

# Critical Thinking, Sustainability, Agriculture & Market Opportunities

Sustaining people & the planet



## What the heck is it?

- Critical thinking is the ability to step outside our own world view and.....
  - away from comfort zone
  - look at information from another point of view
- Critical thinking gathers information from many sources:
  - BBC or Fox news?
  - Rush Limbaugh or New York Times?



## The process (in short)

- **Research:** Capturing lots of information
- **Debate:** arguing different points of view.
- **Analysis:** taking the argument apart—usually through discussion and scholarly research
- **Objectivity:** detach from personal biases, understand how you typically respond to challenges and think about how others might respond



## Why are we bad at it?

- Critical thinking is not used as often in rural communities because.....
- we need consensus
- we are insulated
- we operate almost constantly in our comfort zone
- we think we know the answer (human nature)
- we talk to ourselves and hear what we know not what we don't want to know



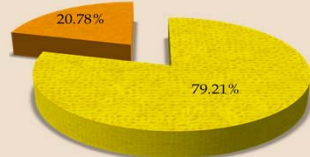
Oh bother.

Why do we need to apply critical thinking to the challenges facing our business?



## Our customers are not like us

U.S. Population as of 2000 Census



\*\*Urban areas defined as population of 50,000 or higher and population

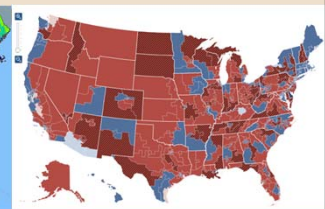
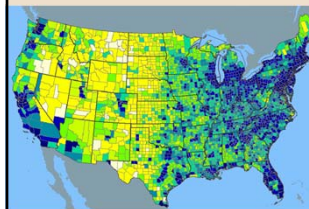
■ Urban ■ Rural



## Rural / Urban Landscape

Population Density

2010 House Results



2000 U.S. population density within each county, in persons per sq. mile: Light to dark (yellow to blue): 1-4 (y), 5-9 (lt. green), 10-24 (teal), 25-49 (dk. teal), 50-99 (blue-green), 100-249 (blue), 250-66,995 (dark blue).  
Source: Wikipedia.

### Carbon case study: Thinking critically, can we trust ourselves to not screw up?

- How are decisions made? Are our organizations up to the task?
- Is the information correct? Do we understand?
- Are the questions right? What is our story?



### The Big Sustainability Kahuna? Carbon

- Climate change—weather variability
- Ag messed this up
- Our ag groups reacted, not proacted
- Didn't really understand language—we bought into the rhetoric (Rush Limbaugh)

Result? We became afraid.

- We missed the critical thinking opportunity
- Information became politicized
- Feedback loop was limited



### Carbon reductions would have paid

Now farmers will be doing it for free because...

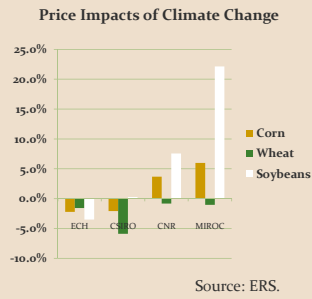
Many of same practices now will be the cost of doing business in the future and

The public and supply chain STILL cares about this.



## Cost of inaction for ag? \$\$

- Long-tail weather events
- More pests and disease
- Increased costs of risk management
- Global food supply challenges
- Production losses



## Figuring it out—this time

How do we say yes to sustaining people & the planet



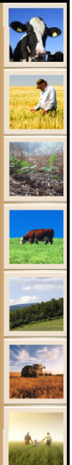
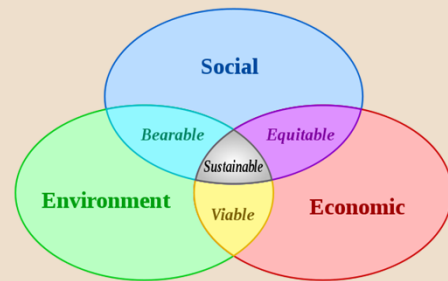
## The new challenge

- Sustainability programs are widespread and spreading throughout the supply chain
- The farm groups are struggling to catch up and learn (similar to carbon)—but constrained by “group think”
- Our tendency as an industry is a default to “no”
- That means loss of potential revenue and potential support mechanisms to ease the inevitable transition

*Worst case? Lose the support of customers and our own narrative as good actors.*



## What is Sustainability?





## Water A Growing Constraint

- Farmers use 70% of the fresh water used in the world.
- With rapid urbanization, cities are likely to outbid agriculture for available water.
- The world's farmers need to double food production using less water than today. Biofuels will add further to this challenge.
- Water is priced at zero to most farmers, signaling that it is much more abundant than in reality and providing no incentive to use it efficiently or adopt already existing water-saving technology.



