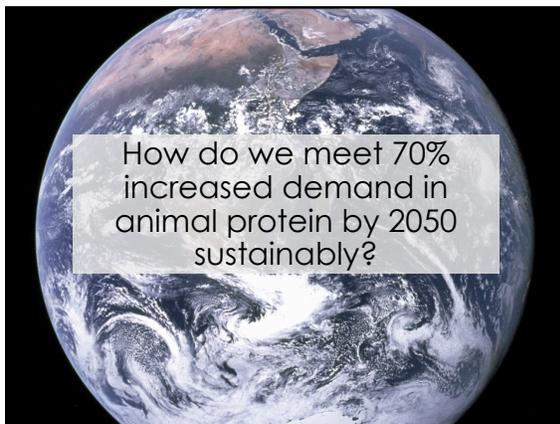


Sustainability: What is it and why does it matter?

Beef Improvement Federation Annual Conference
June 10th, 2015
Biloxi, MS
Sara Place, PhD
Assistant Professor in Sustainable Beef Cattle Systems
Oklahoma State University



Sustainability = environmental impact?

No.
Economics and social issues must also be considered.

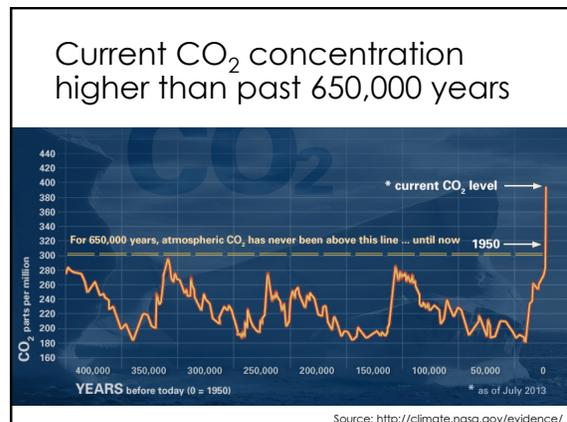
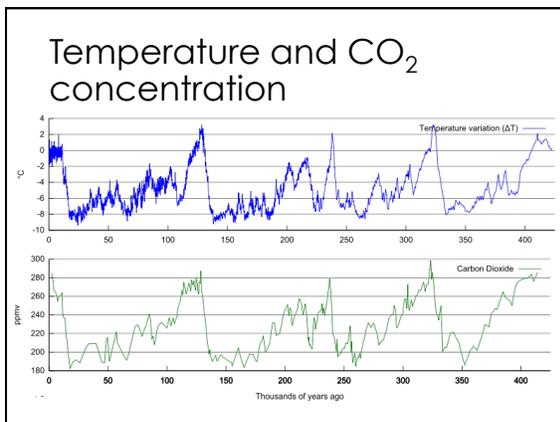
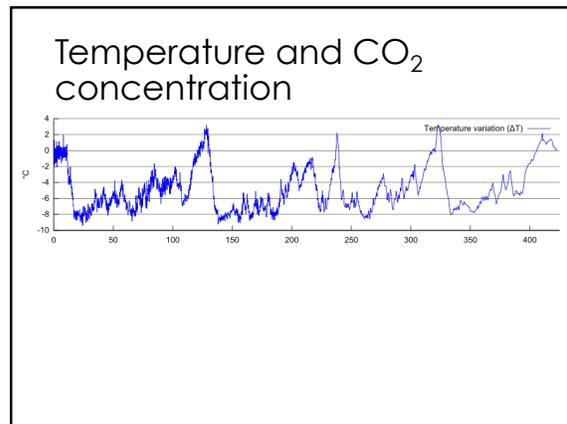
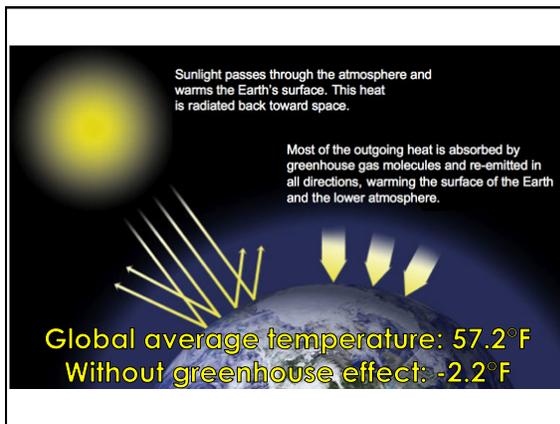
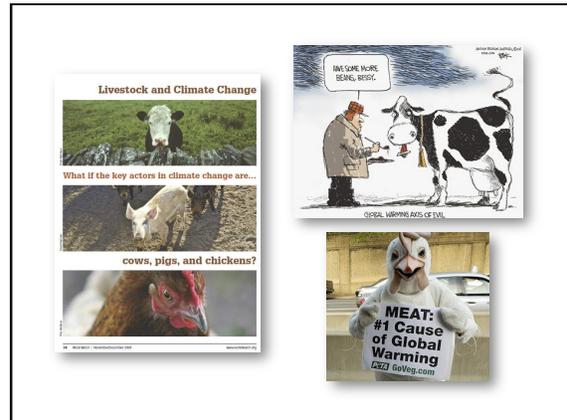
Photo Courtesy of Oklahoma State University

