



Beef Improvement Federation Convention Highlights

The Beef Improvement Federation hosted its 50th annual meeting and symposium in Loveland, Colo., June 20-23.

by *Troy Smith*

It began in 1966 as an idea formed in the fertile minds of individuals who recognized the need for an organization to guide beef cattle performance recording and genetic improvement — men like University of Nebraska animal scientist Frank Baker and Colorado Hereford breeder Ferry Carpenter. In 1968 the Beef Improvement Federation (BIF) met formally for the first time in Carpenter's home state of Colorado.

BIF became the entity that brought diverse cattle industry groups together, providing an

open forum for debate among land grant university scientists, breed association representatives, reproductive technology company personnel, and both seedstock and commercial cattle breeders. During the subsequent years, annual BIF meetings have been held across the U.S. and once in Canada. Longtime BIF participant and Cornell University Professor Emeritus John Pollack claims — regardless of location — BIF is “the meeting of the year for those interested in beef cattle selection and genetics, and the application of technologies to those processes.”

BIF returned to Colorado, June 20-23, to celebrate its 50th anniversary. “Elevating the Industry” was the theme of the 2018 BIF Research Symposium and Convention hosted in Loveland, by the Colorado State University (Colorado State) Department of Animal Sciences, the Colorado Cattlemen's Association and the Colorado Livestock Association.

Discussed were efforts to advance production efficiency and how genetic selection may be applied to improve feed efficiency in the feedlot and on pasture, to enhance reproductive

efficiency, and to utilize grazing resources more efficiently. Other topics addressed included an emerging cattle health concern and the resilient ruminant's role in sustainable agriculture. Sage advice was offered to young or new cattle producers, and a market analyst advised cow-calf producers to better manage risk through savvy marketing.

Production efficiency

Among the convention highlights was a presentation by Michael Genho, director of feedyard business for Elanco Animal Health, who suggests the cattle

Hereford success at BIF

The Beef Improvement Federation (BIF) presented Craig Huffhines, Amarillo, Texas, the 2018 BIF Pioneer Award and Van Newkirk Herefords, Oshkosh, Neb., the BIF Seedstock Producer of the Year Award and elected new board members during the group's annual meeting and symposium in Loveland, Colo.

Van Newkirk Herefords named BIF Seedstock Producer of the Year

The Beef Improvement Federation (BIF) Seedstock Producer of the Year Award is presented annually to a producer to recognize that producer's dedication to improving the beef industry at the seedstock level.

Van Newkirk Herefords is a family-owned ranching operation dating back to 1892, when Lorenzo Van Newkirk started mating Hereford bulls to his Longhorn cows. In 1942 A.J. (Bud) Van Newkirk started the operation's registered Hereford herd.

Today, the ranch is managed by the third and fourth generations: Joe and his wife, Cyndi; son Kolby and his wife, Meg, and their sons, Barrett and Sloan; son Nick; and daughter Sara; and longtime hired man Travis Kezar.

The ranch's herd has grown from the original five registered cows to 600 registered cows. Center pivots and efficient use of surface irrigation have made it possible to produce 90% of the winter feed supply. Summer grazing is on native Sandhills pasture.

The Van Newkirk family is committed to gathering accurate, timely performance data.



Van Newkirk Herefords, Oshkosh, Neb., was named the 2018 Beef Improvement Federation Seedstock Producer of the Year during an awards ceremony June 22 in Loveland, Colo. Pictured (l to r) are: Sara, Kolby, Joe and Cyndi Van Newkirk.

For more than 45 years, performance testing has been a high priority and continues to evolve with technology. Starting in 1969, calves have been individually weighed, and in the 1980s the family began collecting data utilizing ultrasound technology, as well as gathering feedlot and carcass data on cull heifers and steers they fed out. Genetic testing was implemented in the 1990s. The Van Newkirk family is passionate about improving Hereford genetics and strives to strengthen the beef industry by offering superior genetics, utilizing sustainable management practices and being good environmental stewards.

Huffhines presented BIF Pioneer Award

The Beef Improvement Federation (BIF) Pioneer Award recognizes individuals who have made lasting contributions to the improvement of beef cattle, honoring those who have had a major role in the acceptance of performance reporting and documentation as the primary means to make genetic change in beef cattle.

