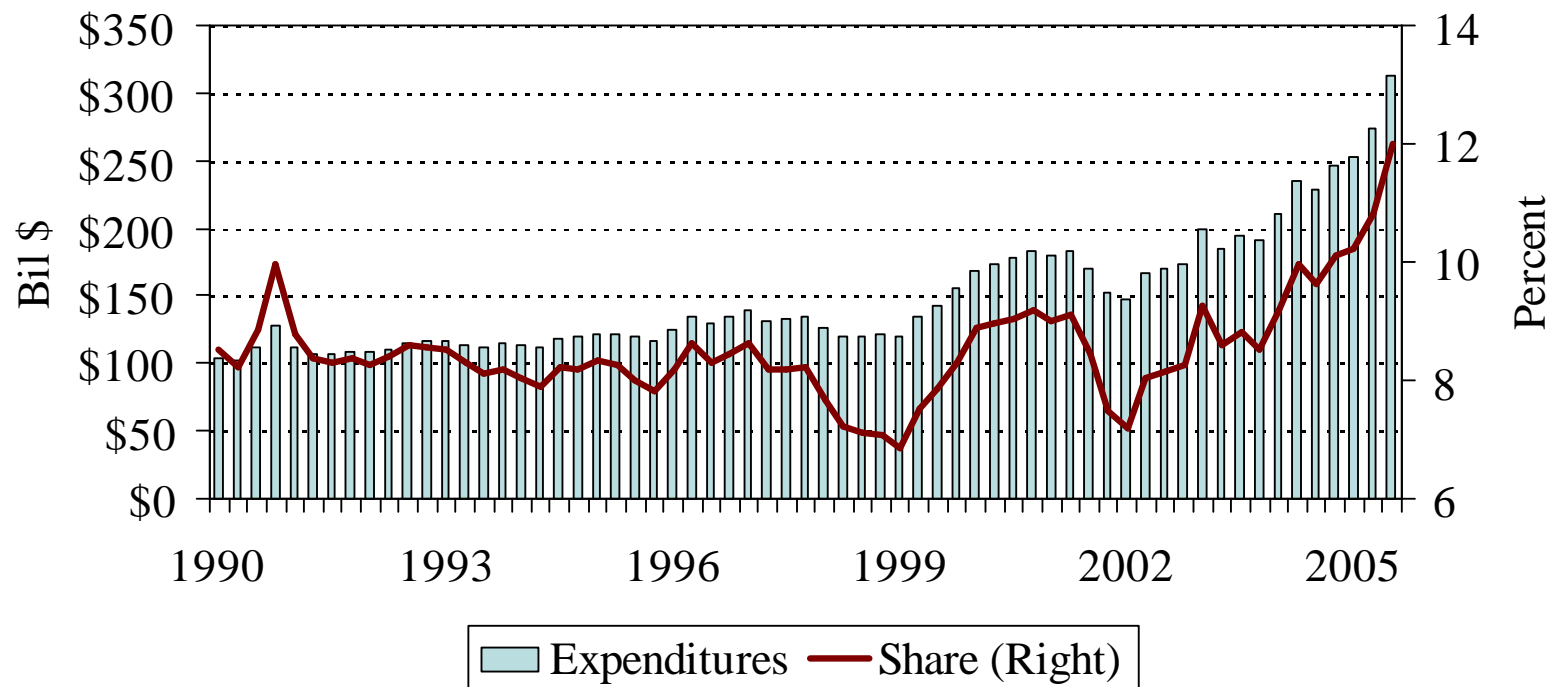
## Natural gas prices are pushing fertilizer costs to new highs.



