

### How Being Green Can Positively Affect Your Company's Bottom Line

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### What's green? It can get confusing . . .

- Sustainability firm PE Americas found an artificial Christmas tree had lower carbon emissions over 10 years than buying real trees
- Environmentalists side with live-tree growers—“A natural product always better”
- Another choice: buy a potted tree and replant it



Source: Time Magazine, December 8, 2008

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### Live Green Initiative at Iowa State



- Goal: “Make ISU a model of sustainability”
- Energy conservation
- On-campus sustainability project loans
- LEED Gold (“green”) construction standards

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### Many definitions of sustainability

Iowa Board of Regents recently asked Iowa's universities to define sustainability. One contribution:

- Ethic of stewardship is embodied in sustainability
- Providing for needs of modern society so that the ability to meet future needs isn't compromised
- Sustainability defined ONLY from an environmental perspective is problematic -- humans interact with and depend on the environment to provide desired market and nonmarket products, goods and services. We think in terms of economic, social, political and environmental sustainability.

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### ISU Food Chain Summit, 2008

- Iowa State University Food Chain Summit held February 2008
- 90 professionals from organizations representing many links in food chain, including farmers, companies, processors, retailers
- Encourage dialogue on issues impacting Iowa livestock production

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### Arnot at ISU Food Chain Summit



Charlie Arnot, president of CMA Consulting and CEO, Center for Food Integrity

- **Values matter.** "Science alone will not prevail. We have to recognize and accept that values influence how neighbors, customers, consumers, media and policymakers perceive our messages, practices and products."
- Continued decline in the trust of traditional authority figures. Today, the most credible source of information is **"a person like me or a peer"**

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### Arnot at ISU Food Chain Summit



Charlie Arnot, president of CMA Consulting and CEO, Center for Food Integrity

- Agriculture fails to conduct **Value Based Communication**
- Discussions rarely begin with **shared values**. For example:

"We share your concern for our environment; we drink the same water and breathe the same air. Let's discuss your concerns and see if we can reach common ground"

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### Marketing and Choice

At ISU Food Chain Summit, heard from leaders of major Midwest grocery store chain:

- "Green" and "sustainable" help sell; it's about their bottom line
- Besides products, taking steps in sustainability, e.g., wind deflectors on trucks to decrease fuel costs; choice of building materials



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### Common Themes, ISU Food Chain Summit

- All facets of industry need to work together to develop value-based messages
- Industry needs to work on uniform verification program that consumers understand
- Use science as a basis to tell the story in a medium understood by today's consumers
- Proactively tell our story on how food arrives on consumers' plates—Put a face on agriculture
- Education/transparency ultimately lead to trust

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IOWA STATE UNIVERSITY  
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**The need for a fourth "R" . . .**



**Reduce, Reuse, Recycle . . . and RESEARCH**

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**Research has raised livestock efficiency...**

"...The phenomenal gains in U.S. agricultural productivity of the past century brought profound benefits to all consumers, regardless of their connection to a farm, in the form of lower prices, better quality and more choices ..."  
— Alan Greenspan

Source: Strategic Directions and Texas Tech University, "Fifty Years of Pharmaceutical Technology and its Impact on Beef We Provide to Consumers," 2004

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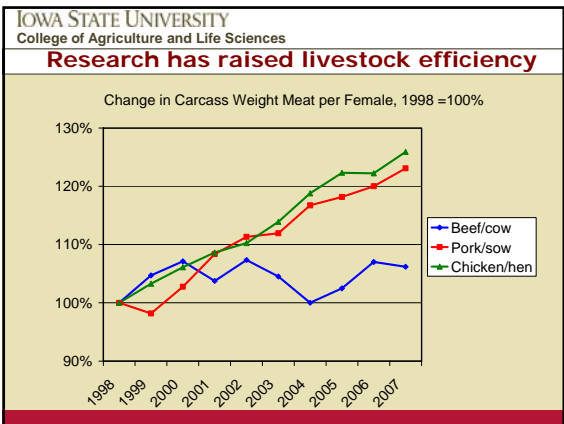
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### Research has raised livestock efficiency