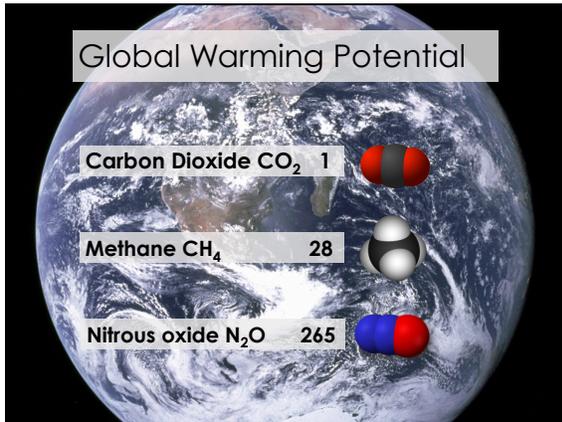
Sustainability... a 'wicked' problem

Such a problem has the essential characteristic that it is not solvable; it can only be managed.

- No clear definition of the problem
- No 'right or wrong' rather 'better or worse'
- Stakeholders have different ways of looking at the problem
- Causes and effects within the system are complex, unknown and/or highly uncertain

Peterson, 2013



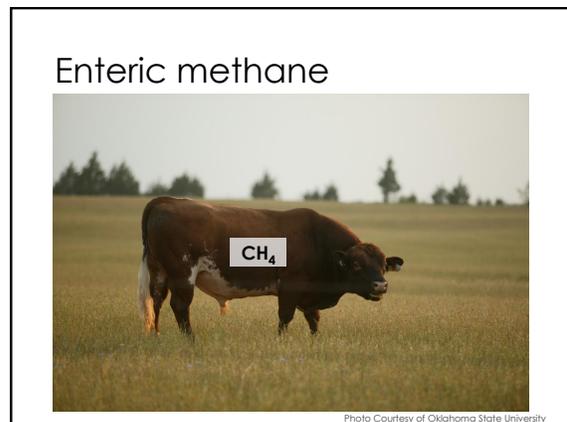
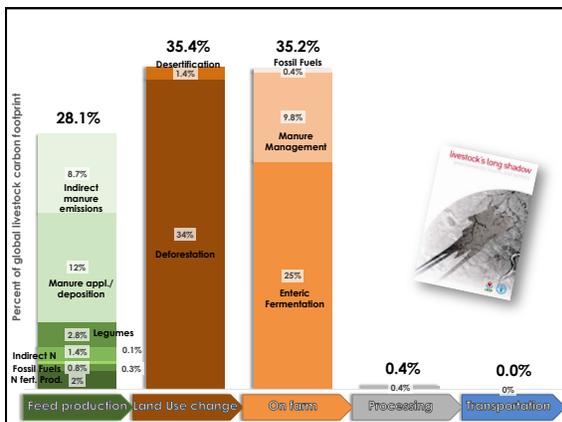


