

Telling the Beef Story

Gary Smith addresses meeting the challenge of feeding the world.

by **KASEY MILLER**,
associate editor

“By tomorrow, there will be 200,000 more people on planet Earth. Farmers and ranchers are going to be asked to produce more food in the next 50 years than was produced in the last 10,000 years combined,” said Gary Smith, emeritus distinguished professor at Colorado State University (CSU). “In 2002, the United Nations’ Food and Agricultural Organization said, ‘By the year 2050, the world’s population will reach 10 billion people,’ so we know the world’s food production will need to increase by 100% in the next 50 years They said 70% of this will have to occur by use of technology, because we simply do not have enough arable land or farmable ground to make up for the deficit.”

At the 2013 International Livestock Congress—USA in Denver, Colo., Jan. 15, Smith voiced his optimism that farmers and ranchers could meet such a challenge, explaining that agriculturalists have already increased food production by 145% in the last 50 years. The biggest problem, he cautioned, is whether the industry allows a vocal minority (those opposed to technological advances) to establish our national food policy.

Use of and need for technology

To feed more people, there are three options, Smith said. The first is to increase the amount of arable land. The second is to increase grazing, but not arable, land. The third, and most realistic, is to increase efficiency of production on arable and grazing lands.

The rise of larger farms, feedlots, packing plants and supermarkets, he explained, started in the 1970s. Big was usually associated with success and is sometimes seen in a negative light, but farms often grew to sustain more family members.

The size of the operation does not necessarily determine whether it is family-owned or -operated, Smith said. Of the 2.2 million U.S. farms, 98% are family-owned.

Concentration, accompanied by transformation, has included new production technologies, specialization and tighter vertical coordination, he noted. Economies of scale equal efficiency and profitability. Sustainability is achieved by increasing productivity using far less labor, land and natural resources per unit of output. Producers benefit by increasing profitability through efficiency, and consumers benefit by smaller increases in food prices.

Smith cited an example in the beef industry. A 2009 Iowa State University study reported by John Lawrence indicated that in the cow-calf sector, eliminating the use of growth-promoting

implants, dewormers and fly control would increase the breakeven price by 47%, a value of \$274 per calf.

In the stocking sector, removal of growth-promoting implants, ionophores, antimicrobial therapy, dewormers and fly control would increase the breakeven price by 13%, a value of \$95 per calf.

Lastly, in the feedlot sector, removal of growth-promoting implants, ionophores, antimicrobial therapy, beta-agonists and dewormers would increase the breakeven price by 13%, a value of \$155 per calf.

There are challenges worldwide, though. The United States must counter additional population growth and

changing international markets with high-yield agriculture technology, said Smith. China’s growth in the coming years could enact a “nightmare scenario” for U.S. consumers in which meat and grain prices are pushed higher and thus end the “cheap food era.”

“China’s appetite for corn, wheat and other farm commodities is poised to expand significantly over the next decade as its people move up the food chain, adding more meat and dairy products to their diets,” he explained.

Consequently, the demand for beef will rise, and to produce the same amount of U.S. beef annually without using these Food and Drug Administration (FDA)-approved technologies, U.S. farmers and ranchers would need:

- 10 million more beef cattle,
- 81 million more tons of feed,
- 17 million more acres of land, and
- 138 billion more gallons of water.

To make up the deficit, if the United States could not, Brazil would have to destroy 16.9 million acres of forestland and would generate the release of 3.1 billion more metric tons of greenhouse gases, according to research done by Jude Capper, Washington State University, and Dermot Hayes, Iowa State University, published in the October 2012 *Journal of Animal Science* (*J. Anim. Sci.* 2012.90:3527-3537).

The year 2050 is 38 years from now, Smith noted, and 38 years ago we did not have many of the technologies used today in our personal lives and for food production and processing. Smith said he is optimistic that by 2050 technologies will have been developed to increase the capacity to capture and use water, as well as to enhance agronomic, animal-breeding, animal-nutrition and animal-health technologies.

