



BIF Highlights

Progressive beef producers and academia attended the 2010 Beef Improvement Federation Symposium.

Story by **Troy Smith**, photos provided by **Angus Productions Inc.**

“Do we fully understand drivers of profit?” asked Barry Dunn during the Beef Improvement Federation (BIF) Research Symposium hosted recently in Columbia, Mo. The former director of Texas A&M University’s King Ranch Institute for Ranch Management and now dean of South Dakota State University College of Agriculture and Biological Sciences, Dunn doesn’t believe the beef cattle industry can “invest its way to profitability.” But he fears past approaches to beef improvement have taken producers down that path.

The most popular strategies, explained Dunn, have focused on manipulating certain genetic traits and diffusing them into breeding herds as rapidly as

possible to increase production. Like assembling pieces of a puzzle, the industry has used ratios, breeding values, expected progeny difference (EPD) values and gene markers. Now, genomic EPDs are the new tool for furthering the pursuit of maximum production.



Barry Dunn

The industry has succeeded in creating change, Dunn said, noting how the U.S. beef industry produces one-and-a-half times more beef with the same number of cows as it had in 1958. But increased production has not come without trade-offs and unintended consequences. Increased mature cow size and higher maintenance costs have accompanied selection for heavier weaning and yearling weights. And despite advancements

in technology and increased production, producer profitability remains relatively low. Dunn said the evidence lies in the loss of well over a third of the number of beef producers existing in 1958.

Dunn challenged researchers and producers to consider a different approach to beef improvement — a “systems approach” recognizing how all the parts and pieces of a beef operation are inter-related. Dunn called interactions between environment, management and genetics “huge.” As an example, he cited fetal programming studies showing how nutritional status of pregnant cows appears to trigger expression or suppression of genes influencing productive and reproductive performance of their calves.

Warning against becoming too dependent upon a constant flow of new techniques and technologies, Dunn asked whether it is more cost-effective to maximize gene frequency (and thus maximize production) or optimize gene frequency and learn to influence gene expression with management.

“Do we chase genes forever and ever, or do we start switching genes on and off?” asked Dunn.

Optimum, not maximum

Taking a similar tone as he addressed the BIF Symposium audience, University of Nebraska Extension Beef Genetics Specialist Matt Spangler suggested that too much emphasis has been placed on increasing revenue with too little attention paid to controlling cost



Matt Spangler

Hereford breeders, enthusiasts recognized

During the 2010 Beef Improvement Federation (BIF) Research Symposium several Hereford breeders were recognized.

Sandhill Farms, Haviland, Kan., was named the 2010 BIF Seedstock Producer of the Year. A fifth generation, family owned and operated Hereford seedstock business, Sandhill Farms is located in south central Kansas.

Currently managed by Kevin and Vera Schultz, the framework of today’s cattle program was laid by Kevin’s father, Ron, and grandfather, Roy. Ron and his wife, Arnita, still play an active role in the farm today. Kevin and Vera’s children, Brooke, Tyler and Courtney, are starting the sixth generation.

The operation began as a commercial cow-calf and farming business. Registered Hereford bulls were brought into the program in the mid-1940s. The registered cow herd was added in the mid-1980s by Kevin and Vera. Sandhill Farms has tested more bulls in the American

Hereford Association (AHA) National Reference Sire Program (NRSP) than any other breeder in the last 10 years. Look for more about Sandhill Farms in the September *Hereford World*.

Hereford enthusiast **Glen Klippenstein**, Maysville, Mo., was presented a pioneer award. Glenkirk Farms was a premier producer of polled Hereford seedstock and produced many national champions and multi-trait leaders. Klippenstein not only tends to business on his farm, but he has also played instrumental roles in the National Cattlemen’s Beef Association, the Cattlemen’s Beef Board, American Polled Hereford Association and American Chianina Association. Klippenstein has been involved politically, serving as a senator for the state of Missouri.

Downey Ranch Inc. (DRI), of Wamego, Kan., was named the 2010 Commercial Producer of the Year. Downey Ranch manages commercial Angus, F-1 baldies and Red Angus and Angus cross cows — 425 that calve

in the spring and 125 that calve in the fall. This year the ranch purchased Hereford bulls to utilize in its breeding program. **HW**



Glen Klippenstein accepts the Pioneer Award from one of the 2010 BIF Symposium organizing committee members Darla Eggers.



Kevin and Vera Schultz, of Sandhill Farms, Haviland, Kan., accept the 2010 BIF Seedstock Producer of the Year award from *BEEF* magazine Senior Editor Burt Rutherford.



Joe Carpenter and Barb Downey, DRI managers, accepted the Commercial Producer of the Year award from Burt Rutherford.

of production. He challenged seedstock producers to take the lead in considering both sides of the profit equation and advised commercial customers to target optimum production rather than maximum production.

“We have to be concerned with input costs,” insisted Spangler, encouraging seedstock suppliers to track the costs of their customers. “We must fit genetics to the producer’s production environment. Cattle cannot be placed in environments that will not work for them.”

To match breeding females to the environment, Spangler advised giving particular attention to EPDs for milk, mature weight, weaning weight and yearling weight and avoiding extremes. Spangler recommended use of breed association-produced or customized economic index values, which account for genetic and economic considerations, to select for multiple traits.