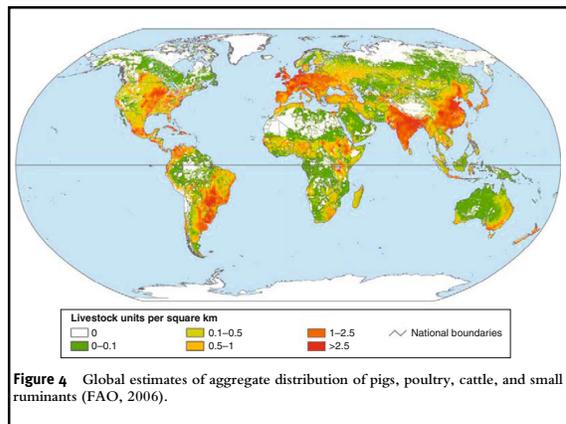
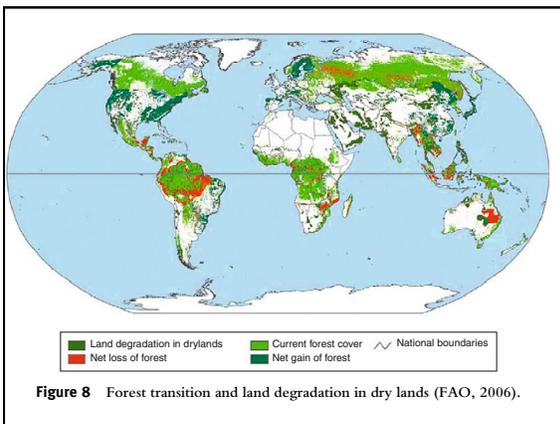
Cowspiracy: The Sustainability Secret is a groundbreaking feature-length environmental documentary following intrepid filmmaker Kip Andersen as he uncovers the most destructive industry facing the planet today – and investigates why the world's leading environmental organizations are too afraid to talk about it.

Livestock's Long Shadow

“The Livestock sector is a major player, responsible for 18% of GHG emissions measured in CO_2e . This is a higher share than transport” (FAO 2006)

- Used Life Cycle Assessment





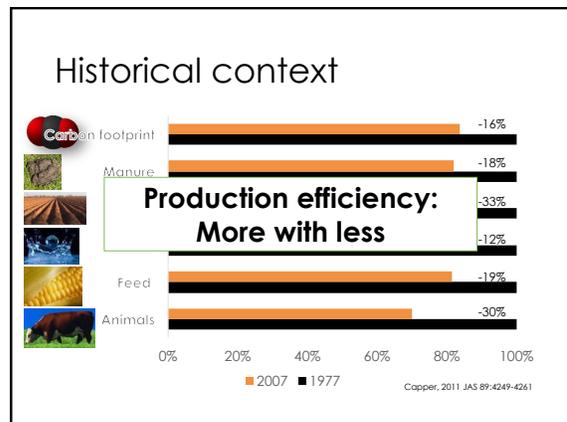
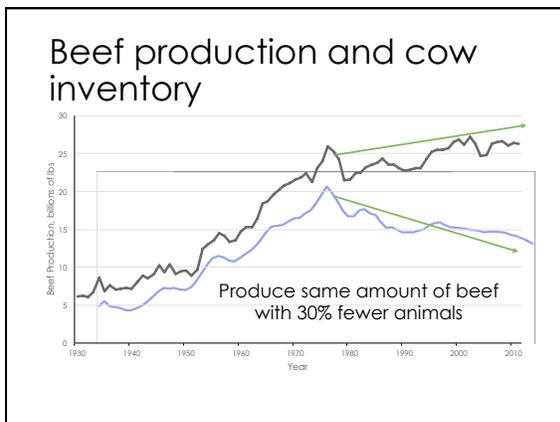
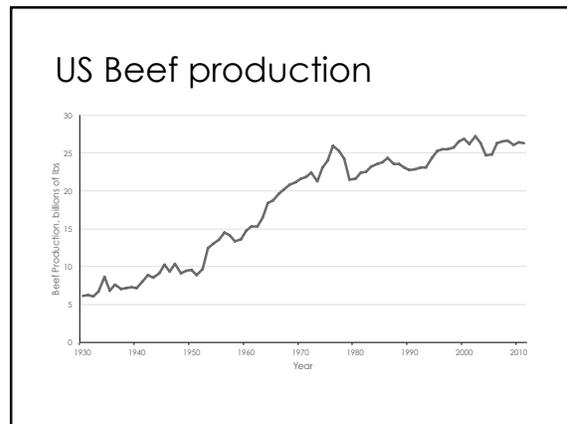
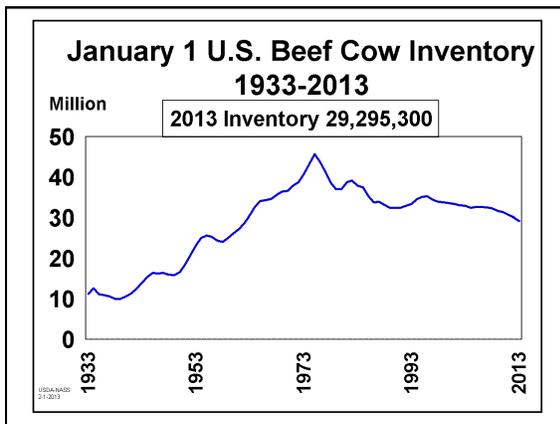
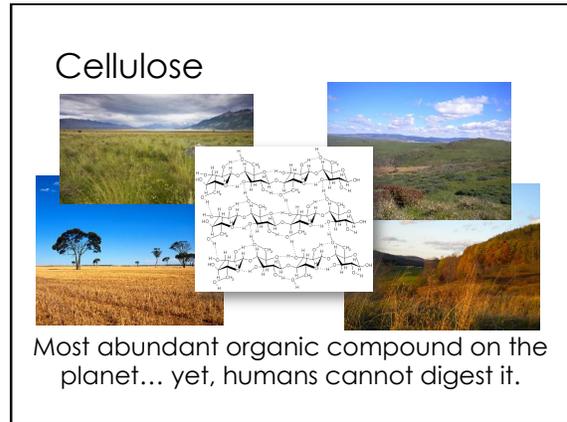
Clearing the air...