Huffhines served as executive vice president of the American Hereford Association (AHA) from 1997 to 2015. When he initially joined the AHA staff in 1992, he was

the director of feedlot and carcass programs for AHA's Certified Hereford Beef (CHB) LLC program. He was named CHB director in 1995, launching a fully aligned, breed-specific, branded-beef program into the retail and foodservice sectors.

“Craig has never been afraid of a challenge and has been a real advocate for breed improvement and technology within the beef industry,” Jack Ward, AHA executive vice president and BIF board member, says.

Under Huffhines' leadership, AHA implemented the Whole Herd Total Performance Records (TPR™) program, developed the National Reference Sire program, moved toward a full multi-trait genetic evaluation, developed a Pan-American genetic evaluation and led the movement toward incorporating genomics into the AHA genetic evaluation.

“In addition to breed improvement tools, Craig's vision was to make the AHA efficient through technology and utilizing all tools to keep the AHA fiscally strong,” Ward adds.



BIF Pioneer Award recipient **Craig Huffhines**, Amarillo, Texas, is presented his award by Donnell Brown, 2017-18 BIF president, Throckmorton, Texas.

feeding industry is not as efficient as is thought. Speaking during the opening BIF session, Genho says economic efficiency is based on optimal production. He criticizes the feed conversion ratio — the most common feedyard measurement of efficiency — for not giving consideration to production costs or the value of what is produced. Both, he points out, are very important to economic efficiency and optimal production.

Genho notes the trend toward marketing fed cattle at extra-heavy harvest weights in order to take advantage of marginal profit opportunity. However, he questions its efficiency, citing feedyard data showing the practice has a negative impact on feed required per pound of carcass weight gain. Elanco data show a 20-year trend toward worsening feed conversion among feedyard steers.

Genho says cattle often perform better than expected and reach an optimal endpoint before managers realize and, therefore, are not managed efficiently. He believes improvement could be achieved if optimal days on feed were the goal.

As a superior endpoint metric, Genho recommends “empty body

“We need to focus on optimal endpoint.”

— Michael Genho

fat,” the percentage of body fat in a carcass, calculated from back fat, hot carcass weight, ribeye area and marbling score. While cattle lot averages for empty body fat range from near 27% to 32%, Genho says great variation exists among animals within a lot.

“There is a ton of opportunity to improve feed efficiency, but we need to measure it in terms of what is optimal,” Genho says. “We need to focus on optimal endpoint.”

Reproductive efficiency

During a GrowSafe-sponsored presentation, Texas A&M University animal scientist Cliff Lamb related his previous experience as director of the University of Florida’s North Florida Research and Education Center (NFREC). While managing the NFREC cow herd, Lamb strived for improved reproductive efficiency, implementing synchronized artificial insemination (AI), shortened periods of exposure to cleanup bulls, and strict rules for selecting and culling females.

To remain in the herd, cows had to calve every year without assistance and to produce sufficient milk for their calves to reach genetic potential while also maintaining a body condition appropriate for the environment. Emphasizing docility, Lamb says, “Cows were culled for crazy.” Replacement heifers had to calve by 24 months of age, and no replacement candidate was considered if she had not become pregnant in the first 25 days of the breeding season.

According to Lamb, after seven years of uncompromised selection pressure for pregnancy, the NFREC herd’s original 120-day breeding season was shortened to 60 days. During that period, timed AI pregnancy rates ranged between 33% and 59%. Lamb says he was more concerned with the total number of females that became pregnant early than with how many became pregnant to AI. Early born calves represented more value, posting heavier and more uniform weights at weaning.

Lamb credits synchronization protocols for “kick-starting” more cycles in cows picked up by cleanup bulls and increasing the total number of pregnant cows while cutting the breeding season in half.



It is critical cattlemen employ strict selection pressure to improve calving interval and reproductive performance.

“The number-one trait [of emphasis] for the cow-calf producer is pregnancy. It can have a four times greater impact on profitability than any other trait,” Lamb explains — noting the value of the NFREC herd’s annual production increased sevenfold in seven years.