DNA markers ahead

In her Symposium presentation, University of California-Davis genomics and biotechnology specialist Alison Van Eenennaam said DNA marker information aids bull selection only if it works, is useful and pays. A DNA test works when it is accurate. It is useful when it helps target traits valued by a chosen market. It pays when that market rewards the producer.

“DNA tests clearly have the potential to add value for producers, but it is situation dependent,” said Van Eenennaam. “Until recently, commercialized DNA tests for beef cattle targeted only a handful of traits. As DNA testing becomes more comprehensive and encompasses more traits, it will become increasingly important to integrate the information into national cattle evaluations.”

That should result in genomic-enhanced EPDs. Van Eenennaam said concurrent development of multitrait selection indices would provide producers with the most practical means of using all available information.

True efficiency analyzed

Bringing an encore of a presentation delivered earlier this year at the Cattle Industry Convention and Trade Show, J.D. Radakovich and Jennifer Johnson discussed a study of cow size and efficiency data

conducted by Texas A&M University’s King Ranch Institute of Ranch Management.

Johnson explained how overall efficiency is a combination of biological efficiency (ratio of feed consumed to beef produced) and economic efficiency (ratio of dollars spent to dollars returned). Attempting to achieve both simultaneously requires understanding and managing the genetic potential of cattle, the environment in which they must perform, along with making decisions about what product is marketed and when that product is marketed.

Warning against equating low cow maintenance requirements with efficiency, Johnson said low-maintenance cows aren’t always efficient, nor are high-maintenance cows always inefficient. She also warned against using the old rule-of-thumb calling for a cow to wean a calf weighing 50% of her own body weight.

“Though commonly used, it’s not an accurate measure of efficiency. It doesn’t consider calf age and the cow’s milk production. The ratio of total pounds of calves weaned to the total number of cows exposed to breeding is a better evaluation,” stated Johnson.

The ratio represents the most important maternal trait which is efficiency of reproduction. Producers able to increase the ratio without increasing input costs will see an increase in net profit.

With regard to optimum cow size, Radakovich said that as long as cow type fits within environmental and economic guardrails, size has little impact on profitability.

“Different cattle are efficient in different environments and production systems,” stated Radakovich. “For the majority of producers, the most efficient cow is the one with the highest milk potential that can, without reducing the percentage of calves successfully weaned, repeatedly produce a calf by bulls with growth and carcass characteristics valued most in the marketplace.”

Research highlights

During the Symposium’s committee breakout sessions, researchers offered reports concerning ongoing research, including efforts to find genes

or gene markers associated with fertility traits such as yearling heifer pregnancy rate and first-calf heifer rebreeding rate. Another study seeks to identify genes that influence susceptibility to bovine respiratory disease. Breeding animals that produce more nutritious beef is the aim of another project. Researchers believe genetic evaluation for nutrient composition of beef could result in development of genomic-enhanced EPDs to aid selection for a favorable fatty acid profile, lower levels of cholesterol and saturated fat, and higher concentrations of minerals and vitamins.



Tom Field

We must unite

Tom Field, National Cattlemen’s Beef Association director of producer education, spoke to Symposium attendees about technological, political and media

matters affecting the beef industry. Field acknowledged technology’s role in increasing the volume of beef production and improved productivity per animal.

“We’ve been unbelievably successful at both,” said Field. “But there has been a consequence of that. It has contributed to the concentration of our industry.”

He noted how 80% of U.S. cow herds include fewer than 50 head and comprise 28% of total inventory, while only 11% of herds include more than 100 head but make up nearly 50% of the nation’s total cow herd. Less than 15% of cow-calf operators depend on cattle as their primary source of income, he added.

A grave worry for Field is the number of people who have exited the cow business — 250,000 producers since 1987. Total cow herd numbers have dipped to lows not seen since World War II. Even the relatively profitable years of 1999 through 2008 did not reverse the exodus. Reasons Field cited included drought, volatile input costs, increasing land values and the advancing age of beef producers.

Also playing a role is producer frustration fueled by the inability of American citizens and elected officials to think about and understand agricultural issues. The media increasingly portrays livestock

industries in an unfavorable light, and producers face an increasing regulatory burden. For some producers, the aggravation is too great and the returns and rewards of the cattle business are too little.

Remaining agricultural producers face a challenging future, said Field. In the next 50 years, they must feed a world population expected to increase by the equivalent of two more Chinas. An important question, suggested Field, is whether food producers will be allowed to use the technology required for the needed increase in food production.

However, Field fears the greatest foe beef producers face is industry infighting. Battling among factions weakens the industry as a whole, when it most needs to present a united front against animal rights activists and overzealous government interference in business.

“There is animal abuse in this country and in our industry. It’s limited, but it’s there. We must drive it out. It is a weed in our field of progress,” warned Field. “There are extremes on either side of the animal welfare issue. We are in the middle, and we have to defend the middle ground.”

Field further warned his audience to watch out for government intrusion into free markets. It has been proposed that government have authority to review any marketing contract pertaining to agricultural products and rule whether it is “fair.” Such authority could, he said, jeopardize contracts between willing buyers and sellers and would hinder, if not destroy, freedom in the marketplace.

The beef industry finds itself in an uncomfortable position, but Field thinks that may be what it takes to propel producers out of their ruts. He hopes they will communicate better among themselves, seek partners outside the industry and engage consumers.

“It’s time for producers to assess, evaluate and take ownership (of the industry),” said Field, “and take pride in ownership.” **HW**