## The Land Constraint

- There is at most 12% more arable land available worldwide that isn't presently forested or subject to erosion or desertification, and...
- Loss and degradation of many soils continues:
  - Urbanization & infrastructure construction
  - Nutrient mining
  - Erosion
  - Desertification
  - Natural reserves
  - Reforestation



## C2C (Cradle-to-Cradle) Closed-loop Model

The Next Industrial Revolution: Model for the Prototypical Company of the 21st Century  
[www.interfaceglobal.com](http://www.interfaceglobal.com)

- Nature has some fundamental operating principles:
- it runs on sunlight and other renewable energy sources,
  - it fits form to function,
  - it recycles everything
  - it is extremely efficient — never creating excess or
  - it rewards cooperation.

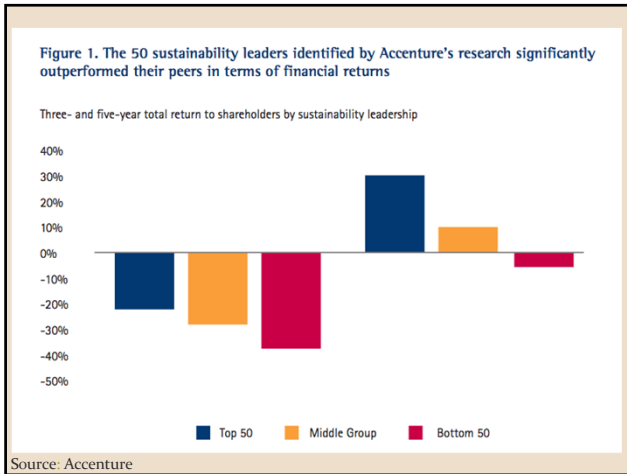
Our job was to translate these principles into a new model for business.

## Sustainability = Increased Profits

- Profit increase of 38%
- Employee commitment is key
- Adopt due to various beneficial reasons:
  - energy efficiency
  - waste reduction
  - revenue enhancement
  - product and service differentiation
  - supply chain optimization and
  - materials risk management
  - Brand value

"The Sustainability Advantage", Bob Willard 2002

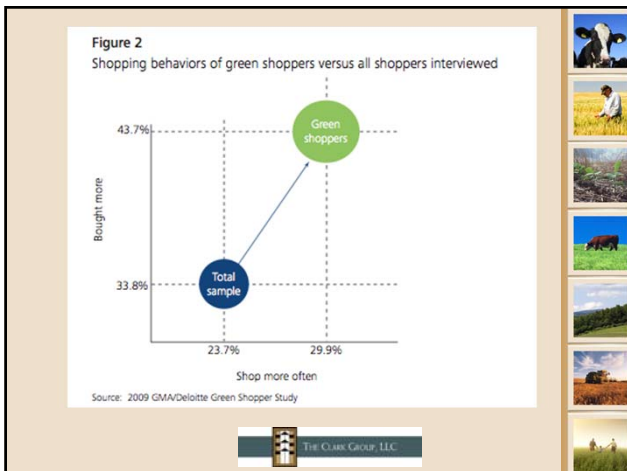




### GMA/Deloitte 2009 Green Shopper Study

- Green shoppers are a large, high-value segment of importance to retailers and many manufacturers.
- Green shoppers visit stores more frequently, buy more products on each trip, and demonstrate more brand and retailer loyalty.*
- This suggests that shopper marketing insights dealing with green shoppers will prove particularly attractive to many retailers.





### Unilever's Lipton Tea example



25,000 People  
100,000 Dependants

>600,000 trees planted



Free Housing  
Schools, Hospital

97%  
Renewable energy




**We are committed to sourcing all our tea sustainably**

- All our tea used in PG Tips and Lipton Yellow Label tea bags in Western Europe certified by the Rainforest Alliance by 2010
- Extend Rainforest Alliance certification to all Lipton tea bags globally by 2015

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**Complete Communication Programme**



Media: KOF trips  
Le Figaro economie Advertis

Digital  
Facebook

Web

PACK

YOUR SMALL CUP CAN MAKE A BIG DIFFERENCE

**Walmart**  
1-800-331-0085 www.walmart.com

**Supplier Sustainability Assessment: 15 Questions for Suppliers**

**Energy and Climate: Reducing Energy Costs and Greenhouse Gas Emissions**

- Have you measured your corporate greenhouse gas emissions?
- Have you opted to report your greenhouse gas emissions to the Carbon Disclosure Project (CDP)?
- What is your total annual greenhouse gas emissions reported in the most recent year measured?
- Have you set publicly available greenhouse gas reduction targets? If yes, what are those targets?

