

Staying Informed

Industry representatives led discussion to “Talk Innovation” during the 2019 educational forum.



The educational component of the American Hereford Association (AHA) Annual Membership Meeting and Conference is a must-attend for experienced and new members alike. Brought to attendees in part by the National Cattlemen’s Beef Association and the National Corn Growers Association, this year’s lineup featured four sessions covering the sustainability of the beef industry, beef cattle genomics, value-added marketing and growing an operation’s marketing strategy. See below for a summary of each presentation.

Innovation Through Sustainability

Beef’s environmental footprint has been the target of much misguided scrutiny in recent years, and anti-animal activist groups have responded accordingly. Luckily, science is on beef’s side, and when paired with a positive message, these facts can help quell negative opinions — especially at upcoming holiday dinner parties. As Sara Place, Ph.D., with the National Cattlemen’s Beef Association explains, sustainability pertaining to beef encompasses environmental stewardship, economic viability and social responsibility. The conversations can become complicated when producers are trying to balance these issues, but Place shares several counterclaims to use when debating myths about beef.

Myth: Cattle harm the environment

Reality: Beef’s carbon footprint certainly receives the bulk of attention, namely due to alarming statistics about beef’s impact on the environment.

Many industry-wide statistics are reported out of context, and global figures are often mistakenly used to describe U.S. beef production.

According to the Environmental Protection Agency, beef cattle in the U.S. contribute a mere 2% to total U.S. emission levels — which equates to less than 0.5% of all global greenhouse emissions. Globally, beef production accounts for 6% of all greenhouse gas emissions.

In reality beef has an amazing efficiency story. From 1910 to 2015, the U.S. population soared from 90 million to 321 million, with the average life span increasing from 52 to 79 years. Meanwhile, the ratio of the number of cattle per person decreased by 58%, and the U.S. beef industry’s footprint declined by 33% — all while producing the same pounds of beef per person. Because of progress in genetics, animal husbandry and management, the U.S. supplies much of the world’s beef (20%) while using the least amount of resources.

Methane from cattle supposedly comes from “cow farts,” which are *not a real thing*. The microbes which ferment carbohydrates in the rumen naturally release methane during digestion but do so through the mouth. When fed high-concentrate diets like corn, cattle release less methane. With declining cattle numbers and the majority of beef cattle being grain-finished in the U.S., the claim that cattle are driving higher methane levels does not add up.

Furthermore, cow burps do not release excess carbon into the atmosphere. Recalling lessons from chemistry class, the law of conservation

of energy is at play here. The chemical structure of methane is one carbon and four hydrogen atoms. When methane is released into the atmosphere from ruminant animals, one carbon atom is emitted into the air as methane. But, let us start from the beginning of the food chain process. Plants generate energy from photosynthesis, a process which pulls sunlight and carbon dioxide from the atmosphere. Carbon dioxide contains one carbon atom, so carbon released into the atmosphere as methane is simply replacing the carbon absorbed by plants for photosynthesis. Methane eventually converts back into carbon dioxide and the process repeats itself.

Myth: Cattle waste resources

Reality: For the most part, humans do not compete with beef for food resources. Of the feed resources needed to produce the 27 billion pounds of beef each year in the U.S., 82% come from forage.

If one thinks about it, beef can be considered solar-energy products, or upcyclers. Cattle consume forages made from rainwater, sunlight and carbon dioxide and convert those into a feed source with twice the protein content. They take a product of no value to humans and turn it into a wholesome nutrient source. Chicken and pork also provide high-quality protein but require a high-quality protein diet since they do not have a ruminant digestive tract.

Cattle are also scrutinized for grazing land that could otherwise be used to grow human-edible crops. In the U.S. one third of the land area is

uncultivable. Cattle are the only way to harness solar energy from those forages, and if left ungrazed, those areas would be at a higher risk for wildfires.

Harvesting higher levels of human-edible crops can also prove problematic because for every 100 pounds of human food that comes from crops, an average of 37 pounds of byproducts are generated globally. Alternative proteins, like Beyond Meat and the Impossible burgers, contain plant-based protein sources that generate byproducts. Most of those byproducts go to livestock feeds that would otherwise be wasted completely, so livestock actually make up a big chunk of the supply chain for plant-based proteins.

Myth: Red meat is unhealthy — and Americans eat too much of it

Reality: Although red meat is making a comeback in the medical field, beef's stigma in regard to human health still exists. In the U.S. conditions like heart disease, Type II diabetes and obesity are on the rise, yet red meat consumption has flatlined. United States Department of Agriculture data report Americans eat the same amount of beef per capita now as they did 100 years ago. Logically, that data makes it hard to link red meat to an increase in harmful diseases.

Despite the negative attention of beef consumption, beef and other animal-sourced foods are critical to nutritional development. Humans require the dietary essential amino acids which make up animal proteins. While plant-based proteins do contain

amino acids, none provide all dietary essential amino acids in one sitting. Therefore, plant-based proteins need to be paired strategically to deliver the minimal amino acid requirements.

Globally, one in four children suffers from mental and physical stunted growth. Without animal proteins, the U.S. would not be able to produce enough plant-based foods to fulfill the dietary micronutrient requirements of the growing population. People would be overfed on a caloric basis but malnourished on a vitamin and mineral basis — and would be particularly deficient in Vitamin B12.

The takeaway: Will going meatless save the planet? Quite the opposite!

“The bottom line is there is no way to eat our way out of climate change,” Place says. “Even though a lot of this [issue] is framed either or — either livestock or plant agriculture — of course we need both.”

