

Can we fly and eat too?

Michael Bomford
Biofuels for Aviation Summit
Arlington, VA
September 2009



US Food System, 1995 (millions of pounds)

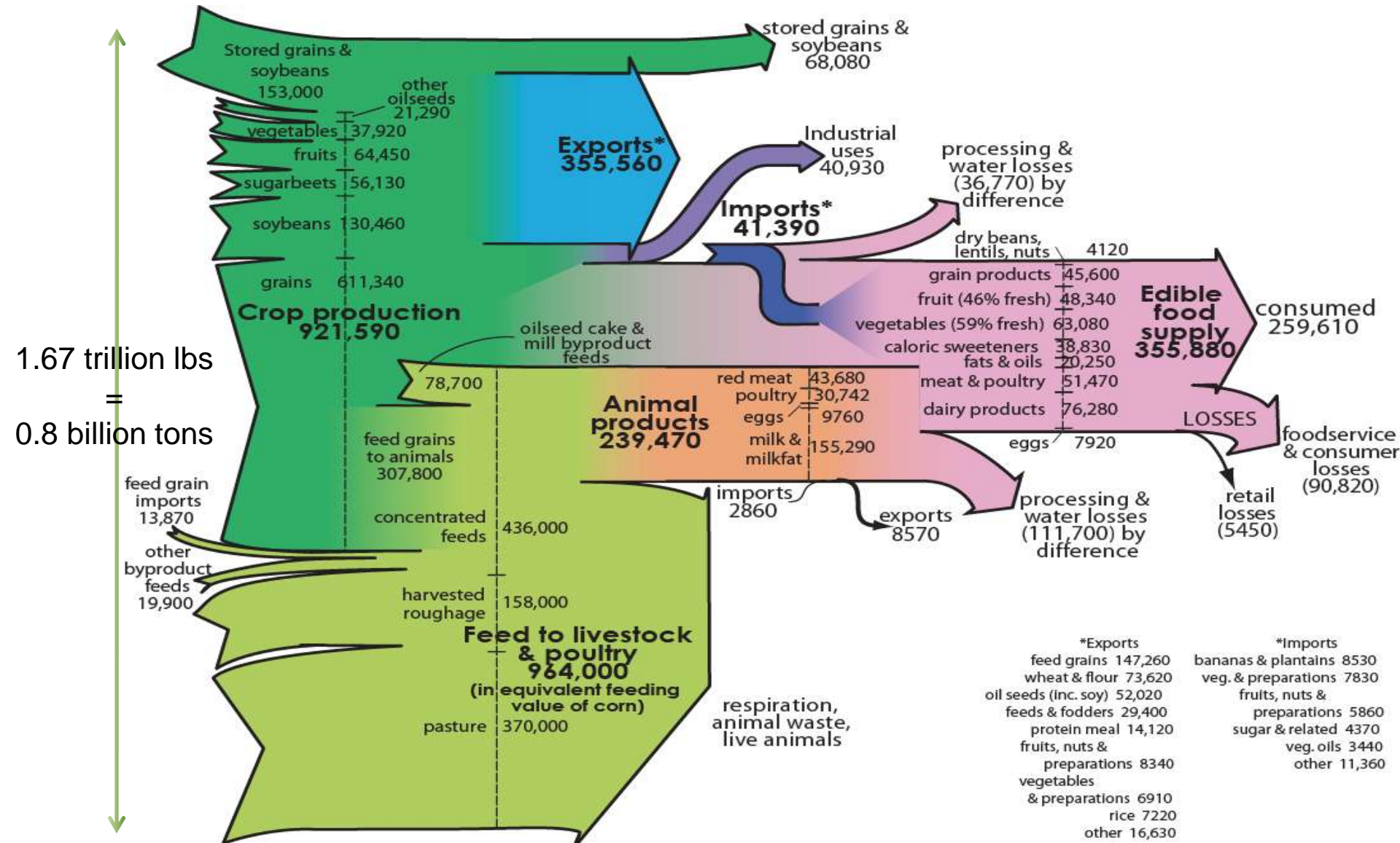
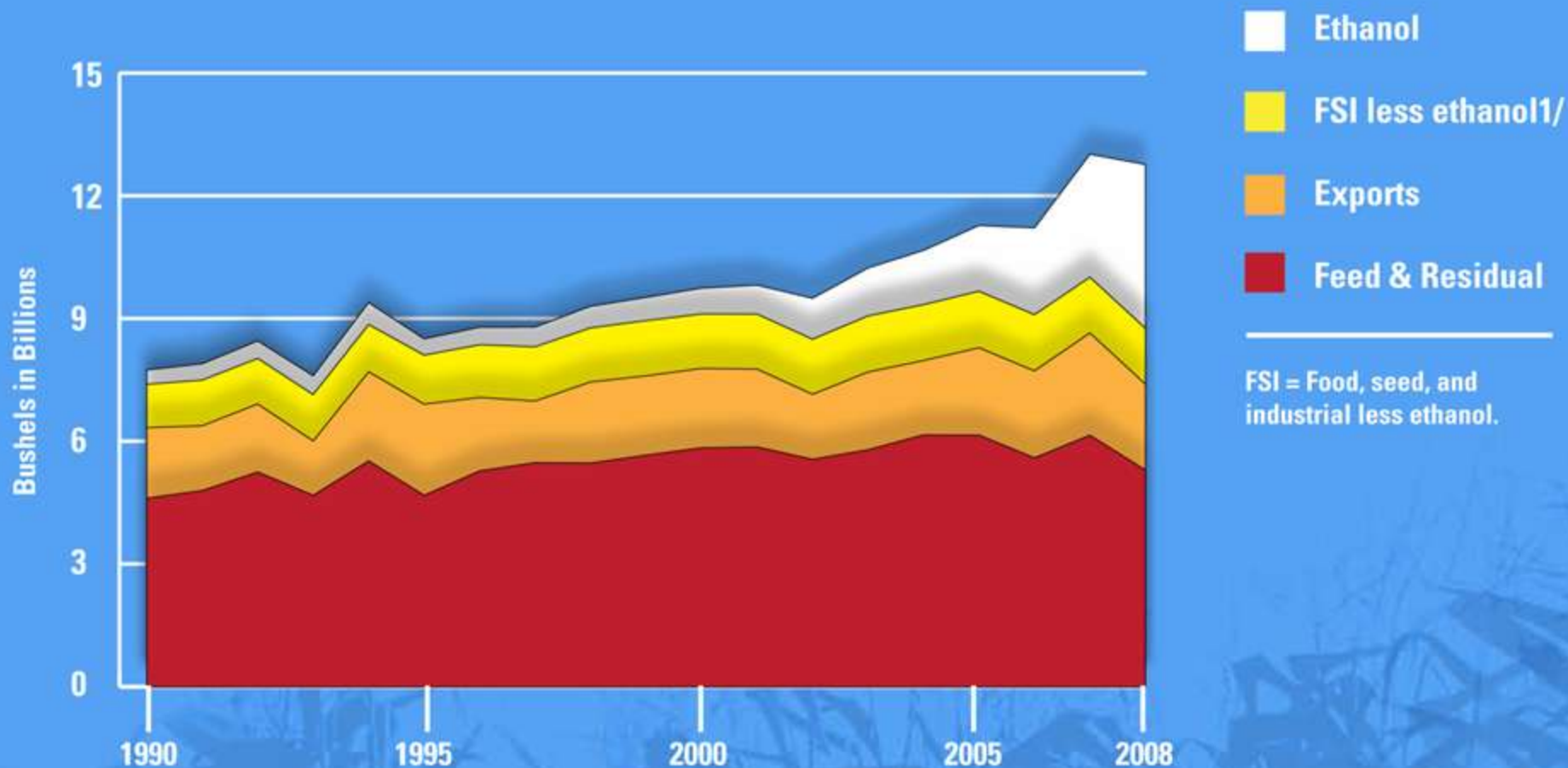