#### Average number of eggs laid per hen in one year's time

1983: 249.6  
1987: 251.6  
1991: 257.8  
1995: 261.8  
1999: 265.3  
2003: 267.5  
2007: 271.2  
2008: 274.2



Source: Don Bell, University of California, Riverside

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### Environmental impact of dairy production

- Bovine somatotropin (rBST) found to ease energy, land and nutritional inputs necessary to meet milk production demand
- 1 million cows supplemented with rBST reduces carbon footprint equivalent to removing 400,000 family cars from the road or planting 300 million trees
- "...Use of rBST markedly improves efficiency of milk production, mitigates environmental impact including greenhouse gas emissions and reduces natural resource requirements such as fossil fuel, water and land use."



Source: "The Environmental Impact of Dairy Production,"  
Proceedings of the National Academy of Sciences, June 30, 2008

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### Impact of technology in modern beef

- Estimated direct cost savings of pharmaceutical technologies is \$360/head from improved animal health, well being and performance
- Benefit accrues to consumers in form of larger supplies at lower prices.
- If technologies are removed from the market
  - Cost of production will rise
  - Producers exit,
  - Feedlot and beef packing sectors downsize
  - Beef imports increase
  - Consumers prices increase— not just those willing to pay a premium for natural and organic production practices



Source: "Economic Analysis of Pharmaceutical Technologies in Modern Beef Production in a Bioeconomy Era," John Lawrence and Marolbarburu, Iowa State University

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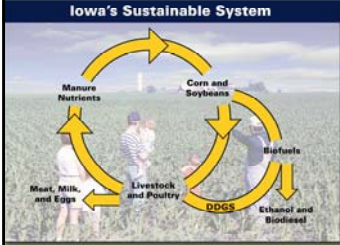
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### "Being Green" that makes sense in Iowa



- Iowa soils and climate make a case for efforts to integrate crops, animal agriculture and emerging bioeconomy
- Millions of acres of corn and soybeans produced to feed livestock and fuel biofuels plants
- As energy prices climb, value of manure recycled as crop nutrients increases for Iowa farmers
- Use of coproducts (DDGS) from biofuels production provides opportunities to feed animals

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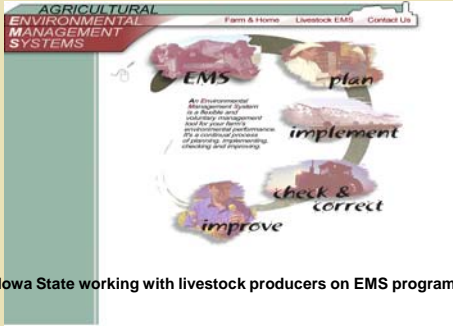
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### Environmental Management Systems



Iowa State working with livestock producers on EMS programs

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### EMS: Voluntary environmental improvement

#### EMS as a business model:

- Manage your business for profits
- Incorporate into your management:
  - environmental regulations
  - stewardship principles
- Many things you're already doing
- Management is key to environmental protection
- *You can't manage what you don't measure*

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**EMS success: It's a mindset**

**Mindset of producers key to EMS success**

- Results include:
  - 95% believe they practice better stewardship
  - 46% saw improved crop yields
  - 45% saw improved soil conservation
  - 50% of beef producers saw improvement in animal performance
- Buy-in from producers and employees on ability to manage operations profitably while making improvements for environmental stewardship
- Helping move producers toward better nutrient management, practices that protect water quality and meet requirements of regulations

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**What's your mindset?**

A mindset of meeting minimum requirements?

