



Food, fuel and fiber for  
**9 billion** while maintaining the **planet**



Jason Clay  
SVP, WWF

Ethanol Summit '11

Population X Consumption  $\neq$  The Planet



Global Food  
8,000 years = 40 years



more from less, and then less again



intensify agriculture, sustainably

double productivity for each input



And, we need to shift our thinking from maximizing any one variable (e.g. carbon)



to optimizing several key ones

Should consumers have a choice about sustainable products?



Or, should they pay the real costs?



On a finite planet, it's a B2B issue



sustainability = availability

Producers



Traders



Manufacturers



Brands



Retailers

1. The Consumer Goods Forum—  
Retailers & brands taking deforestation out of supply chains

# The Consumer Goods Forum

The goal: take deforestation out of supply chains by 2020



Producers



Traders



Manufacturers



Brands



Retailers

2. UNICA and Ethanol—  
Producers & millers bringing carbon into supply chains



## Grams of CO<sub>2</sub>e/kWh energy by energy source

|                      |     |
|----------------------|-----|
| Sugarcane            | 39  |
| Anthracite coal      | 840 |
| Lignite/brown coal   | 940 |
| Natural gas          | 370 |
| Crude oil & kerosene | 640 |
| Gas/diesel oil       | 670 |

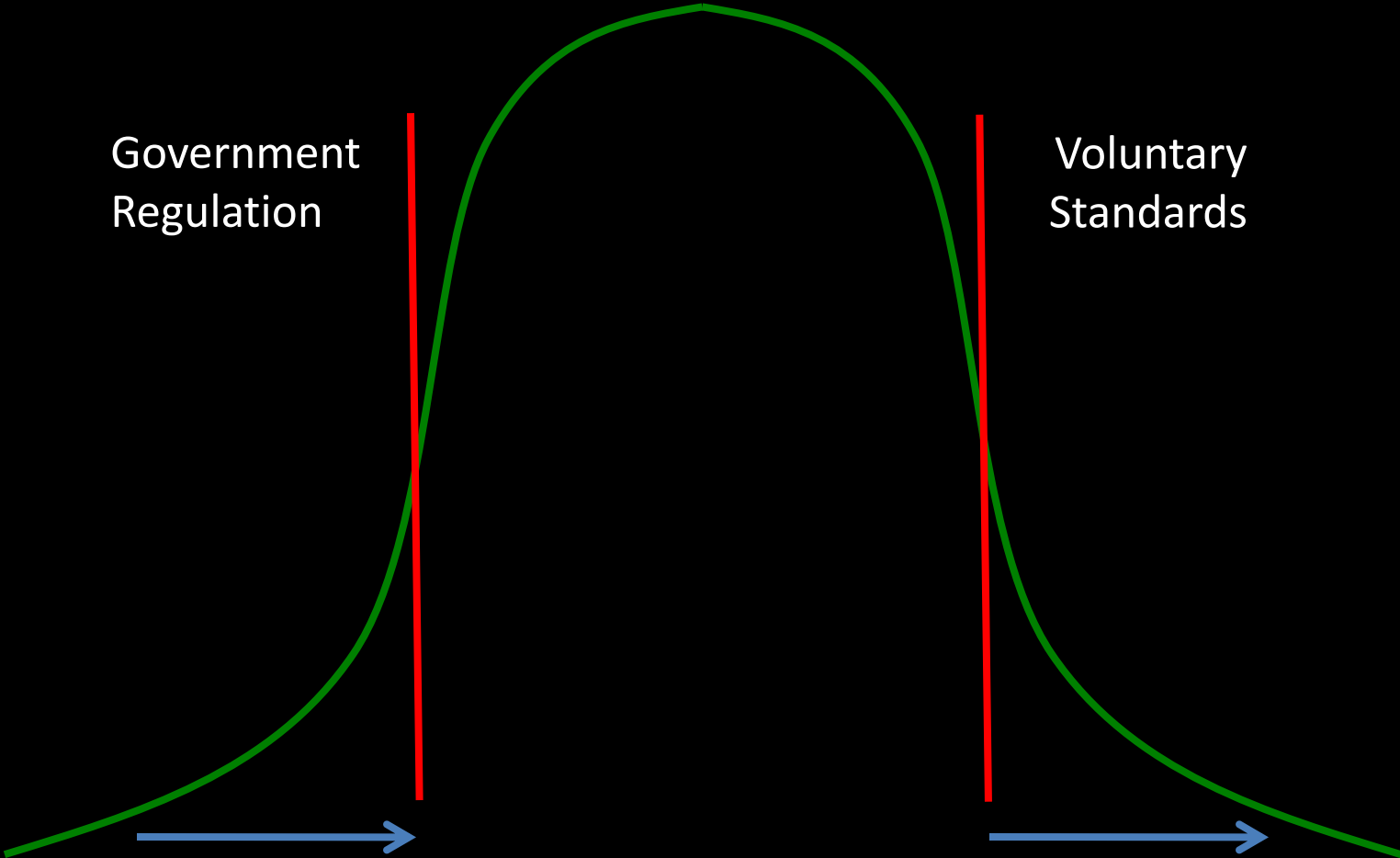
Ogorzalek and Quirk (2011) adapted from Rein (2010)

What about sugar, ethanol and bioplastics?

# Performance Curve

Government  
Regulation

Voluntary  
Standards





Who will  
manage  
the planet?