CHAPTER ONE
CLEARING THE AIR: LIVESTOCK'S CONTRIBUTION TO CLIMATE CHANGE
Philip L. Place, Katherine R. Stockman, and Claire M. Westcott

- LLS is a global assessment, should not be applied regionally
 - US: 3.6% of GHG emissions
 - Paraguay: ~50%
 - Ethiopia: ~90%
- Transport was not analyzed with LCA method

New UN FAO report

- 14.5% of global anthropogenic GHG
- Regions with more modern, intensive production systems have lower GHG emissions per unit of beef

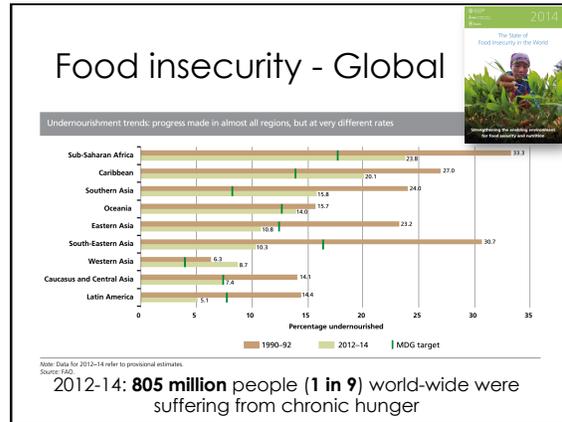


Production efficiency considerations

- Reproductive efficiency
- Animal health
- Genetics
- Nutrition
- Growth promoting technologies



Photo Courtesy of Oklahoma State University



Food security has national security implications...

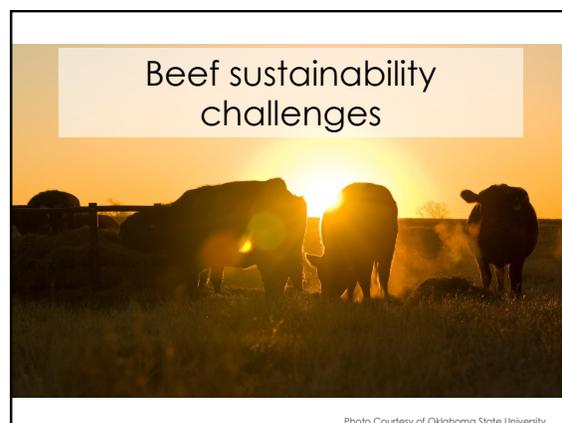
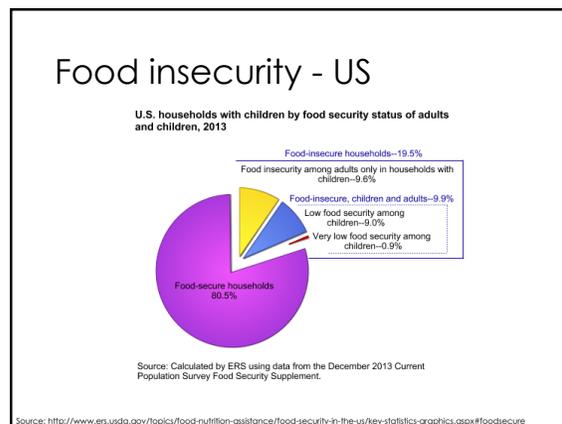
Witnesses report rioting in Tunisian town