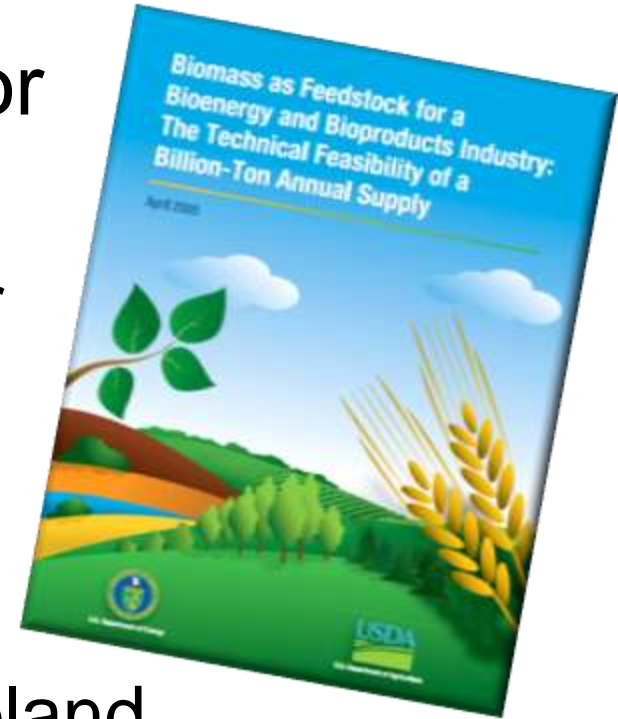
Figure from University of Michigan Center for Sustainable Systems (css.snre.umich.edu)