There will be more changes in the field of animal nutrition in the next 10 years than there have been in the last century, he

predicted. He mentioned technologies like nutrigenomics and epigenetics, or how certain feed ingredients, by switching genes on or off and thereby influencing genetic expression in animals, can improve production efficiency.

“Gloom-sayers always use today’s technology extrapolated into the future and ignore the creativity of mankind,” Smith asserted.

Explaining to consumers

The use of technologies may make sense to cattle producers, but do consumers understand?

“It is not enough for farmers/ranchers to produce safe, wholesome food. It’s also necessary to show that farmers and ranchers are accomplishing larger societal goals such as nutrition education, hunger relief, economic stimulus and

conservation of existing resources,” he quoted Thomas QuaiFFE from the August 2012 edition of *Dairy Herd Management*.

There are plenty of challenges to this, as the agriculture community is becoming less relevant in political life, he cited from Agriculture Secretary Tom Vilsack, as evidenced by the lack of a five-year farm bill. To counteract this, the agriculture industry must be proactive instead of reactive.

The vocal minority is a large issue, but they make a bigger splash than there are actual consumers who agree with them. Only 4% are lifestyle buyers who oppose conventional production methods, and 1% are fringe buyers. Of polled consumers, 94% either support the use of technology or are neutral about it as long as food is safe.

Smith said he’s not as concerned about the vocal minority as much as when things go viral, like the lean, finely textured beef/“pink slime” debacle.

“Once a problem goes viral, everyone is responsible for creating a solution,” he charged.

The question is: How?

There are many ways to reach out to consumers, especially with methods of social media. “Eighty-three percent of U.S. citizens with access to the Internet visit social media sites,” he said. While social media is important domestically, it is even more important for the Asian markets.

Smith mentioned other means of communicating the beef story, like the U.S. Farmers and Ranchers Alliance (USFRA) or the National Cattlemen’s Beef Association (NCBA) Masters of Beef Advocacy (MBA) program. There are also resources like the NCBA *Beef* — *The Real*

Story is Your Story brochure or industry websites with myth vs. fact sections, like that found on the Animal Agricultural Alliance website, in which producers can chime in with their industry experience.

There is plenty of science to defend production practices, like that offered by Frank Mitloehner of the University of California—Davis and Capper, for instance, as well as through the Center for Food Integrity, the Federation of Animal Sciences, and many more. The most important factor is how those facts are communicated.

“Do, in fact, try to be transparent on the use of technologies, because we are seeking trust,” Smith reminded. It is far easier to stay out of trouble than to get out of trouble, he added. The industry must be transparent enough to stay out of trouble. That way, if a problem does arise, consumers already trust that the industry is working to correct a problem. Additionally, the problem won’t get blown out of proportion in the first place. Such was the case with the cow that was confirmed as positive for bovine spongiform encephalopathy (BSE) earlier this year.

Trust is what the beef industry craves from its consumers, and the way to gain that trust is to use confidence (show that producers have similar values to that of consumers), competence (scientific data) and influential others (like the American Medical Association agreement on not labeling GMO foods), he explained. These three things lead to trust, which then becomes social license and freedom to operate.

Of these three, he noted, confidence, or values, is three to five times more resonant with consumers than competence, or science.

He gave the example of stores like Sprouts, Trader Joe’s and Whole Foods, at which shoppers believe they don’t have to spend as much time poring over labels because they trust that those companies share their values and do the right thing.

It is now the beef industry’s challenge to get consumers to align their trust with us. Just as the industry can meet the challenge of producing more food, Smith believes that trust is possible, too.

Editor’s Note: For full coverage of the 2013 International Livestock Congress—USA, check out the March *Angus Journal* starting on page 277; or visit <http://www.api-virtualibrary.com>, then click Meeting Sites>Other Industry Meetings>News Coverage>2013 International Livestock Congress.