Source: USDA/NASS; EIA

## Fuel is accounting for an increasing share of the consumer's dollar.

### Consumer Expenditures for Gasoline and Oil as Share of Nondurable Consumption

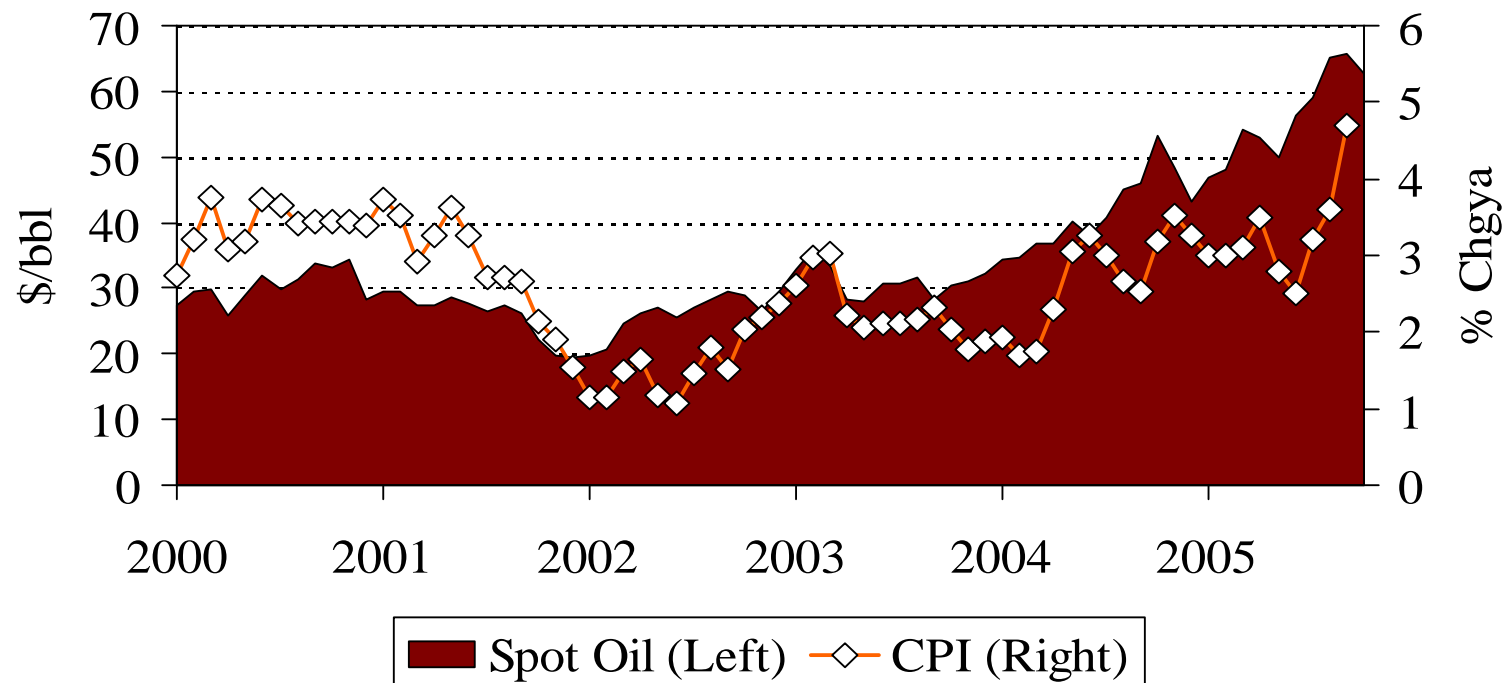


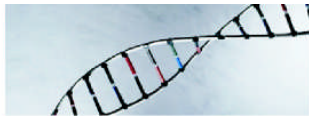




**Rising energy prices are beginning to be reflected in the inflation rate.**

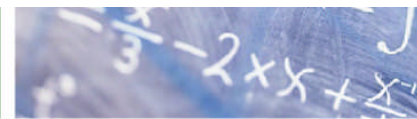
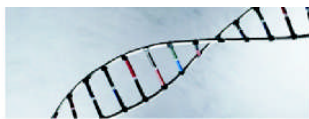
**WTI Spot Oil and Change in CPI**