**Material Efficiency: Reducing Waste and Enhancing Quality**


- If measured, please report the total amount of solid waste generated from the facilities that produce your product(s) for Walmart for the most recent year measured.
- Have you set publicly available solid waste reduction targets? If yes, what are those targets?
- If measured, please report total water use from facilities that produce your product(s) for Walmart for the most recent year measured.
- Have you set publicly available water use reduction targets? If yes, what are those targets?

**Natural Resources: Producing High Quality, Responsibly Sourced Raw Materials**

- Have you established publicly available sustainability purchasing guidelines for your direct suppliers that address issues such as environmental compliance, employment practices and product/ingredient safety?
- Have you obtained 3<sup>rd</sup> party certifications for any of the products that you sell to Walmart?

**People and Community: Ensuring Responsible and Ethical Production**

- Do you know the location of 100 percent of the facilities that produce your product(s)?
- Before beginning a business relationship with a manufacturing facility, do you evaluate the quality of, and capacity for, production?
- Do you have a process for managing social compliance at the manufacturing level?
- Do you work with your supply base to resolve issues found during social compliance evaluations and also document specific corrections and improvements?
- Do you invest in community development activities in the markets you source from and/or operate within?



**Retail Sustainability Initiatives**

**Retailers are beginning to evaluate the environmental and social performance of vendors and products**

**COSTCO WHOLESALE** Costco has begun surveying its current and potential dairy vendors to assess animal welfare practices and outcomes

**Kroger** Kroger has prioritized expanding its green living and sustainable offerings to consumers

**SAFEWAY** Safeway has developed initiatives on food safety, nutrition, and sustainability. In addition, its Animal Welfare Council periodically audits vendors

**McDONALD'S CORPORATE RESPONSIBILITY**

**VALUES IN PRACTICE VIDEO**

**ABOUT**  
Values  
Sustainable Supply Chain  
Nutrition & Well-being  
Environmental Responsibility  
Employment Experience  
Community

**NEWS**  
NEWSWEEK MAGAZINE RECOGNIZES McDONALD'S AS ONE OF THE GREENEST BIG COMPANIES IN AMERICA  
[Read More](#)

**VIDEO SNAPSHOTS**

**BLOG**  
LANDFILLS - A "GROWING" PROBLEM  
[Read More](#)

**VIDEO**

**SORT BY CATEGORY:**  
MOST RECENT

**01/14/2010 The Road to Sustainability**

01/13/2010 McDonald's Australia Embraces Education

10/02/2009 Global Animal Welfare Video

10/01/2009 McDonald's U.S. Animal Welfare Video

07/15/2009 McDonald's USA Animal Welfare - Working with the Experts to Continuously Improve

**The Road to Sustainability**

Good things come from Sysco

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Sysco Home : About Sysco : What We Do : Agricultural Sustainability

**Agricultural Sustainability**

Sysco is taking a leading role in support of a new vision for agricultural practices designed to protect the land and environment. This new vision is a result of farming practices that began in post World War II America. At that time, global demand for agricultural commodities placed increased pressure on agricultural practices, thus productivity gains were increased by greater mechanization and utilization of new technologies. Increased chemical use and specialized farming practices that favored maximized production were implemented, creating unintentional and unfortunate consequences.

These concerns include soil erosion, chemical contamination of the aquifer, and higher levels of pesticide residual. Additional social ramifications include the decline in the number of family farms and the economic and social erosion of rural communities.

It is Sysco's goal to ensure that highly differentiated products are successfully produced for our future generations. To that end, our ultimate goal is to foster the success of highly differentiated products that are profitable to all participants and incorporate farmer ownership and control.