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Huffhines has served in several industry leadership capacities, including being president of the National Pedigreed Livestock Council from 2003 to 2006, chairman of the BIF Emerging Technology Committee from 2004 to 2007, chairman of the U.S. Beef Breeds Council, and a member of the National Cattlemen’s Beef Association (NCBA) National Animal Identification working group and the U.S. Meat Animal Research Center advisory committee.

Currently, Huffhines is executive vice president of the American Quarter Horse Association. He and his wife, Mary Jon, have three sons — Seth, Cole and Miles.

New BIF board selected

The BIF elected new directors and announced new officers to its board of directors on June 22 during the meeting and symposium.

Lee Leachman, Ft. Collins, Colo., was introduced as the 2018-19 BIF president during the Friday luncheon. Tommy Clark, Culpeper, Va., is the new vice president.

New directors elected to serve on the BIF board were Kevin Schultz, Haviland, Kan., and Gordon Jones, Lafayette, Tenn. New association representatives elected were Shane Bedwell, American Hereford Association, and Kajal Devani, Canadian Angus Association. **HW**



2018-19 BIF Board Of Directors seated (l to r) are: Lee Leachman, Ft. Collins, Colo., president; Tommy Clark, Culpeper, Va., vice president; Donnell Brown, R.A. Brown Ranch, Throckmorton, Texas, past president; Jane Parish, Verona, Miss., BIF executive director; Darrah Bullock, University of Kentucky, BIF eastern region secretary; Bob Weaber, Kansas State University (K-State), BIF central region secretary; Mark Enns, Colorado State University, BIF western region secretary; and Josh White, National Cattlemen’s Beef Association. Back row (l to r): Dan Moser, Angus Genetics Inc.; Tommy Perkins, International Brangus Breeders Association; Megan Rolf, K-State; Mark Thallman, U.S. Meat Animal Research Center; Aaron Arnett, Sexing Technologies; Lex Carter, Pingree, Idaho; Kajal Devani, Canadian Angus Association; Matt Perrier, Eureka, Kan.; Gordon Jones, Lafayette, Tenn.; Kevin Schultz, Haviland, Kan.; Lauren Hyde, American Simmental Association; Shane Bedwell, AHA; Joe Mushrush, Strong City, Kan.; Robert Williams, Pickens, Miss.; and Stephen Scott, Canadian Beef Breeds Council. Not pictured are Jack Ward, AHA; and John Genho, Woodville, Va



Understanding grazing behavior can improve forage utilization.

Foraging efficiency

New Mexico State University animal scientist Derek Bailey shared research exploring cattle grazing behavior and the potential for improving forage utilization across diverse landscapes. After studying where, when and why cattle choose to graze certain areas, and avoid others, Bailey found cattle tend to be “bottom dwellers,” preferring to graze low and relatively level areas, or “hill climbers,” choosing to graze higher, rougher terrain. Even when regrouped and moved to different locations, cattle maintained their respective grazing behaviors.

The extent grazing behavior is inherent or learned is not fully

understood, but Bailey believes genetics definitely play a role. He hopes the grazing distribution data he and his colleagues have collected will help develop tools for selecting for cattle exhibiting specific grazing behaviors — perhaps a genomic expected progeny difference (EPD) value for grazing distribution.

Colorado State researcher Milt Thomas agrees selection for behavioral traits could be hugely advantageous for range-based cow-calf operations. He says evidence suggests grazing distribution is a polygenetic trait.

“There’s not one single magic gene or magic marker that explains why a cow climbs hills to graze or stays on flat ground,” Thomas says — noting research has focused on five genes influencing aspects of grazing behavior. They could be keys to developing the sought-after EPD.

Brisket disease exposed

The BIF Convention agenda included a discussion of brisket disease, otherwise known as high altitude disease, or, more correctly, bovine pulmonary hypertension (BPH). While the condition is not new to cattle herds grazing at high altitude, its occurrence in Plains-area feedyard cattle is a relatively new and growing problem.