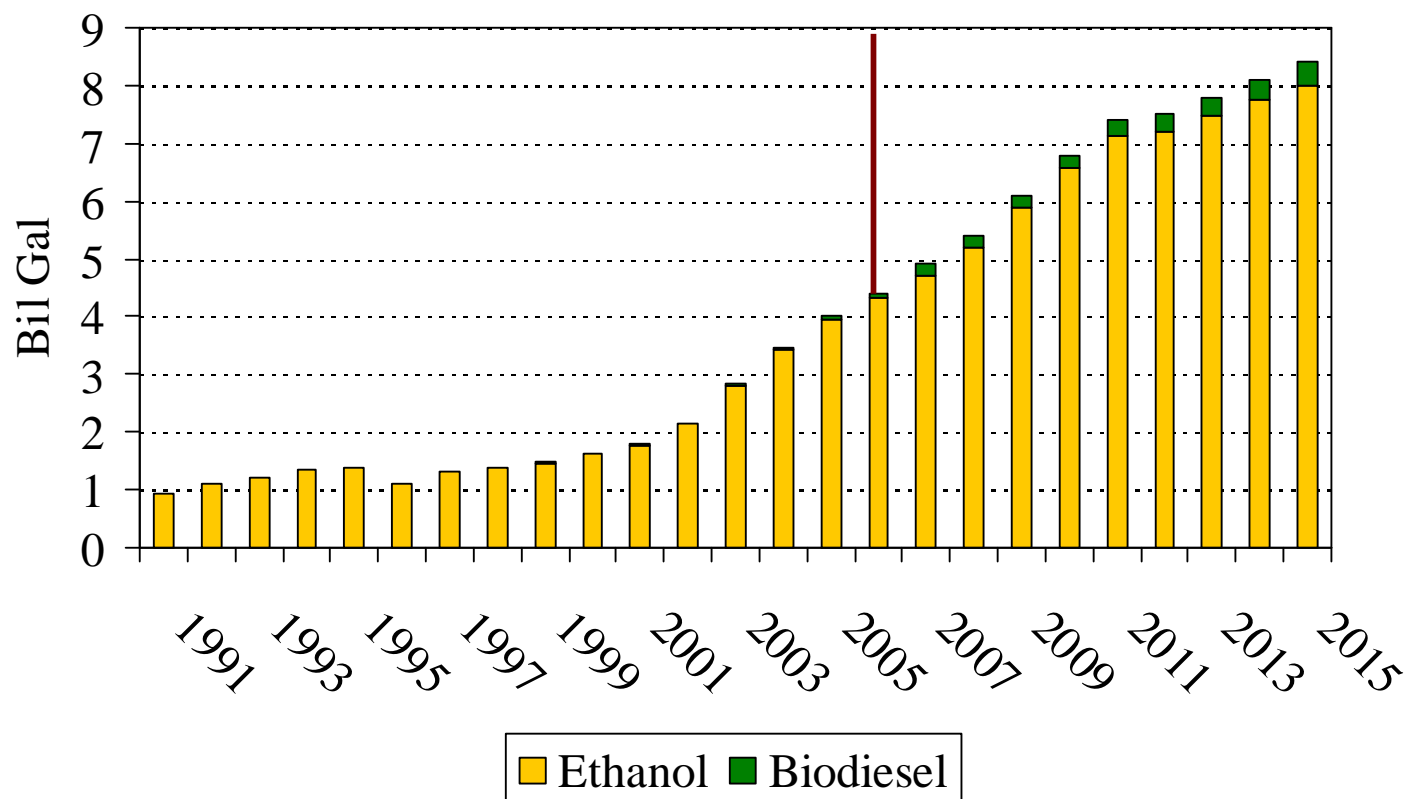


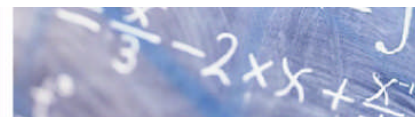
## **Energy Policy Act of 2005 is part of the solution. EPACT05 provides significant incentives for renewables.**

- ❖ Renewable Fuel Standard of 7.5 billion gallons by 2012
- ❖ Increases the Size Limitation on the Small Ethanol Producer Credit to 60 million gallons
- ❖ Extends biodiesel tax credit through 2008 (1 cent/gal for agri biodiesel; ½ cent/gal for other biodiesel)
- ❖ Provides credit for installation of alternative fuel refueling infrastructure (B20 minimum)
- ❖ Provides a small agri-biodiesel producer tax credit of \$0.10/gal up to 15 mil gal for producers up to 60 MGY.
- ❖ Provides \$5 mil/yr for research in testing biodiesel in advanced diesel engine fuel system technologies.
- ❖ Creates a cellulosic biomass program of 250 million gallons in 2013



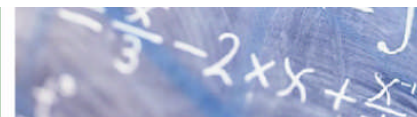
## The RFS will create a significant market for ethanol and biodiesel.





