

Economics and sustainability can go hand-in-hand

by Rebecca Mettler for *American Red Angus Magazine*

Can profitable production practices and sustainability coexist? According to Jude Capper, Ph.D., animal scientist and livestock sustainability expert affiliated with Montana State University, the two can coexist and more.

“With economic benefits we are almost always going to see environmental benefits,” Capper said.

Contrary to popular opinion, bigger, more-efficient operations are not more hazardous to the environment, said Capper. With advancements in efficiency comes not only a better economic situation but also can lead to environmental betterment.

Capper conducted a study comparing the environmental impact of the U.S. beef industry from 1977 to 2007. Results showed that increases in efficiency led to a 16 percent reduction in the carbon footprint to produce one pound of beef.

In this instance, measuring the carbon footprint takes consider everything it takes to make a pound of beef until the animal gets to the packing plant door, according to Capper.

A 33 percent reduction in land use was recorded along with a reduction

in water use of 12 percent, and feed resources reduced by 19 percent, said Capper.

Why the Conversation?

Livestock’s Long Shadow, a 2006 report by the United Nations, caused alarm for the agricultural community. The report claimed that the livestock industry was emitting more greenhouse gasses than the world’s transportation system.

The report gained a large amount of media attention and *Time* magazine went as far as providing this analogy in an article: “Given the amount of energy consumed raising, shipping and selling livestock, a 16-oz. T-bone is like a Hummer on a plate.”

Kim Stackhouse-Lawson, Ph.D., director of sustainability research with the National Cattlemen’s Beef Association (NCBA), references this as the event that spurred interest towards sustainability in the beef industry.



Jude Capper, Ph.D.



Kim Stackhouse-Lawson, Ph.D.



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“There was a lot of talk in the consumer space about the perceived environmental impact, greenhouse gasses and climate change,” Stackhouse-Lawson said. “That’s what started the latest sustainability movement.”

In response, the U.S. Beef Sustainability Project - funded by the Beef Checkoff - began in 2011. It was the largest and most holistic sustainability research conducted according to Stackhouse-Lawson. Data from the 1970s to 2011 was collected.

Beef industry sustainability was tracked from birth to consumption of the animal. From 2005 to 2011, there was a 5 percent increase of overall environmental sustainability and a 7 percent increase in social sustainability.

“That’s really a tremendous improvement,” Stackhouse-Lawson said.

A variety of things contributed to the improvement, some of which include improvements in crop yield, increases in animal performance and machinery efficiencies.

The Duties of Cattlemen

Stackhouse-Lawson says we have to continue to produce food for the world, leave the land better than the way we found it, and have a viable business to pass down to our kids, all while being community focused.

“One thing I feel strongly about – sustainability is not a one-size-fits-all approach,” Stackhouse-Lawson said. “One thing may make a ranch more sustainable in Florida but less sustainable in Montana.”

Many sustainability efforts depend on the operation, the cattle market and other situations, aside from a

cow having a calf every year, said Capper.

“If we can do that, we will have fewer cull cows, and less of a need for replacement heifers that can be diverted to the feedlot instead,” she added.

At 70 percent of carbon emissions, the cow-calf sector is the largest producer within the beef industry. Capper said that shouldn’t be a surprise or a reason to point fingers. A majority of carbon emissions are produced at the cow-calf level simply because there are so many animals in that group.

From a time standpoint, a cow-calf operation has to care for the cow 12 months and the calf for seven months, not to mention herd bull care and replacement heifer development. In comparison, a steer is only in the feedlot for four to five months.

Individual producers can, and do, make a difference in beef sustainability.

“From an environmental view he can do everything in the most efficient way possible, have the most productive operation that he can,” Capper said.

Advances in animal performance such as improved genetics make producers more sustainable. Improved calving rates, higher weaning weights, feed efficiency and lower maintenance cows are just a few examples.

Sustainability Improvements Go Beyond the Farm

Cattlemen and women must also concentrate on the social aspects of sustainability.

“From a social point of view they

Defining Sustainability in the Beef Industry

Definition #1: The balance between economic viability, environmental responsibility and social acceptability according to Jude Capper, Ph.D., animal scientist and livestock sustainability expert affiliated with Montana State University.

Definition #2: Meeting the growing global demands for beef by balancing environmental responsibility, economic opportunity and social diligence throughout the value chain according to Kim Stackhouse-Lawson, Ph.D., Director of Sustainability Research with NCBA.

need to help educate the consumer,” Capper said.

Social media is an effective tool for educating consumers about beef and how cattle are raised and cared for. Facebook, Twitter and LinkedIn are examples of social platforms in which farmers and ranchers can broadcast the message of, “Why we do what we do,” said Capper.

“People have always asked where their food comes from, but now more than ever,” she said.

Unfortunately a lot of the times consumers get their food related questions answered by anti-agriculture or animal rights activist groups, or even people vested in niche beef markets that give conventional beef a tainted reputation of being bad.

Capper said producers must rectify that on the social side and share what ranchers do and why they do it, to insure that there is a market for beef in the future. ■