She emphasizes our agricultural system needs plants and animals working together to benefit the environment, the economy and society.

“We hear a lot about plant-based meat, and I think cattle producers need to realize [they] already utilize an amazing technology to make meat from plants,” Place says. “It’s a technology that’s mobile, without burning fossil fuels, and it converts solar energy that’s inedible to people into a high-quality protein source. While it’s doing that it produces an organic fertilizer that feeds the

soil, and the chief criteria there, too, is it self-replicates. One of those conversation starters you can use is that we already have plant-based meat — it’s called beef.”

Innovation Through Genomics

The AHA has always been ahead of the curve on data collection and was an early adopter of publishing genomic-enhanced expected progeny differences (GE-EPDs). Leoma Wells, strategic account manager with GeneSeek, encourages seedstock and commercial producers to utilize genomics in their selection decisions for several reasons. She shares that genomics are useful for parentage verification, diagnosis, selection decisions, herd management and marketing. Paired with phenotypic data, genotyping identifies which animals inherited which variabilities and increases the accuracy of EPDs.

“With genomics, we are able to shorten that generation turnaround and we are able to give you more information at a younger age through the utilization of the tools that are available,” Wells says. “Genomics fill in the missing piece and add what you can’t see.”

To collect DNA for genotyping, Wells recommends using a tissue sampling unit (TSU), but blood and hair samples also suffice. Then, submit samples with the correct AHA-issued paperwork to the GeneSeek lab. After three to four weeks, the DNA results are reported back to the AHA and are run through the genetic evaluation, which generates GE-EPDs.

The take-home with genomics is to genotype animals early. Submitting DNA on a one- to two-week-old animal is best because data on that animal will be available prior to weaning and will be most effective in selection decisions.

“You have to look at genomics as being an investment instead of a cost,” Wells emphasizes. “You are investing in the future of your operation as well as the customers that you are serving.”

Innovation Through Added Value

Brian Bertelsen, vice president of field operations for US Premium Beef (USPB) shared an overview of how the



producer-owned beef company operates and dove into “what has value” in grid marketing. This session described how genetic selection and data can be used to improve quality.

About USPB

USPB is a marketing company that provides U.S. beef producers an opportunity to retain ownership from ranch to rail of the cattle they produce. The producer-owned beef company provides a value-added platform for its unitholders and associates to market finished cattle through National Beef Packing Co. With USPB as a part owner of National Beef Packing Co., one of the nation’s largest beef processors, a direct economic incentive is provided for individuals to produce the highest quality beef possible.

“Those [cattle] that come through our company are all priced on a value-based grid,” Bertelsen says. “My job is to help [producers] understand the data they get back, how the grid works, what has value and the things they can do through management, nutrition and genetics so they can maximize the quality and value, which of course effects their bottom line.”

What has value

The benefit of marketing on a grid is the value that can be added for high-quality cattle, Bertelsen says. The key premium drivers are quality grade, dressing percent, yield grade and out-weight. It is important to be aware of how those drivers can negatively change when feeding cattle too long or marketing too early.

Bertelsen says producers should be mindful of data associated with their cattle in order to recognize strengths and weaknesses and that herd information starts with genetics. Genetic improvement comes from better prediction values, meaning better EPDs. Better EPDs come from more data.

The correlation between genetic improvement and increased carcass performance has been proven, Bertelsen adds.



“People have shared with me carcass data related to EPDs of the sire show the EPDs work and match the carcass data,” Bertelsen says. “They match the grid and premium results. That’s what our commercial producers are doing who understand how to use EPDs and DNA testing.”

Taking advantage of marketing programs, such as USPB, is a great way for producers to gain real-world data and feeding experience to improve genetic quality in their herds. By beginning with the end in mind, producers can be rewarded for superior quality cattle to add value to the bottom line.

Innovation Through Marketing

Mark Core, chief marketing officer at Vermeer Corporation, wrapped up the final session with a recap from “The Brand” Marketing Summit, which assisted breeders with developing an effective marketing strategy. Core described how to leverage an operation’s values to form marketing goals and was joined by Becky Allan, Bar A Cattle Co., and Sheila Jensen, Jensen Bros., to share the advantages of utilizing social media and video.

“If this breed does a better job of telling the same story about what’s right about Herefords, and we have more breeders [telling] their story in an aggressive but yet humble manner, we will continue to be on fire in terms of growth and consumer acceptance,” Core says. “I believe we were able to accomplish that with The Brand.”

Before breeders embark on any marketing task, they need to first identify their operation’s “True North,” a directional compass to guide decision making. This process includes outlining goals, strengths and weaknesses. Core recommends answering this fundamental question: “What is it that we can do as a Hereford breeder or ranch that is better than what anyone else can do?”

Core says regardless of size and location, producers need to focus on a target audience who synchronize with the values their ranch or brand provides. Then producers must be effective and expressive with reaching their target audience.

“Get in your mind that you have to express yourself every week,” Core says. “It doesn’t have to be just social media. It could be going to a sale barn and being able to sit down with an auctioneer or sale barn manager and discussing the attributes you are doing as a breeder or the Hereford brand.”

Core encourages small business owners to watch what others do. From his perspective, the best brands are unique, and customers will pay for a premium brand they connect with emotionally.

“There are two traits of agriculturalist — we love the physical work and we are humble people in general that feed this world, but we don’t market,” Core says. “We simply have to make a balance. We owe it to our customers, ourselves [and] to our families.” **HW**