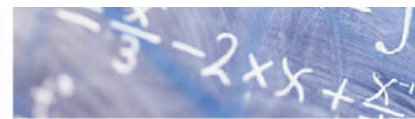
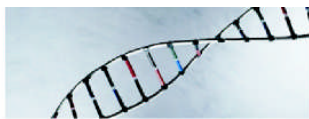
## To the benefit of corn

	Ethanol Use (Bil Gal)	Corn Share (%)	Ethanol Yield (Gal/bu)	Corn Demand (Mil Bu)
2005	3.962	0.99	2.75	1,506
2006	4.310	0.98	2.80	1,602
2007	4.720	0.97	2.85	1,716
2008	5.202	0.96	2.90	1,876
2009	5.882	0.95	2.95	2,045
2010	6.560	0.94	3.00	2,182
2011	7.136	0.93	3.05	2,194
2012	7.210	0.92	3.10	2,199
2013	7.472	0.91	3.15	2,220
2014	7.740	0.90	3.20	2,240
2015	8.010	0.90	3.25	2,257



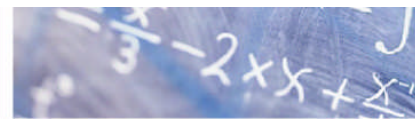
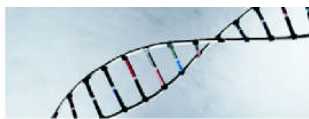
... and to a lesser extent, soybeans

	B100	Biodiesel	Biodiesel	Biodiesel	Soybean	
	Volume	from	from	from	Oil	Soybean
	(Mil gal)	Soybeans	Soybeans	Grease	Equiv	Equiv
	(Mil gal)	(Pct)	(Mil gal)	(Bil gal)	(Mil lb)	(Mil bu)
2005	0.038	99.0	0.038	0.000	285	26
2006	0.090	94.1	0.085	0.005	635	57
2007	0.180	93.1	0.167	0.013	1,256	113
2008	0.198	92.1	0.182	0.016	1,367	123
2009	0.218	91.1	0.198	0.019	1,487	134
2010	0.240	90.1	0.216	0.024	1,618	145
2011	0.264	89.1	0.235	0.029	1,760	158
2012	0.290	88.1	0.255	0.035	1,914	172
2013	0.319	87.1	0.278	0.041	2,082	187
2014	0.351	87.1	0.302	0.049	2,264	203
2015	0.386	85.1	0.328	0.058	2,461	221