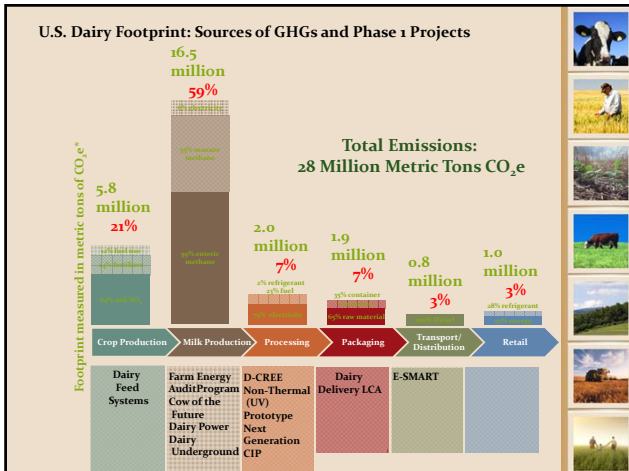
Through a series of initiatives, Sysco is contributing to environmental stewardship and rural social vitality.

**Integrated Pest Control** ...using environmentally-friendly pesticides only as necessary

**Buy Local, Sell Fresh** ...a local food system initiative supplying organic food items

**Ag-In-The-Middle Procurement** ... family-owned farms producing value-added products

**Business Coalition for More Sustainable Food** ...using environmentally-friendly pesticides only as necessary



**THE CLARK GROUP, LLC**

**How do we respond?  
....making new friends,  
changing and thinking  
"different"**

Issues to Watch

Not all environmental groups are created equal . . . Aim for connections with these groups

EDF ENVIRONMENTAL DEFENSE FUND  
Finding the ways that work

WWF

The Nature Conservancy  
Protecting nature. Preserving life.™

CONSERVATION INTERNATIONAL

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## Do we really understand our role?

Redefining Sustainability in the Sector

Scale, Precision & Efficiency Here

Means Less Deforestation There

HIGH-TECH TOOLS FOR SITE-SPECIFIC CROP NUTRIENT MANAGEMENT

THE CLARK GROUP, LLC

## The Advantage of Size

- The ability to aggregate and analyze multiple pieces of data from elevation to soil nutrient value, will require expensive equipment.
- While precision GPS planters and irrigation units and other machinery are currently available, they are not commonly used by small-scale farmers because of the up-front capital cost.
- However, large-scale producers are at the forefront of this technological adoption because it reduces their input costs.

Source: Paul Hollis, Western Farm Press, April 2010: 6.

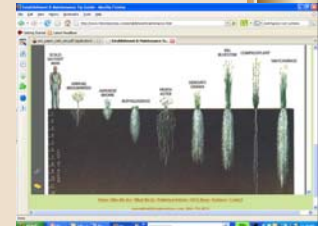
## The Advantage of Size

- Looking at the issue of scale and efficiency, a recent Stanford University study found that *high-yield Agriculture actually slows the pace of global warming* because it results in more yield/acre or unit of land and therefore, *less need to destroy carbon-soaking environments like the rainforest.*

Source: Science Daily, "High-Yield Agriculture Slows Pace of Global Warming, Say Researchers," *ScienceDaily.com*, 6/14, 2010, [www.sciencedaily.com/releases/2010/06/100614160209.htm](http://www.sciencedaily.com/releases/2010/06/100614160209.htm) (accessed 10/6, 2010).



## Soil Fertility



## Precision Irrigation



## Re-thinking GMO

"I daresay the environmental movement has done more harm with its opposition to genetic engineering than with any other thing we've been wrong about. We've starved people, hindered science, hurt the natural environment and denied our own practitioners a crucial tool."

Stewart Brand, *Whole Earth Discipline: An Ecopragmatist Manifesto* (New York, NY: Viking, 2009).



## Assess Environmental Performance

### Best Management Practices (BMP)

- Practices that are suitable for reducing impacts to environmental quality are known as best management practices or BMPs.
- Apply continuous improvement thinking to these emerging business issues—not just financials



## USDA Secretary Vilsack

- “The *sustainable intensification* of agricultural systems can ensure food security, avoid deforestation and desertification, promote environmental stewardship, and meet the emerging demands for fiber and fuel.
- To do this we must fully embrace research and productivity-enhancing measures at all levels and scales.”

USDA Sec Vilsack speaking to the UN Climate Change Conference in Cancun; Dec 9, 2010



## Our challenge

- Understand where our industry is
- Take a hard look at the marketplace
- Understand why others are worried, very worried
- Do what we can to not just “tell our story” (people may not care) but respond responsibly

And last but not least



## We can do better—honesty is the first step on the path toward wisdom

The consequences of today are determined by the actions of the past.

To change your future, alter your decisions today