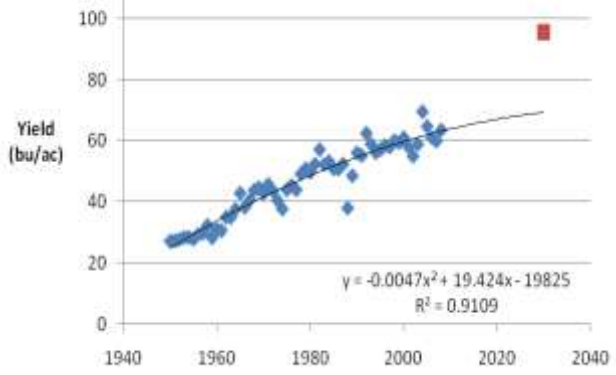
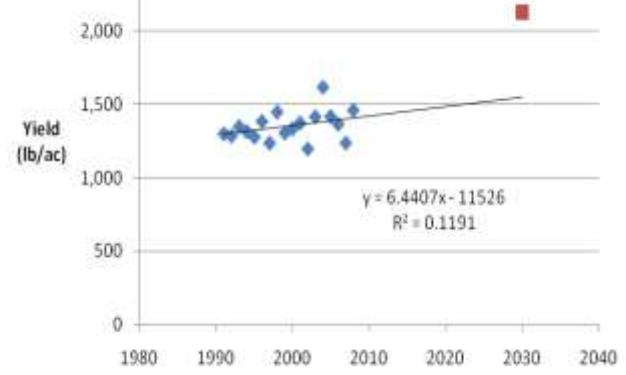
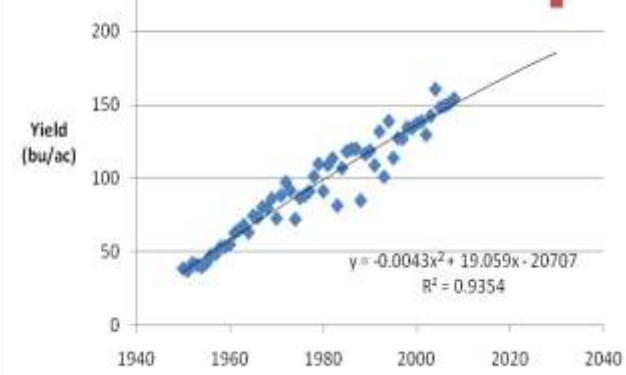
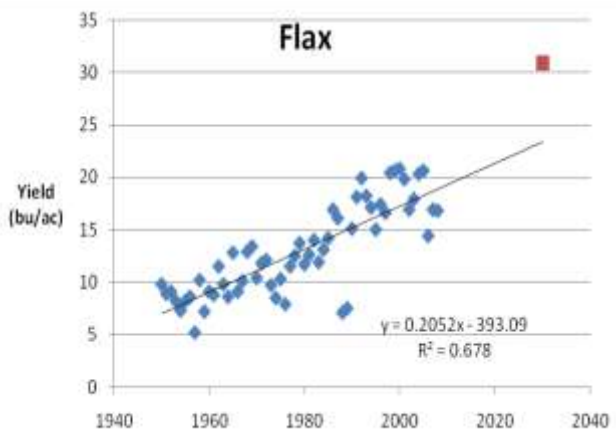
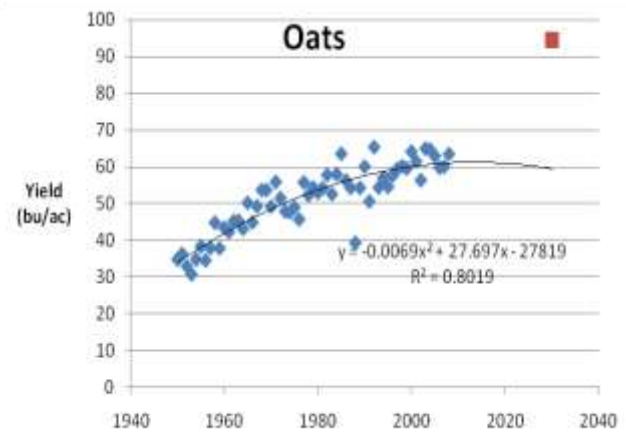