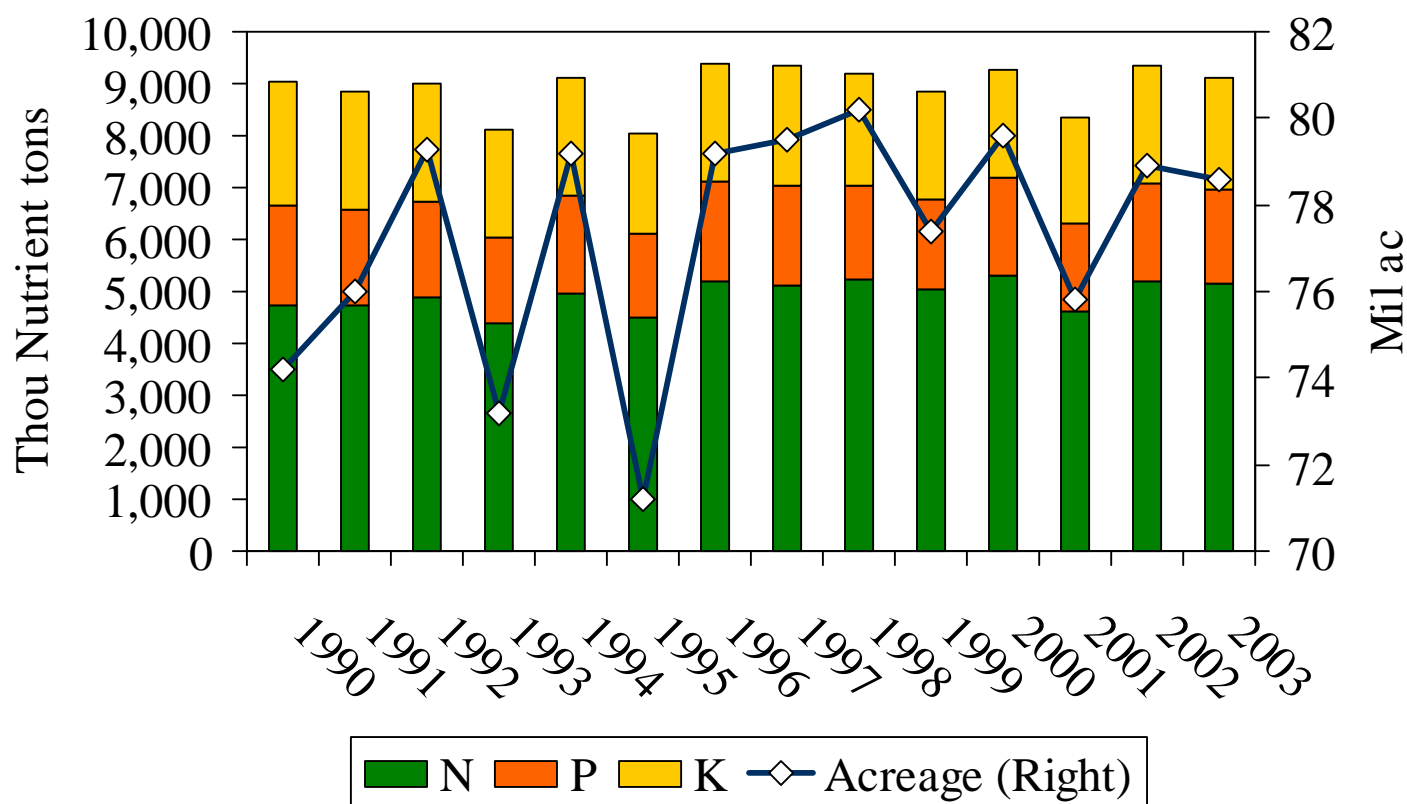


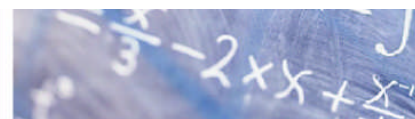
## What's in it for the fertilizer industry?

- ❖ Improved demand: more corn and soybean acres
- ❖ Stronger grain prices and a healthy farm economy
- ❖ Growth