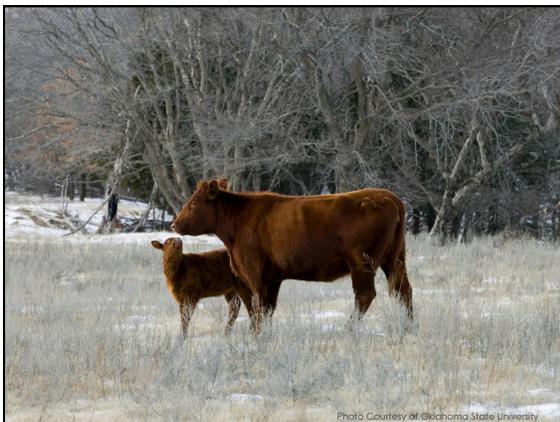
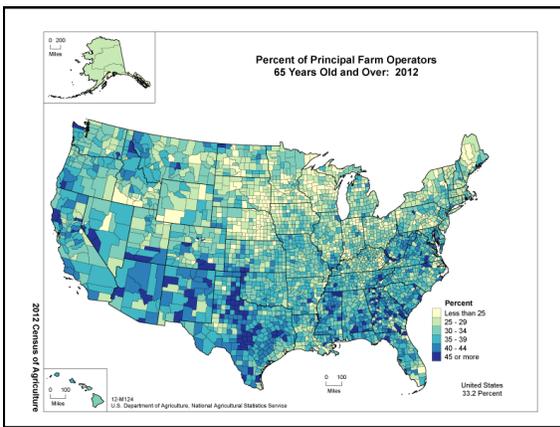
TUNIS | Sun Dec 19, 2010 9:58am EST

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(Reuters) - Police in a provincial city in Tunisia used tear gas late on Saturday to disperse hundreds of youths who smashed shop windows and damaged cars, witnesses told Reuters.

They were angered by an incident where a young man, Mohamed Bouazizi, had set fire to himself in protest after police confiscated the fruit and vegetables he was selling from a street stall, the witnesses said.





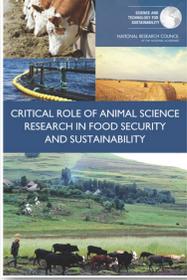
Communication and engagement with the public

The future of beef production in North America
 Michael L. Galeyan, Christian Ponce, and Jennifer Schutz
 Department of Animal and Food Sciences, Texas Tech University, Lubbock 79606-2141

Public concern and regulatory pressure regarding:

- CAFOs
- Animal welfare
- Food safety
- Use of technology
- Environmental impact

Misinformation is a problem, but also we also have differences in **values, interests,** and lack of **trust** – more than just an “educate the public” issue



"For research in sustainable intensification of animal agriculture to meet the challenges of future animal protein needs, it is necessary to effectively close the existing broad communication gap between the public, researchers, and the food industries."

There is a need to revitalize the animal science research infrastructure (physical and human)

Economic



Long-term business viability, stewardship of natural resources, and responsibility to community, family, animals

Is about continuous improvement – all production systems can be "sustainable"

Environment Social

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Sustainable Beef Cattle Systems
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Tel.: 405-744-8858

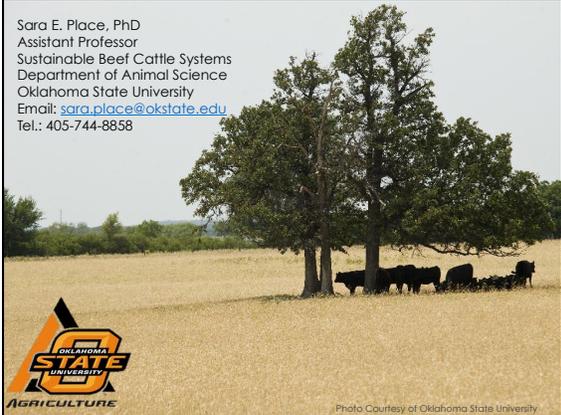


Photo Courtesy of Oklahoma State University