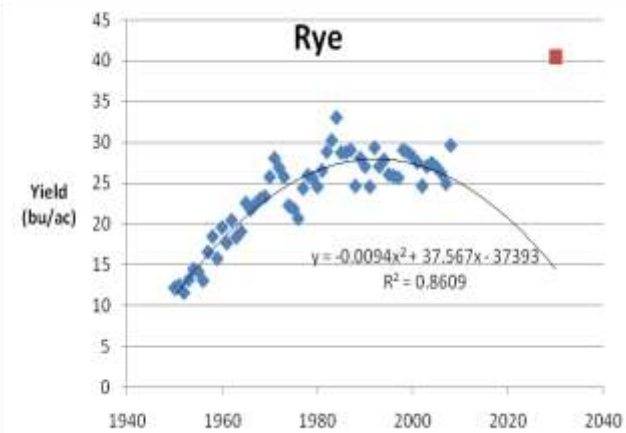
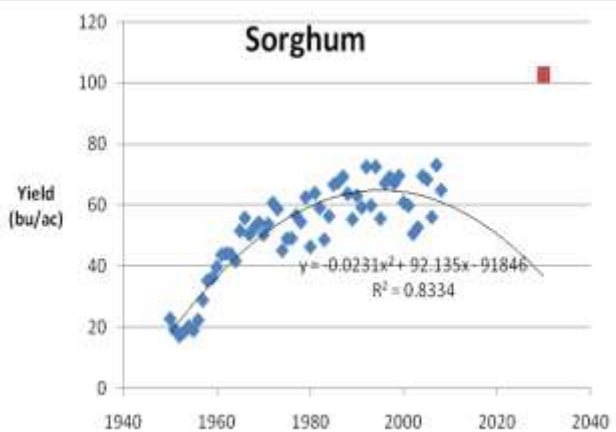
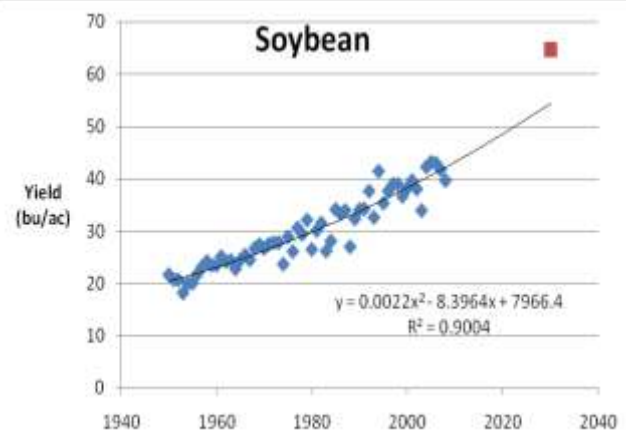
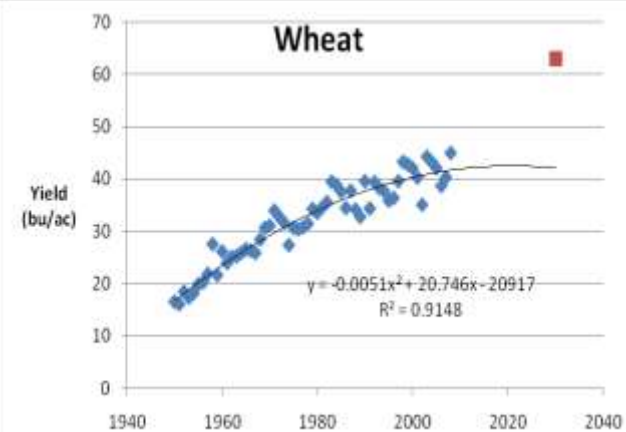
U.S. Corn Use, 1990 - 2008