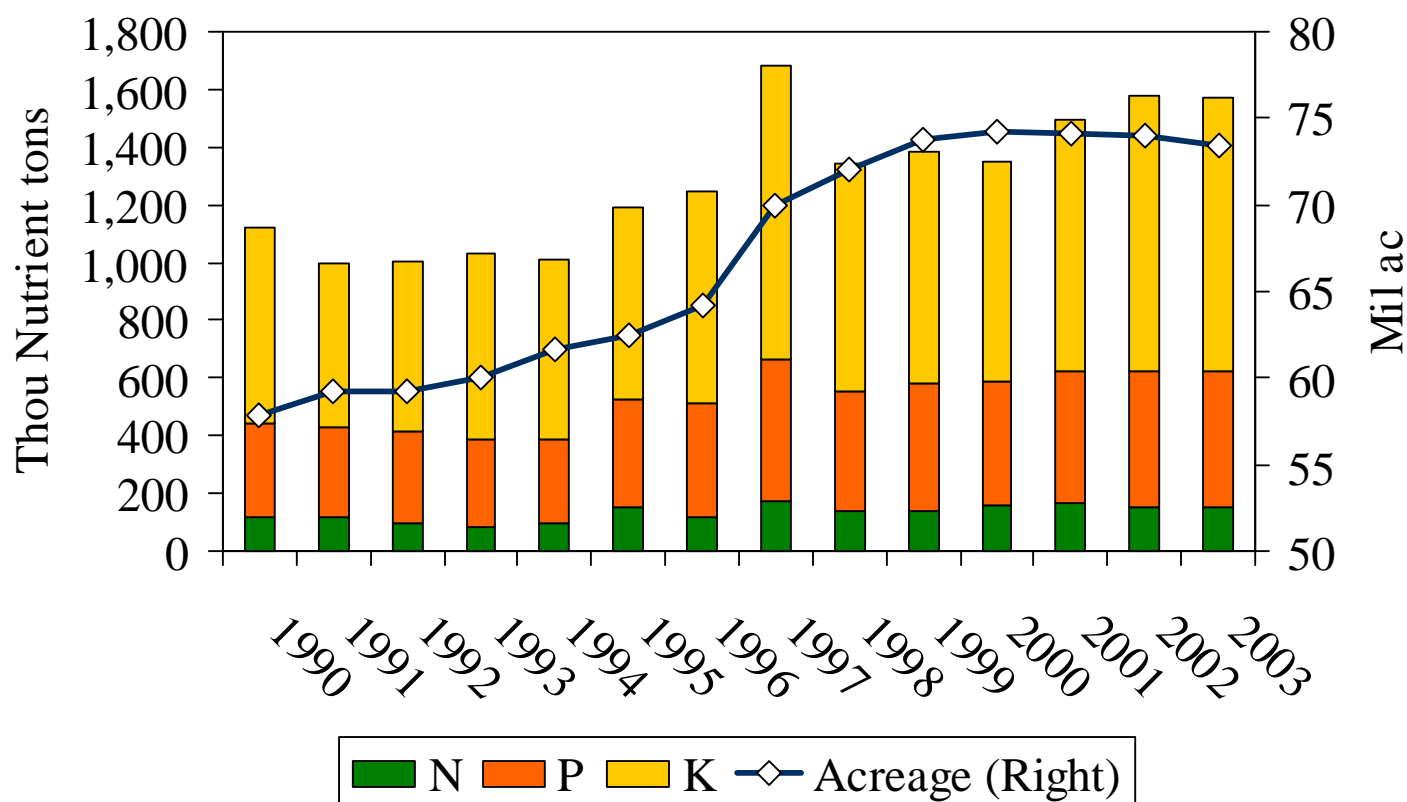


## Corn is the largest market for all fertilizer.

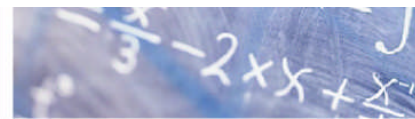
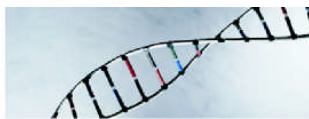




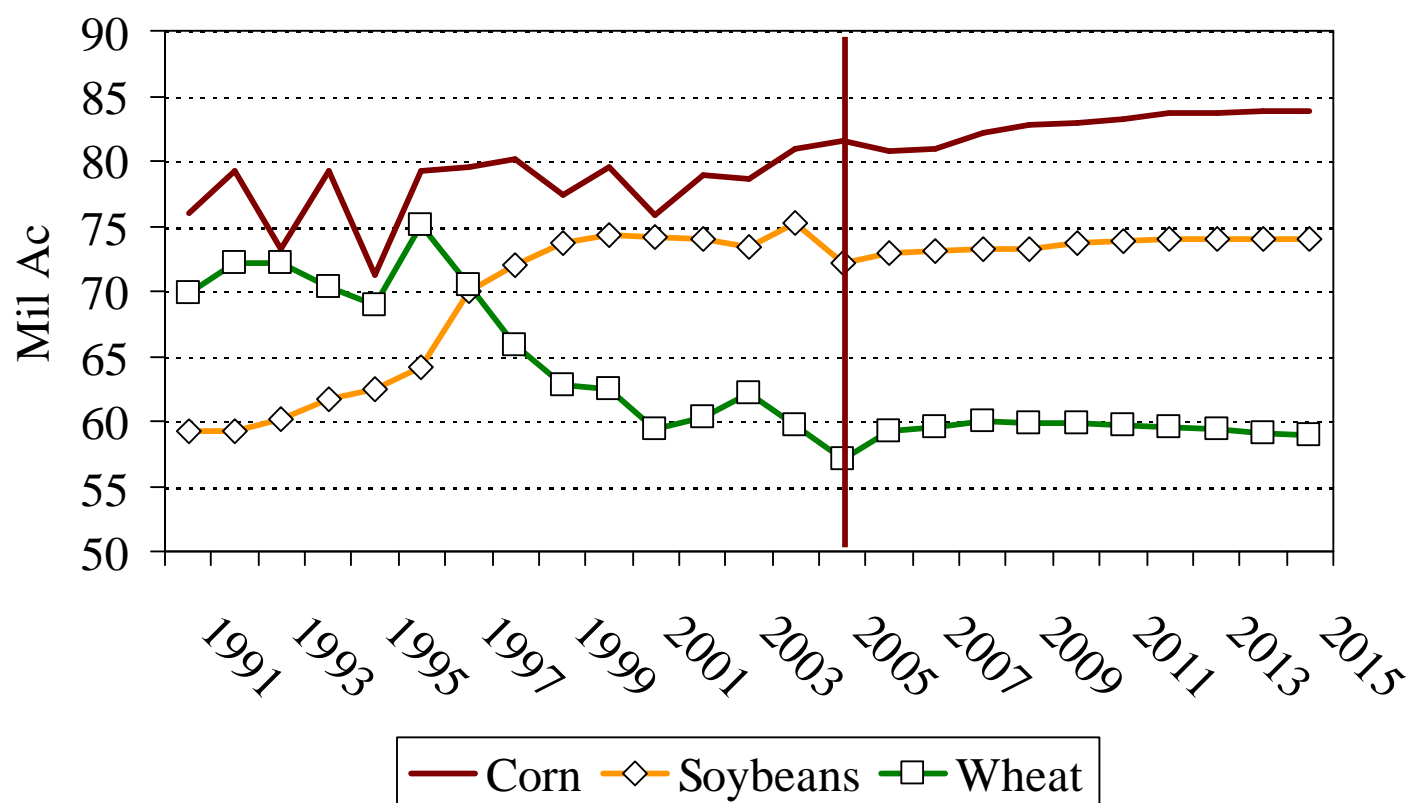
## Soybeans are important for potash.





