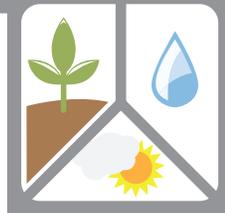


Livestock and Global Warming | fact sheet



Use of Resources

New research published by Dr. Jude Capper in the Journal of Animal Science shows that beef's environmental footprint is shrinking. Each pound of beef raised in 2007 (compared to 1977) used:

- 19 percent less feed;
- 33 percent less land;
- 12 percent less water; and
- 9 percent less fossil fuel energy;

The carbon footprint of beef was reduced by more than 16 percent from 1977 to 2007.¹

Greenhouse Gas Emissions

- According to the Environmental Protection Agency (EPA) livestock production accounts for 3.4% of total greenhouse gas emissions.
- Agriculture as a whole accounts for 6.5% of total greenhouse gas emissions.²
- Methane from livestock production is 2.8% of the total of greenhouse gas emissions.²
- Methane emissions from livestock are 29% of total methane emissions.²

Reducing Inputs: Grass vs. Grain

According to previous research conducted by Capper, it takes 226 more days for grass-finished cattle to reach market weight than grain-finished cattle. More days on grass may mean greater environmental impact.³

- Each pound of grain-finished beef requires:
 - o 45 percent less land;
 - o 76 percent less water; and
 - o 49 percent less feed;And generates:
 - o 51 percent less manure; and
 - o 42 percent fewer carbon emissions.

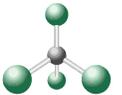
Environmental Sustainability

- With the world population officially hitting 7 billion people earlier this year and projected to reach 9.5 billion by 2050,⁴ farmers and ranchers must continue to find ways to sustainably feed a growing world population using fewer natural resources.
- According to Capper's research, improvements to the way cattle were raised and fed in the U.S. between 1977 and 2007 yielded 13 percent more total beef from 30 percent fewer animals. More beef from fewer animals maximizes resources like land and water while providing essential nutrients for the human diet.
- The United Nations Food and Agriculture Organization (FAO) projects in 50 years, the world population will need 70 percent more food. Seventy percent of this food must come from efficiency-improving technologies.⁵
- U.S. cattlemen raise 20 percent of the world's beef with 7 percent of the world's cattle, making the United States a leader in raising sustainable beef.⁶

Critical Analysis of Livestock's Long shadow

In November 2006, a report from the United Nations (U.N.) Food and Agriculture Organization (FAO) titled Livestock's Long Shadow was released. The report's primary publicized finding was livestock production accounts for 18 percent of global greenhouse gas (GHG) emissions; however this estimate is global and is not applicable to the United States or other developed countries.

At-A-Glance: Critical Analysis of Livestock's Long Shadow (LLS)

	Claim	Reality
	GHG emissions LLS: Livestock = 18% globally	EPA: Total U.S. agriculture = 6% in United States EPA: Livestock = 2.8% in United States WRI: Livestock = 5.1% globally WRI: Livestock = 2.5% in United States
	CO2 from feed grain production LLS: 11.7 million tonnes	Estimate from USDA data: 1.7 million tonnes
	Deforestation LLS: "Livestock induced" emissions from deforestation = 2.4 billion tonnes CO2/year	USDA & USFS: United States = 16 million more acres of forestland than a century ago

- 1 J.L. Capper, *The environmental impact of beef production in the United States: 1977 compared with 2007*. J ANIM SCI 2011, 89:4249-4261. <http://jas.fass.org/content/89/12/4249.full.pdf+html>
- 2 Environmental Protection Agency- 2012 U.S. Greenhouse Gas Inventory Report: Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2010 (April 2012) <http://www.epa.gov/climatechange/emissions/downloads12/US-GHG-Inventory-2012-ES.pdf>
- 3 J.L. Capper, *The environmental impact of conventional, natural and grass-fed beef production systems*. Greenhouse Gases in Animal Agriculture Conference, 2010.
- 4 United Nations Population Fund, www.unfpa.org/public/home/news/pid/8769
- 5 Food and Agriculture Organization of the United Nations. (2009). *How to Feed the World in 2050*. FAO, Rome, Italy.
- 6 USDA National Agricultural Statistics Service, 2011.