WORLD POPULATION

6.7 Billion people
60% Malnourished
Food versus Biofuels

Director General of United Nations
Director General of FAO
Solar Energy Captured by Crops

All crops = <0.1%
Photovoltaics = 20%
Corn Production Inputs

Energy Inputs = 14
Diesel, Nitrogen, etc
Energy Inputs in Corn Production

Per Acre of Corn

100 gal./Acre
Ethanol Production

22 lbs corn/gallon
Energy Omissions Help A Positive Ethanol Yield

- Farm Machinery Omitted
- Processing Machinery Omitted
- Hybrid Corn Omitted
- Irrigation Omitted
- Environmental Impacts Omitted
- By-Product Credit 60%
Ethanol Energy Costs

Total Energy Inputs = 27,500 kcal/gal
Oil equivalents = 1.43 gal. =
1 gallon of Ethanol
Ethanol Production

DOE = 6 billion gallons

Total Oil = 1%
Corn Environmental Impacts

1,700 gal. Water/ethanol gal.
Uses more nitrogen fertilizer
Corn Environmental Impacts

More Soil Erosion
than any other crop grown
Subsidies for Ethanol

$6 billion/year
Subsidies = 60 times Gas
Fossil vs. Biomass
Cellulosic Biomass

Bush = 36 billion gals
1.6 billion tons biomass/year
80% of all crops, forests, grasses