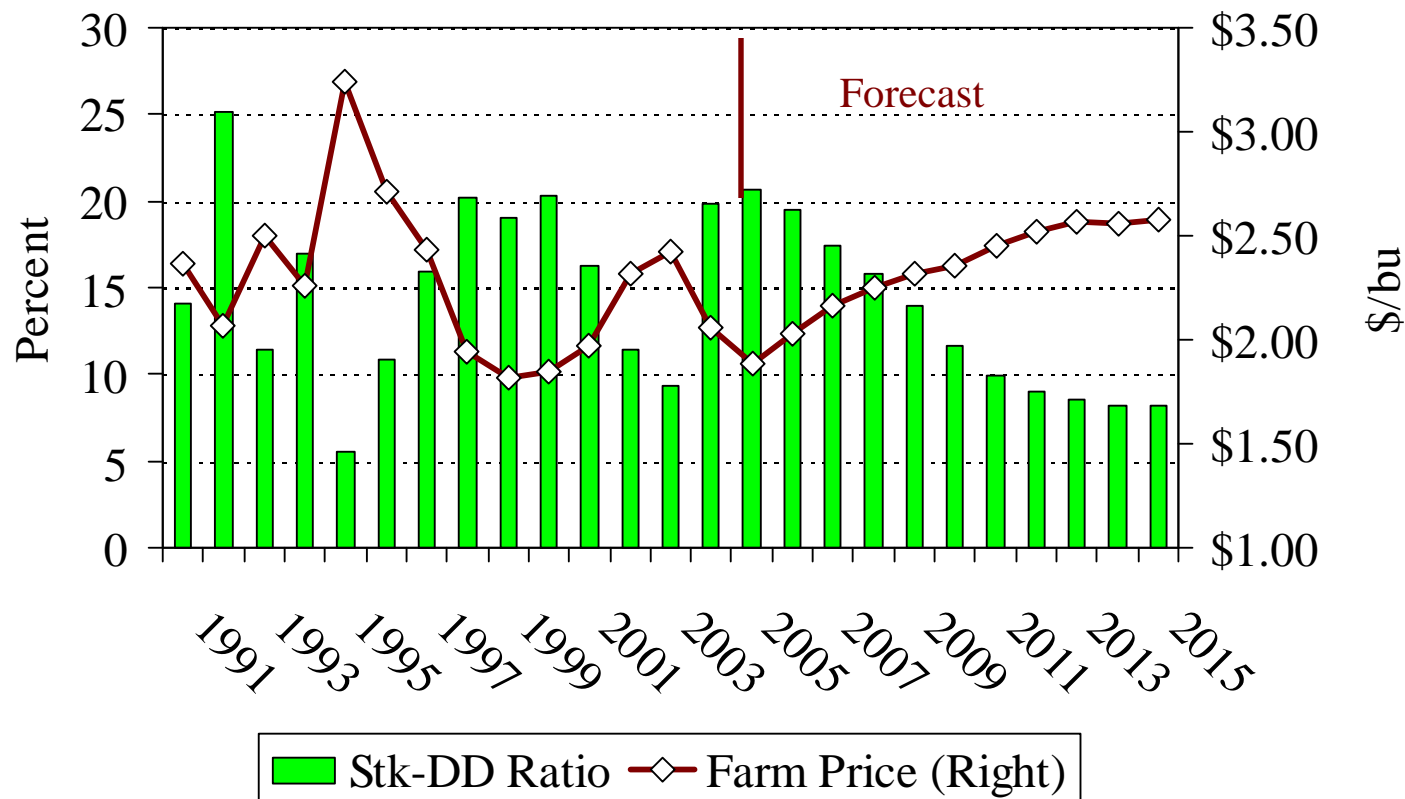


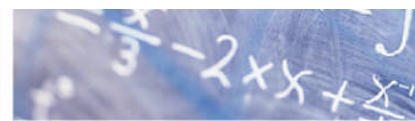
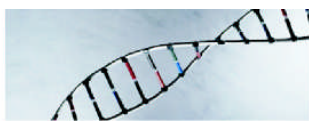
**The RFS will support high levels of corn and soybean planted acres.**