Or a mindset that anticipates change?  
Searching for new efficiencies, filling a market niche, finding common ground in consumer values

**Sustained economic gains will be made in the context of constantly evolving environmental, social, political boundaries**

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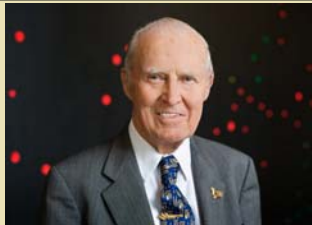
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**Being Green...and next Green Revolution**



**Q:** How do we produce more food in the next 50 years than we have in the last 10,000?

*Norman Borlaug, native Iowan, Nobel Peace Prize laureate, founder of World Food Prize Foundation in Des Moines*

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### Being Green...And Next Green Revolution

**A:** Science and technology. The constant quest for innovation, creativity and smart answers

“Without aggressive agricultural research programs, the world will soon be overwhelmed by the Population Monster.”  
- Norman Borlaug, *The Man Who Fed the World*, 2006



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### Beyond ideology

“We need to get beyond ideology and depend more on science. We need to develop a new understanding of agriculture based on our larger goals if we are to craft a long-term food and farm policy that works. Agriculture has a responsibility to adjust and contribute to improving the environment. But let's stick to science and avoid an ideological debate about agricultural practices.”

— World Food Program board members George McGovern and Marshall Matz, *Chicago Tribune*, January 4, 2009

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### Affordable choices



Craig Lang, President, Iowa Farm Bureau Federation, at December 2008 IFBF Annual Meeting

“This should be our message to consumers — if you feel better buying ‘cage free eggs’ and ‘free range’ steak and you’re willing to pay a little or a lot more, fine. Farmers will provide you the choice...”

“But remember, there are 700,000 hungry children [in the U.S.] whose parents can’t afford bagged salad, locally grown asparagus, cage-free eggs or pasture-born pigs. Don’t take away their choice of more affordable and safe food, the only choice they can afford.”

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**Reverse the decay of farm knowledge**

"We now have to help consumers understand what we do, but even more importantly, who we are and how we share similar values . . . We can share the value of feeding the world and why we care for land and the animals we raise. Tell them what their choices mean. Together, we can reverse the decay of farm knowledge."



Craig Lang

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**A Teachable Moment . . . For Consumers**

- As incomes become tighter, people rethink priorities
- Affordable food should continue to be a goal of a sustainable system using appropriate and emerging technology
- It's not always about "the" right choice; it's about choice, period

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**A Teachable Moment . . . For Students**

"With the attention that colleges are paying to local foods and sustainability, perhaps more institutions should offer basic lessons in agricultural skills... Teaching agriculture can mean teaching about the world. Modern agriculture touches on nearly all the pressing environmental and social issues facing America today..."



Source: Students May Need a Grounding in Agriculture as Much as in the Liberal Arts, Scott Carlson, Chronicle of Higher Education, March 21, 2008

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### A Teachable Moment . . . For You?

**Common Themes, ISU Food Chain Summit:**  
*How can the industry achieve these?*

- All facets of industry need to work together to develop value-based messages
- Industry needs to work on uniform verification program that consumers understand
- Use science as a basis to tell the story in a medium understood by today's consumers
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### Arnot at ISU Food Chain Summit



*Charlie Arnot, president of CMA Consulting and CEO, Center for Food Integrity*

- Give customers, policymakers, community leaders and consumers **"permission to believe"** that contemporary animal agriculture is consistent with their values and expectations
- "To be successful in 21<sup>st</sup> century, animal agriculture must understand and address questions of trust and values where brands and interest in a civil society play an ever-increasing role in commerce."

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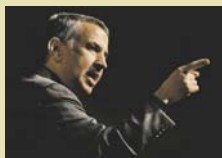
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### The right track



"When the wind changes direction, there are those who build walls, and those who build windmills."  
— Thomas Friedman

"Even if you're on the right track, you'll get run over if you just sit still."  
— Will Rogers



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