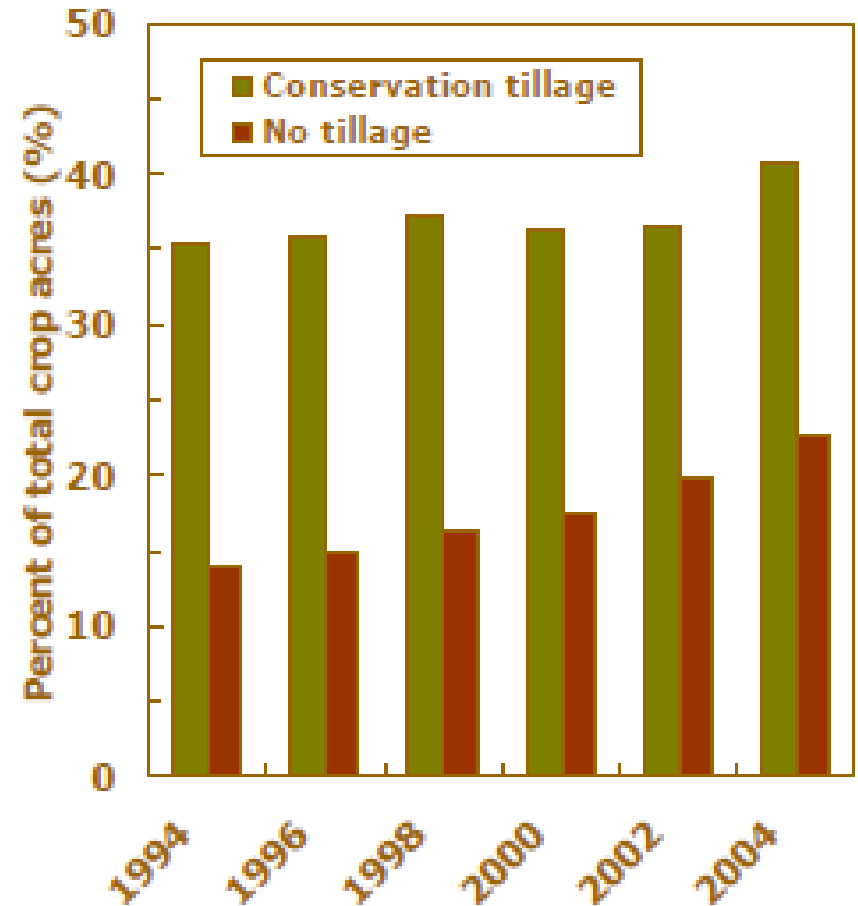
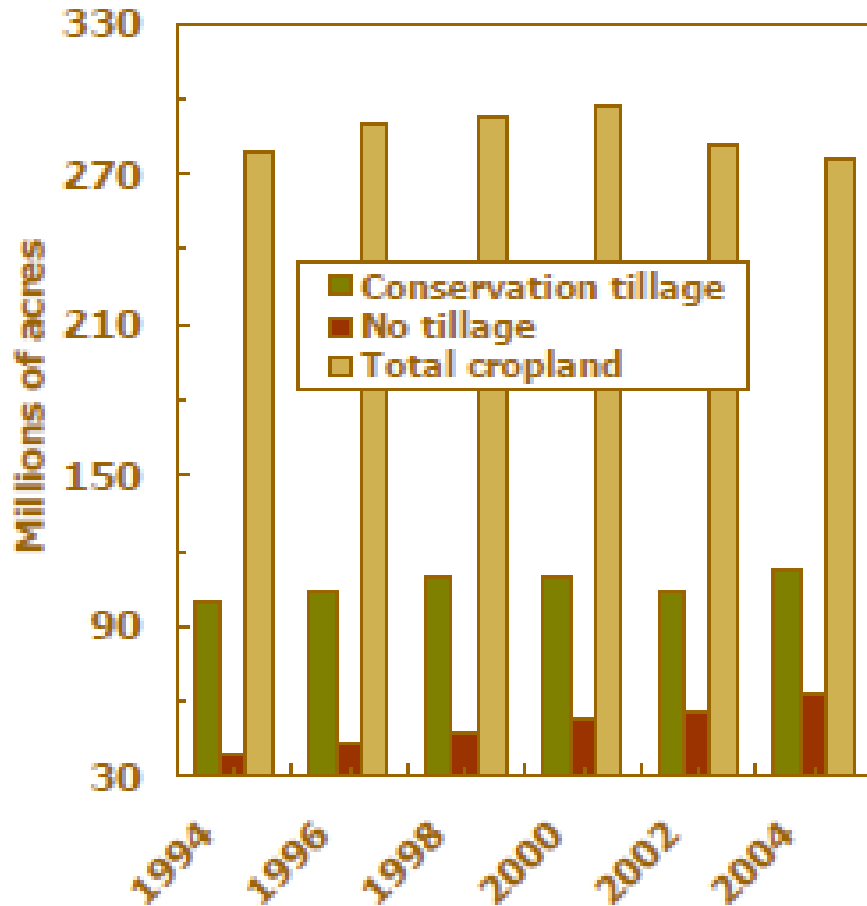
A Billion Tons by 2030?

- “Relatively modest changes” or unrealistic assumptions?
 - Yields of corn, wheat, and other small grains increase by 50%
 - Recover 75% of crop residues
 - All cropland no-till
 - Convert 55 million acres of cropland, pasture to perennial bioenergy crops



Barley**Canola****Corn****Flax****Oats****Rye****Sorghum****Soybean****Wheat**

No-till adoption, 1994-2004



Fractional Stover Harvest

Harvest Scenario	Stover Collected (Mg/ha)	% Harvested
High cut	4.9	46
Low cut	6.7	64
Normal cut	5.1	49

FIGURE 27

Agricultural trade balance of least-developed countries

Billion US\$