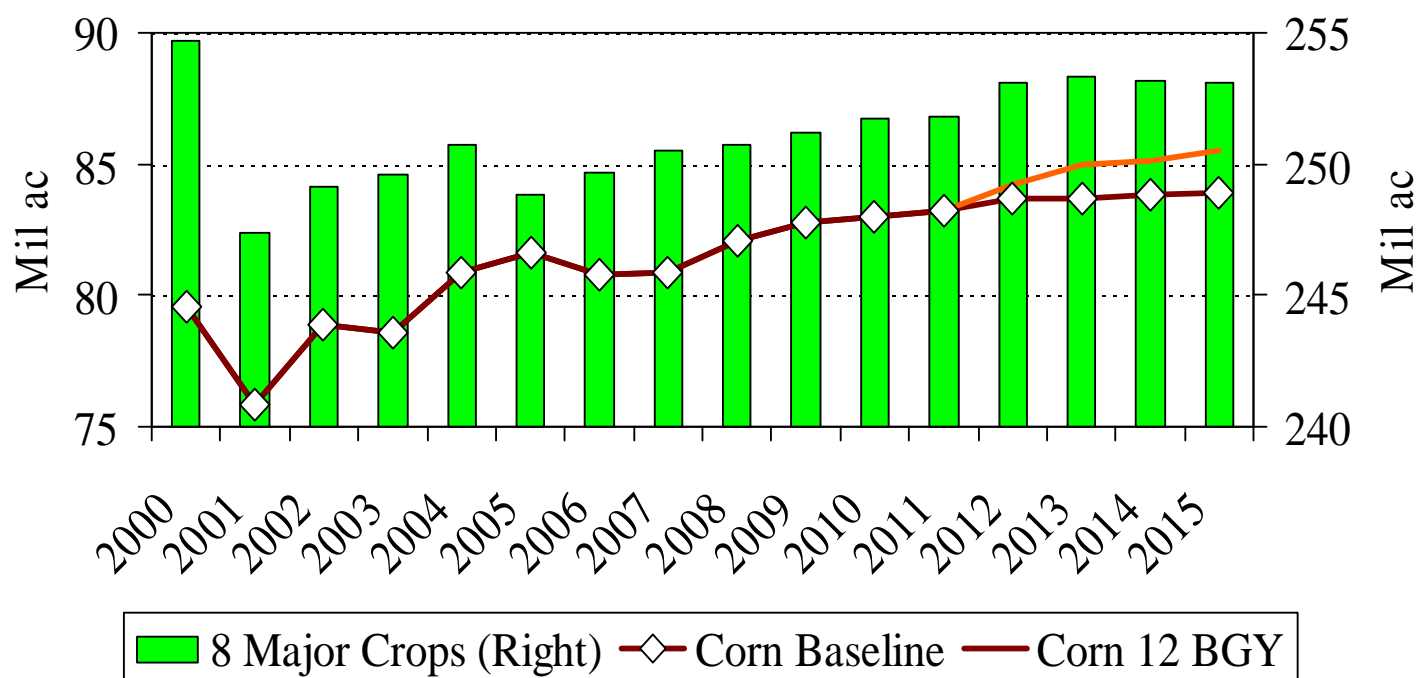
**Increased demand for corn to produce ethanol will keep stocks low, raise prices, and bolster farm income.**





**Look at the RFS as a floor, we have the potential to produce more than 12 BGY of ethanol from grain.**

**Area Planted to Corn vs 8 Major Crops**





## Who benefits from renewable fuels?

- ❖ The fertilizer industry
  - Increased demand from higher planted area.
- ❖ Consumers
  - Increased fuel supplies, potentially lower fuel prices, and cleaner air.
- ❖ Farmers
  - Increased demand for grains and oilseeds, and higher prices.
- ❖ Local communities
  - Every dollar of output spent on building and operating an ethanol or biodiesel plant is multiplied several fold as those dollars circulate through the local economy resulting in larger final demand, additional household income, new jobs, and higher tax revenue for state and local governments.

Thank you.

Questions?

FRANK & ERNEST

WELL  
ENOUGH

LEAVE IT ALONE,  
ERNIE.

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