Practicing veterinarian and Colorado State Associate Professor Tim Holt explained how BPH most commonly occurs among young cattle grazing mountain pastures, usually at elevations above 5,000 ft. Among susceptible cattle, low oxygen levels cause pulmonary arteries to constrict, increasing resistance

to blood flow and causing pulmonary arterial pressure to rise. Congestive heart failure occurs in animals not removed to lower elevations.

In advanced stages, the failing right side of the heart causes blood to back up in the veins. As pressure increases, fluid is forced out through the semipermeable vein walls and into surrounding tissues. This tissue edema often is most evident in the brisket area — hence the moniker brisket disease.

Holt also described pulmonary arterial pressure (PAP) testing as a way of identifying animals least susceptible to BPH. Mountain-state producers often use PAP test results to screen breeding herd replacements. BPH resistance is a heritable trait, for which Colorado State and Holt have conducted research to develop and perfect an EPD based on PAP.

In recent years, BPH has been diagnosed among cattle fed in feedyards located at elevations below 3,000 ft. But is BPH in feedyards the same as brisket disease occurring in the mountains?

“Yes and no,” Holt says. “The same thing is occurring in the animals’ bodies, with similar symptoms and typically the same end result, but the etiology is different.”

According to Holt, feedyard case evidence suggests high growth rate and extra-heavy body weight contribute to BPH among susceptible feedyard animals regardless of elevation.

Discussing the application of PAP-based EPDs for selecting breeding animals resistant to brisket disease, Colorado State University geneticist Scott Speidel says the EPD is useful in predicting how well suited to a high-elevation environment a sire’s progeny are likely to be. However, a sire’s own phenotype — his own PAP score — is the indicator of whether the sire himself can survive when residing at high elevation.

The ruminant edge

During her BIF presentation, Sara Place expressed her amazement at the ability of beef cattle to thrive high in the mountains; on the desert; in places wet or dry, hot or cold; and in many places ill-suited to cultivated crops. The senior director of sustainable beef production research for the National Cattlemen’s Beef Association urges the beef industry to draw on its chief advantage — the fact that it is built upon a ruminant animal.

Noting the growing “plant-forward” diet trend and continued disparagement of meat production as bad for the planet, Place recommends cattle producers counter the movement

by sharing the truth. She emphasizes beef is the “original” plant-based protein, because of the ruminant animal’s ability to convert plant material inedible to humans into high-quality, digestible protein. It is the beef industry’s competitive advantage.

“The fundamental value proposition of beef to the food system is the transformation of lower-value resources — plants and land bases — to higher-value protein, micronutrients and ancillary products,” Place says, encouraging conference attendees to hone their social skills and to seek opportunities to tell the real story.

Find your advantage

In a presentation geared to young and new beef producers, Colorado cattleman, commercial consultant and Cattlemen to Cattlemen television host Kevin Ochsner challenged audience members to find their own competitive advantage.

“What are you doing in your operation to create and capture value?” Ochsner asks.

Taking his turn at the podium, CattleFax market analyst Troy Applehans challenged cow-calf producers to improve risk management by controlling fixed costs and devoting more thought to marketing. He cautions against the common mistake of paying too much for replacement females. Emphasizing the need for strategic marketing, Applehans advises producers to consider how they might take advantage of market seasonality.

Highlighting how a majority of spring-born calves are sold in the fall, Applehans notes how prices for 550-lb. calves typically hit seasonal lows during the October-November time frame. He counsels producers to consider forward contracts or video sales with delayed delivery as alternatives that might facilitate calf marketing during a period of seasonally higher prices. Similarly, Applehans suggests producers consider alternatives to selling cull cows during the traditional late fall and early winter period of low prices.

Referring to increased heifer placement in feedlots, along with other indicators, Applehans says cow herd expansion in the U.S. has significantly declined. An even slower and modest increase in breeding herd numbers is expected to end by 2020. With continued positive domestic and global demand for beef, Applehans predicts favorable cattle and beef prices for 2018, on average. However, continued price volatility underscores the importance of risk management. **HW**



Pulmonary arterial pressure (PAP) testing is a way to identify animals that are least susceptible to bovine pulmonary hypertension (BPH) in high altitude feedlots.